

Organization, Regulations, and Courses 2025-26

August 2025



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ABOUT THIS CATALOG

Volume LXXXV, August 2025

To support the launch of the new School of Arts and Sciences on July 1, several roles and titles mentioned in this catalog will be amended in the near future. For example, any reference to the 'Dean of the College' shall be amended to read 'Dean of the School of Arts and Sciences' or their designee.

This catalog has been prepared for the benefit of students, faculty, and officers of Dartmouth College, and of others wishing to know more about the College's programs and activities. The information contained herein is accurate as of the date of publication (August 2025), and the officers of the College know of no significant changes to be made in the near future, other than those mentioned above. However, Dartmouth College reserves the right to make from time to time such changes in its operations, programs, and activities, including cancellation of classes and campus closure, as the Trustees, faculty, and officers consider appropriate and in the best interests of the Dartmouth community.

Dartmouth College is committed to the principle of equal opportunity for all its students, faculty, employees, and applicants for admission and employment. For that reason, Dartmouth does not discriminate on the basis of race, color, religion, sex, age, sexual orientation, gender identity or expression, national origin, disability, or military or veteran status in its programs, organizations, and conditions of employment and admission.

Any person having inquiries or complaints concerning Dartmouth's compliance with this policy or with federal regulations relating to nondiscrimination is directed to contact the Office of Institutional Diversity & Equity, Parkhurst 006 (garden level), HB 6018, Hanover, New Hampshire 03755-3541, (603) 646-1606. The ADA Coordinator has been designated by Dartmouth to coordinate the institution's efforts to comply with the regulations implementing Section 504 and the Americans with Disabilities Act.

Dartmouth College is accredited by the New England Commission of Higher Education.

DARTMOUTH COLLEGE MISSION STATEMENT

Dartmouth College educates the most promising students and prepares them for a lifetime of learning and of responsible leadership, through a faculty dedicated to teaching and the creation of knowledge.

to Dartmouth and to each other is legendary and is a sustaining quality of the College.

Adopted May, 2007

Our Core Values

Dartmouth expects academic excellence and encourages independence of thought within a culture of collaboration.

Dartmouth faculty are passionate about teaching our students and are at the forefront of their scholarly or creative work.

Dartmouth embraces diversity with the knowledge that it significantly enhances the quality of a Dartmouth education.

Dartmouth recruits and admits outstanding students from all backgrounds, regardless of their financial means.

Dartmouth fosters lasting bonds among faculty, staff, and students, which encourage a culture of integrity, self-reliance, and collegiality and instill a sense of responsibility for each other and for the broader world.

Dartmouth supports the vigorous and open debate of ideas within a community marked by mutual respect.

Our Legacy

Since its founding in 1769 to educate Native students, English youth, and others, Dartmouth has provided an intimate and inspirational setting where talented faculty, students, and staff—diverse in background but united in purpose—contribute to the strength of an exciting academic community that cuts easily across disciplines.

Dartmouth is committed to providing the best undergraduate liberal arts experience and to providing outstanding graduate programs in the Dartmouth Medical School (founded 1797), the Thayer School of Engineering (1867), the Tuck School of Business (1900), and the graduate programs in the Arts and Sciences. Together they constitute an exceptional and rich learning environment. Dartmouth faculty and student research contributes substantially to the expansion of human understanding.

The College provides a comprehensive out-of-classroom experience, including service opportunities, engagement in the arts, and competitive athletic, recreational, and outdoor programs. Pioneering programs in computation and international education are hallmarks of the College. Dartmouth graduates are marked by an understanding of the importance of teamwork, a capacity for leadership, and their keen enjoyment of a vibrant community. Their loyalty

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Roger J. Lynch, M.B.A., Oakland, CA
Jose M. Minaya, M.B.A., Mooresville, NC
Kimberly C. Parizeau, M.B.A., Wellesley Hills, MA
Jonathan H. Paul, M.B.A., Boston, MA
J. Anthony Precourt, M.B.A., Hillsborough, CA
Paul E. Raether, M.B.A., New York, NY
Martha Ellen Records, M.B.A., Denver, CO
Daniel R. Revers, M.B.A., Boston, MA
Tore Rynning-Nielsen, M.B.A., Oslo, Norway
Kinya Seto, M.B.A., Tokyo, Japan
Leela Srinivasan, M.B.A., Raleigh, NC
Langley Steinert, M.B.A., Cambridge, MA
Marco A. Tablada, M.B.A., New York, NY
Steven S. Tseng, M.B.A., New Canaan, CT
Michael D. Ward, M.B.A., Boston, MA (Chair)
Dow R. Wilson, M.B.A., Palo Alto, CA
Russell E. Wolff, M.B.A., Mamaroneck, NY

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Board of Advisors of the Hood Museum of Art

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Rebecca Knox Byrne, B.A., J.D., Montreal, QC, Canada
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Stanley Chou, A.B., M.B.A., Hong Kong
Barbara J. Couch, B.A., M.A., Hanover, NH

Kim LessowCrockett, A.B., J.D., Menlo Park, CA
 Rachel Dratch, A.B., New York, NY
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 Claire Foerster, B.S., Hanover, NH
 Kelly Fowler Hunter, A.B., M.B.A., Bedford, NY
 Jennifer Lopez, A.B., Brooklyn, NY
 Jane B. Meyer, B.A., Lyme, NH
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 Daniel E. Rush, A.B., Santa Monica, CA
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 Tanya Ghani, A.B., New York, NY
 Sara Burch Khairallah, A.B., London, England
 Elizabeth Ann McClintock, A.B., M.A., Ph.D., Medford, MA
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 Amanda Brown Lierman, A.B., Silver Spring, MD
 Timothy C. Harrison, A.B., J.D., L.L.M., Staten Island,

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Ann M. Kappler, A.B., J.D., Chevy Chase, MD
 Maxine Lum Mauricio, A.B., J.D., Greenwich, MA
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 R. Bruce Rich, A.B., J.D., New York, NY
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 Peter Sisitsky, A.B., M.B.A., Rye, NY
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 Leah Wright Rigueur, A.B., Ph.D., Hartford, CT

William Jewett Tucker Center for Spiritual Life Board of Advisors

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 S. Caroline Kerr '05, A.B., M.A., Hanover, NH

Center for Social Impact Board of Advisors

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 Michelle Davis '92, A.B., J.D., Weston, MA
 Pamela Donovan Gehret '81 P'11, A.B., Rumson, NJ
 Dennis G. Goldstein '87, A.B., M.B.A., Weston, MA
 Todd Gomez '86, A.B., M.B.A., South Orange, NJ
 Zachary A. Kaufman '08, A.B., M.A., Ph.D., Geneva, Switzerland
 Mitchell H. Kurz '73, A.B., M.B.A., New York, NY
 Martin "Marty" V. Lempres '84, A.B., M.B.A., Wellesley, MA
 Andrew C. Marino '91, A.B., M.B.A., Washington, DC
 Jennifer Kochman Marrus '89, A.B., M.B.A., New York, NY
 Amanda R. Salzhauer '93, A.B., M.S.W., Bronx, NY
 Robin Shaffert '82, A.B., J.D., Washington, DC

Robert "Bob" S. Victor '88, A.B., J.D., Philadelphia, PA
Stephanie Welsch-Lewin '88 P'17 THP '17 P'20, A.B.,
Chevy Chase, MD
Warren Valdmanis '95, A.B., M.B.A., Portland, ME

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Corinne Heyes '82

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Justin Sadrian '94

Damon Wright '08

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Sian L. Beilock, B.A., Ph.D., President

David F. Kotz, A.B., Ph.D., Interim Provost

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School of Engineering

Justin Anderson, B.A., Vice President for Communications

Cheryl A. Bascomb, A.B., Vice President for Alumni
Relations

Scott C. Brown, B.A., M.Ed., Ph.D., Dean of the College

Lee A. Coffin, B.A., Ed.M., Vice Provost for Enrollment
and Dean of Admissions and Financial Aid

Duane Compton, B.S., Ph.D., Dean of the Geisel School of
Medicine at Dartmouth

Mitchel W. Davis, B.A., A.M., Vice President and Chief
Information Officer

Shontay Delaloe, B.A., M.Ed., Ph.D., Senior Vice

President and Senior Diversity Officer

Joseph R. Doucet, B.A., Chief Technology Officer

R. Scott Frew, B.C., M.B.A., Chief Financial Officer

Michael M. Harrity, B.A., M.Ed, Haldeman Family
Director of Athletics and Recreation

Sandhya L. Iyer, B.A., J.D., General Counsel

Joshua Keniston, B.A., Ed.M., Vice President of Campus
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F. Jon Kull, A.B., Ph.D., Dean of the School of Graduate
and Advanced Studies

Robert W. Lasher, A.B., M.A., Senior Vice President for
Advancement

Sara R. Lester, B.A., J.D., Chief Human Resources Officer

Dean R. Madden, A.B., Ph.D., Vice Provost for Research

Susanne Mehrer, B.A., M.A., P.G.Dip.L.I.S., E.M.B.A.,
Dean of Libraries

Richard G. Mills, B.A., J.D., Executive Vice President

Alice A. Ruth, A.B., Chief Investment Officer

Matthew J. Slaughter, B.A., Ph.D., Dean of the Tuck
School of Business

Elizabeth F. Smith, B.A., Ph.D., Dean of the Faculty of
Arts and Sciences

The Faculty of Arts and Sciences

Active Faculty

The list is of A&S active faculty and research associates
for 2025-26 can be accessed at [https://faculty-
directory.dartmouth.edu/arts-sciences-faculty-directory](https://faculty-directory.dartmouth.edu/arts-sciences-faculty-directory).

Academic Administrators

Sian L. Beilock, Ph.D., President

Santiago Schnell (2025) Ph.D., Provost, Professor of
Mathematics

John M. Carey (2003) Ph.D., Interim Dean of the Faculty
of Arts and Sciences, John Wentworth Professor in the
Social Sciences, Professor of Government

Colleen G. Boggs (2001) Ph.D., Associate Dean for the
Arts and Humanities, Parents Distinguished Research
Professor in the Humanities, Professor of English and
Creative Writing

Matthew F. Delmont (2018) Ph.D., Guarini Associate
Dean of Interdisciplinary Programs and International
Studies, Sherman Fairchild Distinguished Professorship in
Emerging Fields, Professor of History

Jane E. G. Lipson (1987) Ph.D., Associate Dean for the
Sciences, Albert W. Smith Professorship in Chemistry

Benjamin A. Valentino (2003) Ph.D., Associate Dean for
the Social Sciences, Professor of Government

F. Jon Kull (2001) Ph.D., Dean of School of Graduate and

Advanced Studies, Rogers Professorship, Professor of Chemistry

Mary Lou Aleskie (2017) Howard L. Gilman '44 Director of the Hopkins Center

Jason Barabas (2020) Ph.D., Director of Rockefeller Center and Professor of Government

Rebecca E. Biron (2006) Ph.D., Director of the Leslie Center, Professor of Spanish and Portuguese

Lee Coffin (2016) Ed.M., Vice Provost for Enrollment and Dean of Admissions and Financial Aid

Thomas DeChiaro (2025) M.B.A., Interim Chief Information Officer

James E. Dobson (2012) Ph.D., Director of the Writing Program, Associate Professor of English and Creative Writing

Victoria Holt (2021), Norman E. McCulloch Jr. Director of the John Sloan Dickey Center for International Understanding

Anne Hudak (2007), Interim Dean of Undergraduate Student Affairs

Julie L. Rose (2014) Ph.D., Hans '80 and Kate Morris Director of the Ethics Institute, Associate Professor of Government

Nancy A.G. Vogele '85 (2021) M.Div., Chaplain and Director of the William Jewett Tucker Center

Susanne Mehrer (2016) M.B.A., Dean of Libraries and Librarian of the College

Eric Parsons (2016) M.P.A., Registrar for the Arts and Sciences

Erin DeSilva (2015) M.A., Director of the Dartmouth Center for the Advancement of Learning, Associate Provost, Digital and Online Learning

Daniel N. Rockmore (1991) Ph.D., Director of the Neukom Institute, William H. Neukom 1964 Distinguished Professor of Computational Science, Professor of Mathematics and Computer Science

Mike Harrity (2022), Haldeman Family Director of Athletics and Recreation

John Stomberg (2016) Ph.D., Virginia Rice Kelsey 1961s Director of the Hood Museum of Art

Geoffrey G. Parker (2016) Ph.D., Interim Faculty Director, Charles E. Hutchinson '68A Professor of Engineering

Innovation, Executive Director, Master of Engineering Management Program

Emeritus Faculty

Note: The listing is alphabetical; the date indicates the year of initial appointment.

Susan Ackerman (1990) Ph.D., Professor of Religion, Emerita

Sarah Allan (1995) Ph.D., Professor of Asian & Middle Eastern Languages and Literatures, Emerita

Hoyt S. Alverson (1968) Ph.D., Professor of Anthropology, Emeritus

Martin A. Arkowitz (1964) Ph.D., Professor of Mathematics, Emeritus

James L. Aronson (1998) Ph.D., Professor of Earth Science, Emeritus

Virginia C. Beahan (2003) M.F.A., Senior Lecturer of Studio Art, Emerita

David G. Becker (1982) Ph.D., Associate Professor of Government, Emeritus

Joseph J. BelBruno (1982) Ph.D., Professor of Chemistry, Emeritus and Research Professor of Chemistry

Ehud Z. Benor (1991) Ph.D., Associate Professor of Religion, Emeritus

Edward M. Berger (1975) Ph.D., Professor of Biological Sciences, Emeritus

Sharon E. Bickel (1997) Ph.D., Professor of Biological Sciences, Emerita

Susan R. Blader (1978) Ph.D., Associate Professor of Asian & Middle Eastern Languages and Literatures, Emerita

Lynda E. Boose (1985) Ph.D., Professor of English and Creative Writing, Emerita

Edward M. Bradley (1963) Ph.D., Professor of Classics, Emeritus

Meredith Braz (2006) M.A.T., Registrar, Emerita

James E. Brown (1990) M.F.A., Senior Lecturer of Film & Media Studies, Emeritus

Raul Bueno (1986) Ph.D., Professor of Spanish and Portuguese and Latin American, Latino, and Caribbean Studies, Emeritus

John L. Campbell (1996) Ph.D., Professor of Sociology, Emeritus

Robert Cantor (1984) Ph.D., Professor of Chemistry, Emeritus

Laura E. Conkey (1982) Ph.D., Associate Professor of Geography and Women's, Gender, and Sexuality Studies, Emerita

Katharine Conley (1992) Ph.D., Professor of French & Italian and Comparative Literature and Women's, Gender, and Sexuality Studies, Emerita

Thomas H. Cormen (1992) Ph.D., Professor of Computer Science, Emeritus

Kathleen A. Corrigan (1983) Ph.D., Associate Professor of Art History, Emerita

Catherine P. Cramer (1982) Ph.D., Associate Professor of Psychological and Brain Sciences, Emerita

Lewis A. Crickard (1987) M.F.A., Professor of Theater, Emeritus

Pamela Crossley (1985) Ph.D., Professor of History, Emerita

Nancy J. Crumbine (1992) Ph.D., Senior Lecturer of Writing, Emerita

William B. Dade (2003) Ph.D., Associate Professor of Earth Science, Emeritus

Margaret H. Darrow (1980) Ph.D., Professor of History and Women's, Gender, and Sexuality Studies, Emerita

Mary R. Desjardins (1997), Ph.D., Professor of Film and Media Studies, Emerita

Robert Ditchfield (1972) D.PHIL., Professor of Chemistry, Emeritus, and Research Professor of Chemistry

Peter G. Doyle (1999) Ph.D., Professor of Mathematics, Emeritus, and Research Professor of Mathematics

Robert L. Drysdale (1978) Ph.D., Professor of Computer Science, Emeritus

Bruce Duncan (1969) Ph.D., Professor of German Studies, Emeritus

David Ehrlich (1993) M.F.A., Visiting Professor of Film and Media Studies, Emeritus

Dale F. Eickelman (1989) Ph.D., Professor of Anthropology, Emeritus, and Research Professor of Anthropology

Kirk M. Endicott (1982) D.PHIL., Professor of Anthropology, Emeritus

Hans M. Ermarth (1970) Ph.D., Professor of History and Jewish Studies, Emeritus

Xiahong Feng (1994) Ph.D., Professor of Earth Sciences, Emeritus

Robert A. Fesen (1989) Ph.D., Professor of Physics & Astronomy, Emeritus

William A. Fischel (1973) Ph.D., Professor of Economics, Emeritus

Carol L. Folt (1983) Ph.D., Professor of Biological Sciences, Emerita

Linda L. Fowler (2003) Ph.D., Professor of Government, Emerita

Rodolfo A. Franconi (1997) Ph.D., Associate Professor of Spanish and Portuguese, Emeritus

Nancy K. Frankenberry (1977) Ph.D., Professor of Religion, Emerita

Andrew C. Friedland (1987) Ph.D., Professor of Environmental Studies, Emeritus

Michael Joseph Ganio (2019) M.F.A., Associate Professor of Theater, Emeritus

Andrew C. Garrod (1985) Ed.D., Professor of Education, Emeritus

Gene R. Garthwaite (1968) Ph.D., Professor of History, Emeritus

Gretchen H. Gerzina (2005) Ph.D., Professor of English and Creative Writing, Emerita

John J. Gilbert (1966) Ph.D., Professor of Biological Sciences, Emeritus

Carolyn S. Gordon (1990) Ph.D., Professor of Mathematics, Emerita, and Research Professor of Mathematics

Mary Jean Green (1974) Ph.D., Professor of French & Italian, Emerita

Ronald M. Green (1969) Ph.D., Professor of Religion, Emeritus

Gordon W. Gribble (1968) Ph.D., Professor of Chemistry, Emeritus, and Research Professor and Lecturer of Chemistry

Marcia Groszek (1997) Ph.D., Professor of Mathematics, Emerita

Alan L. Gustman (1969) Ph.D., Professor of Economics, Emeritus

Alexandra Halasz (1990) Ph.D., Associate Professor of English and Creative Writing, Emerita

Raymond L. Hall (1972) Ph.D., Professor of Sociology, Emeritus

Louise E. Hamlin (1990) B.F.A., Professor of Studio Art, Emeritus

Douglas E. Haynes (1983) Ph.D., Professor of History, Emeritus

Ernest Hebert (1987) B.A., Professor of English and Creative Writing, Emeritus

Marlene E. Heck (2000) Ph.D., Senior Lecturer of Art History, Emerita

Robert G. Henricks (1976) Ph.D., Professor of Religion, Emeritus

Lynn A. Higgins (1976) Ph.D., Professor of French & Italian, Emeritus

Richard T. Holmes (1967) Ph.D., Professor of Biological Sciences, Emeritus

Mary K. Hudson (1984) Ph.D., Professor of Physics & Astronomy, Emerita, and Research Professor of Physics & Astronomy

Howard C. Hughes (1980) Ph.D., Professor of Psychological and Brain Sciences, Emeritus

Russell P. Hughes (1976) Ph.D., Professor of Chemistry, Emeritus, and Research Professor of Chemistry

Jay G. Hull (1982), Ph.D., Professor of Psychological and Brain Sciences, Emeritus

Cynthia Huntington (1990) M.A., Professor of English and Creative Writing, Emerita

Peter A. Jacobi (1997) Ph.D., Professor of Chemistry, Emeritus, and Research Professor of Chemistry

G. Christian Jernstedt (1967) Ph.D., Professor of Psychological and Brain Sciences, Emeritus

Keala J. Jewell (1986) Ph.D., Professor of French & Italian and Comparative Literature and Women's, Gender, and Sexuality Studies, Emerita

Gary D. Johnson (1971) Ph.D., Professor of Earth Science, Emeritus

Jim M. Jordan (1980) Ph.D., Professor of Art History, Emeritus

Irene Kacandes (1994) Ph.D., Professor of German Studies and Comparative Literature, Emerita

Nelson M. Kasfir (1970) Ph.D., Professor of African and African American Studies and Government, Emeritus

Konrad O. Kenkel (1974) Ph.D., Associate Professor of German Studies, Emeritus

Francis Kennedy (1999) Ph.D., Professor of Engineering Sciences, Emeritus

Joy Kenseth (1976) Ph.D., Professor of Art History, Emerita

Deborah King (1982) Ph.D., Associate Professor of Sociology, Emerita

Robert E. Kleck (1966) Ph.D., Professor of Psychological and Brain Sciences, Emeritus

John M. Kopper (1986) Ph.D., Professor of Russian and Comparative Literature, Emeritus

Kenneth A. Korey (1972) Ph.D., Associate Professor of Anthropology, Emeritus

Richard L. Kremer (1985) Ph.D., Associate Professor of History, Emeritus

Paul D. Lagomarsino (1974) Ph.D., Associate Professor of History, Emeritus

Walter E. Lawrence III (1971) Ph.D., Professor of Physics & Astronomy, Emeritus

Amy L. Lawrence (1988) Ph.D., Professor of Film & Media Studies, Emerita

Robert N. Leaton (1964) Ph.D., Professor of Psychological and Brain Sciences, Emeritus

Richard N. Lebow (2002) Ph.D., Professor of Government, Emeritus

John Kemp Lee (2013) M.F.A., Senior Lecturer of Studio Art, Emeritus

David M. Lemal (1965) Ph.D., Professor of Chemistry, Emeritus

Thomas Luxon (1988) Ph.D., Professor of English, Emeritus

Francis J Magilligan (2002) Ph.D., Professor of Geography, Emeritus

Nancy P. Marion (1976) Ph.D., Professor of Economics, Emerita

Michael Mastanduno (1998) Ph.D., Professor of Government, Emeritus

Cleopatra Mathis (1982) M.F.A., Professor of English and Creative Writing, Emerita

C. Robertson McClung (2001) Ph.D., Professor of Biological Sciences, Emeritus

Patricia McKee (1979) Ph.D., Professor of English, Emerita

Delo E. Mook II (1970) Ph.D., Professor of Physics & Astronomy, Emeritus

Benjamin F. Moss (1988) M.F.A., Professor of Studio Art, Emeritus

Hua-yuan L. Mowry (1975) Ph.D., Associate Professor of Asian Societies Cultures and Languages, Emeritus

Marysa Navarro (1968) Ph.D., Professor of History and Latin American, Latino, and Caribbean Studies, Emerita

Joseph B. Nelson (1985) Ph.D., Professor of History and African and African American Studies, Emeritus

Melinda P. O'Neal (1979) D.M., Professor of Music, Emerita

Vera B. Palmer (2009) M.A., Senior Lecturer of Native American and Indigenous Studies, Emerita

Misagh Parsa (1989) Ph.D., Professor of Sociology, Emeritus

Beatriz Pastor (1985) Ph.D., Professor of Spanish and Portuguese, Emerita

David R. Peart (1985) Ph.D., Professor of Biological Sciences and Environmental Studies, Emeritus John F.

Pfister (2000) Ph.D., Senior Lecturer of Psychological and Brain Sciences, Emeritus

Carl B. Pomerance (2003) Ph.D., Professor of Mathematics, Emeritus, and Research Professor of Mathematics

Ulrike Rainer (1983) Ph.D., Associate Professor of German Studies, Emeritus

Colleen M. Randall (1990) Ph.D., Professor of Studio Art, Emerita

A. Kevin Reinhart (1992) Ph.D., Associate Professor of Religion, Emeritus

Louis A. Renza (1970) Ph.D., Professor of English and Creative Writing, Emeritus

Jeremy B. Rutter (1976) Ph.D., Professor of Classics, Emeritus

M. Anne Sa'adah (1984) Ph.D., Professor of Government, Emerita

Ivy T. Schweitzer (1983) Ph.D., Professor of English and Creative Writing, Emerita

John T. Scott (1977) Ph.D., Professor of Economics, Emeritus

William C. Scott (1966) Ph.D., Professor of Classics, Emeritus

Thomas R. Shemanske (1981) Ph.D., Research Professor of Mathematics, Emeritus

Kenneth E. Shewmaker (1967) Ph.D., Professor of History, Emeritus

Ellis Shookman (1987) Ph.D., Professor of German Studies, Emeritus

Brenda R. Silver (1972) Ph.D., Professor of English and Creative Writing, Emeritus

Walter Simons (1992) Ph.D., Professor of History, Emeritus

Jonathan S. Skinner (1995) Ph.D., Research Professor of Economics, Emeritus

Roger D. Sloboda (1977) Ph.D., Professor of Biological Sciences, Emeritus

Roger H. Soderberg (1962) Ph.D., Professor of Chemistry, Emeritus

Margaret E. Spicer (1974) M.F.A., Professor of Theater, Emeritus

Silvia D Spitta (1989) Ph.D., Professor of Spanish and Portuguese, Emeritus

Leo Spitzer (1967) Ph.D., Professor of History and Jewish Studies, Emeritus

William Summers (1984) Ph.D., Associate Professor of Music, Emeritus

Virginia E. Swain (1978) Ph.D., Professor of French & Italian and Comparative Literature, Emerita

Marsha Swislocki (1977) Ph.D., Associate Professor of Spanish and Portuguese and Comparative Literature, Emerita

James H. Tatum (1969) Ph.D., Professor of Classics, Emeritus

Paula E. Thompson (1979) Ph.D., Professor of Studio Art, Emerita

John R. Thorstensen (1980) Ph.D., Professor of Physics and Astronomy, Emeritus

Peter W. Travis (1970) Ph.D., Professor of English and Creative Writing and Women's, Gender, and Sexuality Studies, Emeritus

Roger B Ulrich (1989) Ph.D., Professor of Classics, Emeritus

Samuel J. Velez (1976) Ph.D., Associate Professor of Biological Sciences, Emeritus

Steven F. Venti (1982) Ph.D., Professor of Economic Policy, Emeritus

Roxana M. Verona (1990) Ph.D., Professor of French & Italian and Comparative Literature, Emerita

Ross A Virginia (1992) Ph.D., Professor of Environmental Studies, Emeritus

Keith L. Walker (1976) Ph.D., Professor of French & Italian, Emeritus

Dorothy Wallace (1987) Ph.D., Professor of Mathematics, Emerita

John Watanabe (1985) Ph.D., Associate Professor of Anthropology, Emeritus

David L Webb (1996) Ph.D., Professor of Mathematics, Emeritus

Gary A. Wegner (1982) Ph.D., Professor of Physics & Astronomy, Emeritus

Heide W. Whelan (1973) Ph.D., Professor of History, Emeritus

Margaret Williamson (1999) Ph.D., Associate Professor of Classics and Comparative Literature, Emerita

J. Kathleen Wine (1983) Ph.D., Associate Professor of French and Italian, Emerita

Richard F. Winters (1969) Ph.D., Professor of Government, Emeritus

George L. Wolford (1969) Ph.D., Professor of Psychological and Brain Sciences, Emeritus, and Senior Lecturer of Psychological and Brain Sciences

Richard A. Wright (1985) Ph.D., Professor of Geography, Emeritus

Martin N. Wybourne (1997) Ph.D., Professor of Physics & Astronomy, Emeritus

David Wykes (1972) Ph.D., Professor of English and Creative Writing, Emeritus

Wen Xing (1999) Ph.D., Professor of Asian Societies, Cultures, and Languages, Emeritus

Emeritus Presidents

Philip J. Hanlon, Ph.D.

Jim Yong Kim, Ph.D.

James Wright, Ph.D. (deceased)

Divisions of the Faculty

For purposes of administration the Departments of the Faculty are grouped into three Divisions, as follows:

Arts and Humanities

Art History [ARTH]

Classics [CLAS]

East European, Eurasian, and Russian Studies [EEER]

English [ENGL] and Creative Writing [CRWT]

Film and Media Studies [FILM]

French [FREN] and Italian [ITAL]

German [GERM]

Music [MUS]

Philosophy [PHIL]

Religion [REL]

Spanish [SPAN] and Portuguese [PORT]

Studio Art [SART]

Theater [THEA]

Sciences

Biological Sciences [BIOL]

Chemistry [CHEM]

Computer Science [COSC]

Earth Sciences [EARS]

Engineering Sciences [ENGS]

Mathematics [MATH]

Physics [PHYS] and Astronomy [ASTR]

Psychological and Brain Sciences [PSYC]

Social Sciences

Anthropology [ANTH]

Economics [ECON]

Geography [GEOG]

Government [GOVT]

History [HIST]

Sociology [SOCY]

Each of these Departments is represented by its Chair on the corresponding Divisional Council, which has general supervision over matters affecting the Division. Most of the Departments offer one or more majors.

A fourth division, International and Interdisciplinary Studies (p. 19), consists of the interdisciplinary departments and programs.

The International and Interdisciplinary Studies

African and African American Studies [AAAS]

Asian Societies, Cultures, and Languages [ASCL]

Cognitive Science [COGS]

Comparative Literature [COLT]

Environmental Studies [ENVS]

Jewish Studies [JWST]

Latin American, Latino, and Caribbean Studies [LALACS]

Linguistics [LING]

Middle Eastern Studies [MES]

Native American Studies and Indigenous Studies [NAIS]

Quantitative Social Science [QSS]

Women's, Gender, and Sexuality Studies [WGSS]

Writing [WRIT]

The Chair of each department and program serves on the Council on International and Interdisciplinary Studies; this council has general supervision over matters affecting the interdisciplinary departments and programs. Several of the interdisciplinary departments and programs offer majors and/or minors.

REGULATIONS

Undergraduate Study

Admission

Applicants for first year admission have two deadline options. Candidates applying via the Early Decision program must submit applications by November 1 of the calendar year prior to the year in which they expect to enter college. Early Decision candidate notification takes place in mid-December. Candidates applying via the Regular Decision program must submit applications by the first business day of the calendar year in which they expect to enter college, typically on or about January 2. Regular Decision candidate notification takes place at the end of March.

Candidates for transfer admission must apply by March 1 of the calendar year in which they expect to matriculate. Transfer candidate notification takes place in May.

New students enroll only in the fall term.

A fuller statement of admission principles, policies, and procedures may be found online at <http://admissions.dartmouth.edu>. In addition, prospective first-year students may request more information about Dartmouth by using the online request form at <https://apply.dartmouth.edu/register/signmeup>.

Academic Honor

Dartmouth's Academic Honor Principle can be found in the Dartmouth Policy Portal.

Dartmouth's Academic Honor Policy for Undergraduate Students in Arts & Sciences can be found in the Dartmouth Policy Portal.

Faculty Guidelines for Responding to Violations of the Academic Honor Principle can be found in the Dartmouth Policy Portal.

Requirements for the Degree of Bachelor of Arts

The degree of Bachelor of Arts is awarded by the Board of Trustees to qualified students who have been recommended by the Faculty. Certain changes in degree requirements, which take effect for the Class of 1998 and

later classes, were voted by the Faculty and Trustees in 1992; members of the Class of 1997 and earlier classes should consult previous editions of this Catalog for details of the distribution and major requirements as they apply to them.

The degree requirements, given in detail below, fall into several basic categories: Residence (fall, winter, and spring of the first and year and summer following the sophomore year and two terms of senior year), Course Count (35 courses passed), Specific Course Requirements (including Writing and First-Year Seminar, Foreign Language and General Education requirements), a Wellness Requirement, and a Major Requirement. The details of each of these requirements are given in the following sections as they apply to students who matriculated as first-year students. Students who matriculated at Dartmouth after attending another institution of higher education should note the modifications of the graduation requirements that apply to them. To matriculate is to be accepted by Admissions and to be enrolled as a full-time degree-seeking student at Dartmouth College. Students officially matriculate on the first day classes begin for the term. Students studying as exchange students, as special community or as community high school students, are not matriculated at Dartmouth. Any credits these students earn prior to matriculation, if awarded after matriculation, may count as transfer credit only, and do not count towards meeting residency requirements.

I. A student must fulfill the academic requirements of the College and must, as an absolute minimum, complete six terms in residence, registered and enrolled in courses. (Terms spent elsewhere while enrolled in absentia in the various Dartmouth off-campus programs do not serve for any part of this requirement, nor do exchange or transfer programs.) A student must be in residence for all three terms of the first year, for the summer term following the sophomore year, and for two terms of the senior year, in every case being registered and enrolled in courses. A student will normally be enrolled for twelve terms but will be allowed thirteen if two of these are summer terms. For further details and information regarding certain exceptions, see the section on Enrollment Patterns.

II. A student must pass thirty-five courses, although this number may be reached in part by credits transferred from another institution. No credit will be awarded for a course dropped or withdrawn from before completion; unless the withdrawal is authorized, the course will be included with a failing grade in the student's cumulative average. No more than eight courses passed with the grade of D (including those received under the Non-Recording Option) may be counted toward the thirty-five courses required for graduation. No more than 17 transfer courses may be counted toward graduation.

No student may count toward graduation more than a combined total of eight final standings of CT (Credit), NC (No Credit), NR (Non-Recorded from courses under the Non-Recording Option), and E (when resulting from courses under the Non-Recording Option). *NOTE: CT and NC courses earned spring term 2020 are not included in this count.*

A student otherwise eligible for graduation but not in good academic standing as a result of their performance in the last term of enrollment preceding intended graduation may graduate only with the approval of the Committee on Standards. No student may graduate with the standing of Incomplete in any course even though the count of courses passed may exceed thirty-five.

Students are subject to the requirements listed in the *ORC/Catalog* in the year they matriculate. An exception is made for students in good standing who are readmitted after 10 years of absence from the College. These students should contact the Registrar and the chair of the department/program in which they wish to major. The Registrar works with the student to determine appropriate general education requirements, which could be a combination of prior and current requirements. The chair of the major department/program determines appropriate major requirements (and minor requirements, if applicable). An academic plan for graduation is reviewed, possibly modified, and approved by the Committee on Instruction. (Note: Readmission will be considered on a case-by-case basis; former students who have subsequently earned degrees elsewhere, who have been absent from the College for multiple decades, or who have significant requirements to fulfill are unlikely to be readmitted.)

III. A student must pass the following courses, although they may be substituted in part by credits on entrance or by proficiency demonstrated then or later. Either a passing letter grade or a CT (Credit) will suffice. The standing NR assigned under the Non-Recording Option will not serve.

1. Writing: Writing 5; Writing 2-3; or Humanities 1-2. Students must complete the requirement by the end of the second term of the first year. Writing 5, Writing 2-3, and Humanities 1-2 are not eligible for use of the Non-Recording Option.
2. First-Year Seminar: One seminar chosen from an approved list which is available on the College website: <http://writing-speech.dartmouth.edu/curriculum/writing-courses/first-year-seminars>. These seminars, which have Writing 5 (or 2-3) as prerequisite, are designed both to further the student's proficiency in writing and to provide an opportunity for participation in small group study and discussions with an instructor on a subject of mutual interest. This requirement must be completed during the first year. It is never possible to include a First-Year Seminar as an actual part of a major. No First-Year Seminar may be taken under the Non-

Recording Option. Beginning in the 2021-2022 academic year, First-Year Seminars do not satisfy General Education requirements (Distributive or World Culture Requirements).

3. Language: Foreign language courses numbered 1, 2, and 3; or, if competency has been demonstrated equivalent to the three terms of study in one language at the college level, a more advanced course in that same language OR a Dartmouth course in a different language that goes beyond the normal first term of study. If competency was demonstrated in a language not taught at Dartmouth, OR if the student has demonstrated full proficiency in a language other than English, the requirement may also be fulfilled with a course designated LRP (Language Requirement for Proficient Speakers).

Students will be informed during their New Student Orientation of the options that are available to them for satisfying the Language Requirement. Those students who enter Dartmouth with some degree of competency in a language other than English are responsible for making arrangements with the relevant department to demonstrate their level of competency via standardized tests, local placement tests, or other measures of competency.

A student must normally complete the requirement before the end of the seventh term, either in a language offered for admission or in another language begun at Dartmouth.² There are two options: (1) study on the Dartmouth campus in any of the languages offered, or (2) participation in one of Dartmouth's Language Study Abroad (LSA) programs offered in several of these languages.

Language courses numbered 1, 2, or 3 and other beginning language courses may not serve in partial satisfaction of the World Culture and Distributive Requirements. They may not be taken under the Non-Recording Option until the Foreign Language Requirement has been satisfied in another language (and then only if the department/program so authorizes); no course studied off-campus may be taken under the Option.

The language requirement may be substituted under certain disability-related circumstances. In these cases, the Language Requirement is fulfilled by taking a course specified by the Committee on Instruction (COI).

4. General Education Requirements: There are two separate requirements under this heading: World Culture Requirement and Distributive Requirement. These requirements are outlined below and are explained in detail later (including the codes used to designate which courses fall into which categories.)

- a. World Culture Requirement. Each student must take and pass one course in each of three areas: Western Cultures, Non-Western Cultures, and Culture and Identity
- b. Distributive Requirement. Each student must take and pass ten courses, as follows:
 - one in the Arts;
 - one in Literature;
 - one in Systems and Traditions of Thought, Meaning, and Value;
 - one in International or Comparative Study;
 - two in Social Analysis;
 - one in Quantitative and Deductive Sciences;
 - two in the Natural Sciences;
 - one in Technology or Applied Science.
 - *One of the courses in the Natural Science or Technology categories must have a laboratory, field, or experimental component.*

A course may satisfy categories in two of these requirements. For example, a course might satisfy the Western category in the World Culture requirement and the Literature category in the Distributive requirement. Consequently, by careful choice of courses, it is possible to satisfy all of these requirements with just ten courses. Note also that the fact that a course falls within the student's major department or program does not invalidate its use toward meeting these requirements. Courses satisfying general education requirements must be taken subsequent to college matriculation.

Credits received prior to matriculation, even for courses which would qualify for one or more of these requirements if taken after matriculation, do not count, even though they receive course credit or credit on entrance. Courses satisfying these requirements must be passed with a regular letter grade. Courses which are failed, for which the regular grade has been replaced by NR due to the student's election of the Non-Recording Option, or for which the grade is CT (Credit) or NC (No Credit) do not satisfy these requirements. Graduate courses (those numbered 100 or higher) never serve in satisfaction of any part of these requirements.

IV. Students who matriculated with the class of 2025 and earlier must satisfactorily complete the program of Physical Education (PE) as listed in the *ORC/Catalog* published during the year they matriculated at Dartmouth. Starting with those matriculated with the class of 2026 and beyond, students must complete satisfactorily the program of Wellness Education (WE) (p. 795).

V. A student must receive credit for completion of a major program at least satisfactorily, as certified by the

department, program, or other appropriate body supervising the major. The supervising body may in advance require a minimum grade average in the major or other demonstrations of learning in the field of the major. A student may elect a major no earlier than the first day of the fifth term in residence and must do so by the end of the student's fifth term, or immediately thereafter, depending upon the student's enrollment pattern. The major is elected by securing the approval of the appropriate department/program using the online major/minor system. See the Registrar's website for more information. A student may change major, or type of major (including the addition of a second major), at any time through the end of the first week of the last term in residence, but not thereafter.

A full statement of the purpose and the various forms of the major follows. Only those courses passed with a letter grade, or a grade of CT (Credit) if previously approved, may be counted in satisfaction of the major. Courses failed or taken under the Non-Recording Option and resulting in a standing of NR (Non-Recorded), may not be used toward completion of the major.

VI. A student is expected to make satisfactory progress at all times toward the degree. All students should be familiar with the requirements for satisfactory academic progress as set forth in the Student Handbook and the Financial Aid Handbook. The Committee on Standards has been empowered by the Faculty to place a student on Risk, Warning, or Probation, or to vote Suspension or Separation for failure to meet the academic standards detailed there.³

² *Under certain circumstances the Registrar will allow an extension of the seven-term rule; such action may allow a student, otherwise prevented by complications of course scheduling, to undertake the Language Study Abroad program.*

³ *Students who have disciplinary cases pending are not eligible for a degree until the case has been resolved. In any case when penalties are imposed, the case is not resolved until the suspension, period of probation, or other penalty has been completed.*

Students Matriculating after the First Year

For students who matriculate at Dartmouth after having spent one or two years at another institution, the academic regulations and degree requirements described above (and, in some cases, following) have been modified by vote of the Faculty on January 13, 1986 and May 1, 1989. The modifications are as follows.

1. Maximum number of course credits: Students transferring to Dartmouth will be allowed a maximum credit of 17 courses. No further transfer credits will be allowed after matriculation.
2. The minimum number of enrolled terms will be six for all transfer students.

3. A summer term residence will be required of all transfer students. Students transferring after their first year will be in residence the summer following their sophomore year. Students transferring after their second year will be encouraged to be in residence the summer after their fall matriculation. The Office of Admissions should complete the admissions process early enough to allow students to plan for the appropriate summer in residence and notify students accordingly.
4. No credits will be allowed in departments or programs not represented in the Dartmouth undergraduate curriculum for transfer students.
5. Non-Recording Option (NRO) and Credit/No Credit (CT/NC) elections: Students entering after their first year will be allowed 2 NR's and a total of 6 CT/NC plus NR's. Students entering after their second year will be allowed 1 NR and a total of 4 CT/NC plus NR's.
6. Two- and Four-Course Terms: Students entering after their first year will be allowed a two-course load in any two terms and a four-course load in any three terms. Students entering after their second year will be allowed a maximum of one two-course load and two four-course loads. Within those limits no permissions are required nor are there changes in tuition.
7. Students admitted after their first year must declare a major and an enrollment pattern according to the deadline for second-year students. Students admitted after their second year must declare a major and file an enrollment pattern during their first term in residence at Dartmouth.
8. Course equivalencies are determined by the Registrar or their designate. In the event of a question concerning the equivalency or appropriateness of a course, the department/program involved will be consulted. Courses applied for major credit must be approved by the major department/program.
9. Degree requirements for transfer students are the same as for all other students, with the exception of the First-Year Seminar, first-year residence, and wellness education requirements, which are waived. All transfer students must satisfy the senior residence requirement.

Degree Audit and Program Planner

DartWorks is a web-based application accessed on DartHub. It allows students and advisors to plan the student's academic program at Dartmouth. It consists of two components, a Degree Audit tool to help students and advisors monitor a student's progress toward completion of their general education and degree requirements, and a Program Planner for students to declare their majors and minors and to plan their major or minor program with the

help of a Faculty Advisor. Most majors are also included in the degree audit.

The Degree Audit displays how courses that have been completed count toward their requirements, and helps students and advisors see what courses and requirements still need to be completed before graduation. The Program Planner allows the student to indicate future courses they plan to take in the major/minor, by term, prior to receiving major/minor approval. It also has other features, such as the ability to compare courses planned versus courses taken. The Faculty Advisor may approve, adjust, or deny a major/minor plan after they review the student's program plan.

See the DartWorks Guides on how to use the Degree Audit tool to monitor your progress towards a degree and the Program Planner to declare your major and/or minor.

Student Information Site-DartHub

Each student has secure access to a student gateway, DartHub, to conduct many official transactions and to obtain personal academic and financial information.

Students use this system for official transactions such as to check in for each term, elect courses, file an enrollment pattern, order official transcripts, declare a major, and to apply for the degree. Personal academic and financial information such as class schedules, grades, and the DartWorks degree audit and major plan can be viewed here. Students also may use it to access personal financial information and use its alert system as a planning tool. Students are reminded of the Information Services Acceptable Use Policy when using Dartmouth systems.

Academic Support

Support for the academic work of individual students is available through numerous offices, programs, and individuals at the College. Included are faculty members who serve as first-year, sophomore or major advisors, the Pre-Major Advising Office, and the Office of the Dean of Undergraduate Students. Dartmouth provides an Integrated Academic Support Program for first-year students, an Academic Skills Center (including a Tutor Clearinghouse), and a Composition Center. Details may be found in the Student Handbook.

Accessibility and Course Accommodation Support for Students and Their Faculty

Dartmouth College adheres to the Americans with Disabilities Act and Section 504 of the Rehabilitation Act to ensure that no otherwise qualified students with disabilities are excluded from or denied the benefits of a Dartmouth collegiate experience. Student Accessibility Services (SAS) is the primary office responsible for

implementing accommodations/adjustments, services, and other supports in alignment with these laws for undergraduate and BE students with disabilities. (Graduate and professional students seeking disability-related accommodations and services should refer to <https://home.dartmouth.edu/accessibility> for designated contacts.)

SAS' primary functions center on supporting undergraduate students with disabilities and their faculty, and include:

- Engaging in an interactive process with students and academic partners to determine reasonable course accommodations that do not fundamentally alter essential course requirements.
- Supporting students and instructors with implementation of reasonable course accommodations by providing services such as accommodated exam administration in our Testing Center and text conversion into alternate formats.
- Ensuring equitable access through the provision of reasonable accommodations to Dartmouth's programs, services, and activities, and promoting an inclusive campus climate. These may include academic, housing, dining, off-campus program, and other types of accommodations.
- Serving as a resource to campus partners and incorporating accessibility into the broader diversity, equity, inclusion, and belonging efforts of the College.

Eligibility for services is based on a student's disability-related need, primarily evidenced by student history and any needed disability documentation. Undergraduate and BE students with disabilities who believe they may need accommodations or services are strongly encouraged to connect with SAS early in their academic career. To begin the process, students should visit SAS' Apply for Services page. Students with injuries or other temporary conditions are typically not considered disabled but will likely find SAS' online resources helpful.

Reasonable accommodations and services are determined on an individualized basis. These may include testing accommodations, notetaking assistance, alternate-format text, real-time captioning/ASL interpreting, assistive technology, mobility assistance, and/or others. Because many students' accommodations require technology, no-technology policies in courses represent a barrier to access. Regarding one of the most common technology accommodations, the office of the Dean of the Faculty of Arts & Sciences and SAS have determined that,

1. Students authorized by SAS to audio-record class sessions as a documented accommodation should be permitted to do so,
2. There are restrictions on the use of such recordings including the fair-use policy, and

3. Such recordings must be destroyed at the end of the course.

Faculty should contact Student.Accessibility.Services@Dartmouth.edu if they believe any recording exceptions are needed for a course. Faculty who wish to discuss their course technology use and policies or universal design to readily incorporate common accommodations into their courses should contact Learning.Design.Tech@Dartmouth.edu or DCAL@Dartmouth.edu.

Students and faculty have rights and responsibilities in the reasonable accommodation process. For instance, students need to request any approved accommodations in a timely manner and notify their instructors as early as possible. Please see student rights and responsibilities, faculty rights and responsibilities, and Faculty FAQs for more information. Students, faculty, staff, and others are always invited to visit the SAS website, email SAS, or call 603-646-9900.

If a student believes that a necessary accommodation has been denied or that a policy/procedure violation may have occurred, or that they have otherwise been subject to disability-related discrimination, the student should review Dartmouth's informal resolution and formal appeal processes to learn more about their options.

Language Requirement Substitution

The Dartmouth College language requirement is described in "Requirements for the Degree of Bachelor of Arts, III.3" and on the Registrar's website. Under rare circumstances, the language requirement may be substituted with a course for a student who has a disability-related need. Such substitution will not be granted in the absence of (1) a verified disability, (2) sufficient information about the petitioner's disability-related need for a substitution, and (3) approval for a substitution, all confirmed by Student Accessibility Services (SAS). Students who wish to inquire about a disability-related substitution of the language should contact SAS.

Petitions are submitted to SAS and will be considered only from students with documented disabilities who have not yet completed the language requirement. Students who are approved for language substitution by SAS must then select a course from a list of previously approved courses or work with SAS to identify at least two language-related substitution course options (with course descriptions and rationale provided) for Committee on Instruction (COI) review. A student may also petition to use a course they previously completed and passed at Dartmouth for substitution of the language requirement; however, advance approval of substitution courses is recommended.

The COI generally reviews language substitution petitions in the fall, winter, and spring. Petitions made over the

summer may not receive a response until the following fall term. As students are expected to complete the language requirement (or be granted a language substitution) by the end of the seventh term of enrollment, a student's substitution course should also be approved by this point.

Students who have been granted a language substitution:

Once SAS has determined that language course substitution is appropriate, the following occurs:

1. Student must complete a previously approved substitution course, notifying SAS of their intent to count it as their language substitution course, or submit a petition to the COI as described above. If no proposed course is approved by the COI, the student will need to petition again with different courses until at least one substitution course is approved. The student must notify SAS of their COI-approved substitution course and complete it.
2. All grades for elementary non-English language courses will not be incorporated into the student's cumulative grade point average. This provision is retroactive, so there may be effects on a student's existing cumulative grade point average. Students' transcripts will designate those grades and note that they are not incorporated into the grade point average, but the transcript will not contain direct information about the reason.
3. Language courses numbered 1, 2, or 3 and other beginning language courses may not be taken under the Non-Recording Option if they are being used to fulfill the language requirement. However, students have completed the language requirement (through substitution or other means) who still wish to enroll in any elementary language courses (typically numbered 1, 2, or 3) will be permitted to use the Non-Recording Option in those courses. All the regulations governing use of that option will apply except that students who have received a substitution are allowed a total of five (5) uses of the Non-Recording Option, two of which can be applied only to introductory courses in the same language. If the grade matches or surpasses a student's selection, it will appear on the transcript; any grade of NR will count as one of the five uses of the option allowed, and any grade of E will appear on the transcript. However, no grade assigned in the course will be incorporated into the student's grade point average.

Please review the SAS language requirement petition page or contact SAS for more information.

General Education Requirements: Categories

This section describes the categories of the General Education requirement. The following section addresses some procedural matters regarding these requirements.

1. World Culture Requirement. All Dartmouth undergraduates must satisfactorily complete one course from each of the three areas listed below:
 - a. Western Cultures (W). The cultures of the classical Judeo-Christian and Greco-Roman Mediterranean, and of Europe and its settlements. The disciplines of the Arts and Sciences as they are studied at Dartmouth developed in these cultures, as did the institution of the liberal arts college itself. For this reason, Dartmouth students are required to take at least one course with a focus on the cultures of the West.
 - b. Non-Western Cultures (NW). Non-Western cultures, including those with a history of colonialism. The world in which Dartmouth graduates will function demands an understanding of its non-Western majority. Knowledge of non-Western peoples, cultures, and histories is thus an increasing practical necessity as well as a form of intellectual enrichment. Courses that satisfy this requirement have as their primary focus understanding the diverse cultures of the non-Western world.
 - c. Culture and Identity (CI). All students are required to take a course studying how cultures shape and express identities. Courses satisfying this requirement examine how identity categories develop in cultures and as a result of interactions between cultures. Forms of identity to be studied may include but are not limited to those defined by race, gender, sexuality, class, religion, and ethnicity. Courses in this category may study the relations of culture and identity with reference to cultural productions from any part of the world.
2. Distributive Requirement (Dist). All Dartmouth undergraduates must satisfactorily complete ten courses divided as indicated below:
 - a. Arts (one course): (ART). Courses fulfilling this requirement usually focus on one or more art or media forms, using historical, critical, and/or participatory methods. Dartmouth aims to foster creativity, to encourage the acquisition of artistic skills and disciplines, and to equip students with the historical knowledge and interpretive powers that will allow them to be informed participants in the world of the arts and contemporary media.
 - b. Literature (one course): (LIT). Rigorous critical reading and writing are central to all academic discourse; although these skills are not taught exclusively in literature courses, they are actively cultivated in those courses. Knowledge and appreciation of literary texts, and of the diverse cultural histories embedded in them, remain crucial to any liberal arts education. In recent times, the

emergence of literary theory has transformed literary study and broadened the scope of literary criticism to include cultural and interdisciplinary perspectives. Literary theory also poses fundamental questions about the ways in which language and literature represent the world. Courses that satisfy this requirement are usually in the language and/or literature departments.

- c. Systems and Traditions of Thought, Meaning, and Value (one course): (TMV). Courses satisfying this requirement provide students with systematic, critical understanding of philosophical issues or systems of religious belief and practice. They address the ways human beings have conceptualized and put into practice claims about such topics as the meaning of human existence and the nature of truth, knowledge, or morality. Such courses are not restricted to a particular cultural, geographical, or historical focus and may include studies from a wide variety of cultures and time periods.
- d. International or Comparative Study (one course): (INT). In addition to understanding the traditions of particular cultures, an educated person needs to be aware that no nation, society, or culture exists in isolation. To an increasing degree, an international dimension informs all human endeavors, including economic, political, social, ideological, religious, and artistic ones. Thus, all students are required to elect one course that considers interrelationships among societies, cultures, or nations and/or the methods or approaches employed in comparative studies. We seek to ensure that Dartmouth students will be internationally as well as nationally informed.
- e. Social Analysis (two courses): (SOC). Courses in this category examine theories of individual and social human behavior, methods of social observation and analysis, historical analysis and inquiry, and issues of civic life and public policy. Social scientific and historical analyses are important tools in our efforts to understand ourselves and others, the contemporary world and its past. They also serve an important purpose in the development of public policy. Courses in social analysis familiarize students with the critical interpretation of evidence and such means of investigation as experiments, modeling, observation, comparison, statistical sampling, interviews and surveys, the use of records and artifacts.
- f. Quantitative and Deductive Science (one course): (QDS). Mathematical sciences are fundamental to much scientific and social scientific investigation, while the underlying mode of deductive reasoning

continues to inform many ways of obtaining knowledge. In this category, students must pass a course in mathematics, in mathematical statistics, or in symbolic logic, the underpinning of mathematical reasoning. Modern mathematics includes areas as diverse as topology, probability, and combinatorics, as well as the more familiar algebra, geometry, and analysis. An understanding of some basic mathematical techniques is essential for appreciating ways in which the world can be visualized and studied. At the same time, such understanding helps in testing the suitability of many of these visualizations and gives tools to examine the fit between natural phenomena and their abstract models.

- g. Natural and Physical Science (two courses): (SCI or SLA). These courses introduce students to scientific methods of inquiry as well as research methodology and interpretation. One of these courses must provide a laboratory, experimental, or field component as an integral part of its structure (courses in the Technology and Applied Science category may also be approved as satisfying the one-course laboratory requirement.) An understanding of the basic principles and terminology of science, and of the ways in which scientists obtain, validate, judge, test, and then re-judge information, is an essential form of education for this century and the next. Students should acquire some expertise in scientific discourse: in the ways in which facts are acquired, tested, and challenged, and in some of the scientific principles that help to explain physical, cosmological, chemical, and biological processes.

Many science courses are taught with coordinated laboratory activities. In some cases, these laboratories take the form of a field trip, outdoor or off-campus, to a site or facility at which the student can examine first-hand some phenomenon, feature, or object.

- h. Technology or Applied Science (one course): (TAS or TLA). These courses must include the methodology and theory of applied science, and may consider the social contexts, benefits, and threats of technology. They enable students to understand the process by which the discoveries of basic science have been translated into products, facilities, services, devices, and technical information. These courses address the principles underlying technology or applied science, rather than just making use of technology.

General Education Requirements: Procedures

Certain courses, such as Writing 2, 3, and 5, language courses numbered 1, 2 and 3 or equivalents, Independent Study courses, TUCK courses, and all graduate courses (courses numbered 100 and higher) do not qualify to

satisfy any part of the General Education requirements. Beginning in the 2021-2022 academic year, First-Year Seminars do not satisfy General Education requirements (Distributive or World Culture Requirements). All other courses may potentially satisfy one or more of these requirements. Departments and programs must propose their courses for such credit and have the proposals approved by the faculty Committee on Instruction (COI). Courses that have already received such approval are noted in this Catalog with codes described below. The exact category of each offering appear in the Timetable of Class Listings for each term.

While every effort has been made in this Catalog to provide information that is as accurate and complete as possible with regard to the categories satisfied by courses in the curriculum, it is inevitable that a few changes or additions will occur in the period between the time when this Catalog is published and before students elect courses for a term. Thus, information provided in the Timetable of Class Listings for each term will officially supersede that found in this Catalog (or in any other publication such as Department/Program websites). Students should take great care to check the distributive and world culture categories listed on the Timetable of Class Listings for the specific term in which they register for a course. These categories may, or may not, match what is listed in this Catalog.

It should be noted that some courses might almost equally well fall into either of two categories. However, with one exception noted below, each course may satisfy only one category for the Distributive requirement, and only one category for the World Culture requirement. In such situations a decision, which may be somewhat arbitrary, must be made as to which category to select. Students must follow the decision that has been made by the COI; there is no appeal of this decision, nor may students petition (then or later) to have a course count for them in a category other than the one selected by the department or program and approved by the COI. In cases where the category of a course has been changed, the category in effect for the term in which the course was taken will be used.

The following phrase or codes are used in the course listings in this Catalog to indicate the categories for each course:

World Culture Requirement (WCult):

W	Western Cultures
NW	Non-Western Cultures
CI	Culture and Identity

Distributive Requirement (Dist):

ART	Arts
LIT	Literature
TMV	Systems and Traditions of Thought, Meaning, and

Value

INT	International or Comparative Studies
SOC	Social Analysis
QDS	Quantitative and Deduction Sciences
SCI	Natural Sciences (without laboratory component)
SLA	Natural Sciences (with laboratory component)
TAS	Technology or Applied Science (without laboratory component)
TLA	Technology or Applied Science (with laboratory component)

Each course listing in the ORC/Catalog has information on General Education categories. For example, 'Dist: ART, WCult: NW' indicates that the course in question satisfies the Art category for the Distributive requirement and the Non-Western category of the World Culture Requirement. If no listing occurs (for example, if WCult does not appear) then the course does not satisfy any part of the requirement in question.

In the Distributive requirement, certain courses satisfy both the International and Comparative Studies category and a second category, and, for example, would be listed in the ORC/Catalog and Timetable as 'Dist: INT or ART'. However, in each case, a given course can satisfy only one requirement for any individual student (that is, in the example given, either INT or ART but not both). The INT category is the only category under the Distributive requirement that can be combined with another category in this way.

Note that the DartWorks degree audit may indicate that either INT or ART are complete in the example above, regardless of what the student may have ideally chosen. It selects the "best fit." In the end, however, as the student progresses, it will adjust.

The Major

The purpose of a major is to provide a coherent program of study in a discipline or area of knowledge. The College offers a number of options designed to meet the needs of students in their selected major programs of study. These options, in addition to Standard Departmental Majors and Program majors, include a Modified Major or a Special Major. A Modified Major usually comprises work in two departments or programs with emphasis in one. The Special Major exists to accommodate students who wish to design special interdisciplinary or interdivisional programs of study. It is also possible for a student to have combinations of majors and minors; however, a student cannot exceed two additional majors or minors beyond the required major (for a total of three).

No more than half of the courses required for the major, including prerequisites, may be satisfied by transfer.

In planning a major program of study, the student is urged to consider carefully these different options; each is described in detail in the designated section. Consultation with appropriate department or program chairs, advisers, and other faculty members is an important and necessary part of planning a major program. Procedures for students wishing to file more than one major are described in the Working Rules and Regulations Section.

The Committee on Instruction is empowered, for all types of major, to allow individual and general variations from the usual patterns that will assist a given student or improve a major without damaging the basic concept.

Culminating Experience in the Major

Each department and program includes among its major requirements a culminating activity, normally during the senior year, academically challenging and appropriate to the discipline and mission of the department or program. To this end, the following principles apply:

1. The requirement may involve individual projects (theses, directed research and writing, laboratory research, creative projects), senior seminar(s), group tutorials or colloquia, or some combination of these. If the requirement exclusively involves graded individual projects, a department or program may provide, on a regular basis, an informal but mandatory senior colloquium or set of group tutorials (these would not necessarily need to be graded). Their goal is to encourage students to exchange ideas, and to share with one another and with members of the faculty reports about progress with their individual projects.
2. The requirement will assume a solid grounding in the substance of the discipline and expect and encourage development of a relatively sophisticated understanding and use of its methods, thereby fostering the student's ability to articulate their work and ideas in writing, oral presentation, and/or discussion.
3. The requirement must be taken for credit and graded. All majors must satisfactorily complete this requirement.
4. The requirement must involve at least one course credit but may take the form of a single project extended over two or three terms (e.g. a 3-term tutorial, laboratory, creative or research/writing project) with credit and grade recorded upon completion of the final term of the project.
5. Departments/programs may offer more than one sort of senior academic activity in order to maintain rational teaching loads for faculty while providing appropriate options to be elected by or designated for students on the basis of their interests and academic achievements.

The implementation of this requirement for each individual major is described under the department or program section in this Catalog.

Standard Departmental or Program Major

The Standard Department or Program Major consists of eight to ten courses in the major subject in addition to those courses that are prerequisite to the major. (With the agreement of the major department/program at least some of the 'prerequisite' courses may be taken after declaring the major.) Prerequisite courses, unlike those that are part of the major, may be taken under the Non-Recording Option and, with the special approval of the department or program, need not necessarily be passed. Every course counted as an actual part of the major must be passed with a recorded letter grade or previously authorized CT; courses completed with standings of NC, NR, and E are not included.

The major must be a unified and coherent whole, not a series of relatively unrelated courses. When appropriate, however, courses from other departments or programs may be substituted for one or more in the area of the major. For instance, an English major often includes as one of the courses a comparative literature offering, or Chemistry, a physics course. However, such courses must serve in satisfaction of the major (not simply as a prerequisite to the major) in the other department or program unless a course has been specifically approved and listed in this Catalog as suitable for the major credit in the department or program of the student's major. Courses within the major, or offered by the major department or program, satisfy whatever Distributive, World Culture, or Interdisciplinary credits are normally attached to those courses. In other words, these requirements are completely independent of the choice of major.

The Department or Program may set a minimum grade average for admission to and/or completion of the major. It may also impose the requirement of a thesis, comprehensive examination, etc.

When a student finishes a standard major as outlined here, the Department or Program determines whether the student has adequately completed (i.e., passing, or reaching an announced minimum average) the courses of the major declared as part of the program plan, along with other specified requirements. If so, the Department or Program notifies the Registrar of the completion of the major and, accordingly, satisfaction of this requirement for graduation. On graduation, the student's record indicates completion of the major in, for example, Comparative Literature or Physics. No form of Honors or Distinction in the major is allowable unless the student has undertaken an Honors Program (see the next paragraph), although the student may receive overall (Latin) honors, e.g., Magna cum Laude, as the result of grade point average for all courses taken at Dartmouth.

Students with appropriate grade averages and the desire to do so may apply to do an Honors Program in the major (i.e., Honors Major). By so doing they may on graduation achieve Honors or High Honors in the major; please see The Honors Program and Honors in the Major.

The procedures for declaring a major are outlined under Working Rules and Regulations in the Catalog and on the Registrar's website. After a student declares a major and if it is approved or denied by the department or program, the student may make updates by consulting the authorized major adviser and submitting a revised major plan.

Modified Major

Departments and Programs may offer modified majors, intended to fit the needs of students who have a definite interest in the major department/program but are also interested in some specific problem or topic, the study of which depends on courses in related fields.

A modified major contains ten courses, six in one field and four in a second field or perhaps in more than one area. It should be planned as a unified, coherent whole, and not consist of a series of unrelated courses. Students must submit a statement to the primary department or program and to the Registrar, explaining their rationale for the courses selected for the modified major. (For those modified majors where the department/program has listed all of the required courses, no rationale need be submitted to the Registrar.) Each department or program sets its own prerequisite and prescribed courses for a Modified Major, within the limit described above, and in greater detail in the following paragraphs. Courses which form part of a modified major are subject to the same requirements described in the section 'Standard Department Major' described previously; they must serve in satisfaction of a major in the department or program offering the course unless specifically listed in this Catalog as suitable for a modified major. The Registrar may refuse to accept a modified major that does not meet the 'unified and coherent' requirement. If the issue cannot be resolved between the Registrar and the department(s) or programs(s) concerned, it will go to the Committee on Instruction for a decision.

The primary part of the major must consist of six courses in a single major-offering department/program (e.g., English, Biology, History, Comparative Literature). The secondary part must consist of four courses, none of which may bear the same department/program title as that of the primary part. (Exception: when a department or program offers officially distinct subjects, as indicated by differing names, an internal modified major may be constructed, e.g., six French and four Italian courses [or the converse].) Furthermore, there will always be at least one course prerequisite to the primary part and normally one or two prerequisites to the secondary part. In case the primary department/program has no prerequisites for its standard

major, seven courses are required in the primary part of a modified major.

If a student desires a modified major consisting of the necessary primary part with six courses from one department or program and four courses that are not from a single department or program as the second part, the major requires the approval of the chair (or approved faculty delegate) of the primary department/program only. There is no direct advantage to securing a second approval. When a student completes the major, it will be entered in the permanent record as, for instance, 'Psychology Modified,' with no indication of the second part appearing. This is Modified Major "type B."

It is also possible for a student to arrange a Modified Major that will receive full recognition. The student works with one major-offering department/program as the primary and another as the secondary. A non-major-offering department/program may also serve as the secondary field. The major plan must show six courses (plus prerequisites) in the primary field (standing for department or program) and four courses (plus prerequisites) in the secondary field. The various prerequisite courses should be identified. The primary field, as noted, must be a department or program authorized to offer a major; the plan will require the approval of the chair (or faculty delegate) of this department or program indicating specific and overall approval. The plan will also require the approval of the chair (or faculty delegate) for the secondary department or program, again indicating specific and overall approval. Both faculty members, in approving the plan, indicate that the resulting major is an intellectually integrated package; it must not be a 'major' and a 'minor' with little or no relationship between the two fields. When such a major has been completed, the final records will show a major for, say, 'History Modified with Economics,' or 'English Modified with Women's Studies.' This is Modified Major "type A." Please note that a student might take exactly the same courses, but not have the approval by the secondary department or program; if so, the major would be recorded as 'History Modified' or 'English Modified.'

In other respects, a modified major is like a standard one. A student may or may not carry out an Honors Program, the potential results being wholly similar. Please be sure to consult the last paragraph of the previous 'Standard Departmental Major' section and the Registrar's website for directions on declaring a major.

Special Major

Dartmouth offers a choice of established majors in a broad array of disciplines and interdisciplinary areas that follow contemporary trends in scholarship and meet most students' interests. In rare cases, when a suitable major, modified major, or combination of majors and minors does not suffice, a student may pursue a special major program of study, provided that it demonstrates intellectual

coherence and educational merit and has the approval of two faculty advisors and of the Council for Interdisciplinary Studies (CIS).

After consultation with appropriate faculty member(s), the student wishing to pursue a special major should submit in writing the proposed individualized program of study to the Assistant Dean of Faculty for Undergraduate Advising. The proposal should state the purpose and objective of the program of study and list ten interrelated courses, at least one of which must consist of independent study or research in association with a primary advisor. No more than three courses may consist primarily of independent reading, study, or research. If an independent research course in a special major has a minimum GPA requirement, the minimum GPA for the research course becomes a requirement for the special major. For advising assistance, the student should meet with the Assistant Dean of Faculty for Undergraduate Advising.

The proposal must also include a detailed supporting letter from the faculty member who agrees to be the primary advisor and the written endorsement of an additional faculty member who is the intended instructor of at least one of the ten courses, this faculty member to serve as secondary advisor.

In its review of a proposed special major program, the CIS will consider the intellectual coherence of the program and the academic qualifications of the applicant. The CIS will also consider the proposed special major in relation to current major/minor offerings at the College and in comparison to established programs of study at peer institutions. The CIS may, at its discretion, call upon the applicant and the advisors to explain the proposal in person.

Since the CIS does not meet in the summer, students due to file a major in or before the summer term should make application early in the spring term or should file a related standard major from which they may later shift. Petitions for a special major will not normally be considered by the CIS unless the petition is presented early enough to allow the student three full terms of regularly enrolled course work at Dartmouth before graduation.

Application for a special major is a demanding process requiring considerable time and many steps. The applicant should not apply for such a major unless the student has a carefully planned program that is of great personal interest. Often, the goals of the special major may be met through other means, such as major/minor combinations, major modifications, or a senior fellowship. A special major is not likely to be approved if the applicant is simply uninterested in pursuing a standard or modified major. The CIS requires evidence that one of these established majors will not suffice.

Upon approval of a special major, the CIS will notify the student, the advisors, the Assistant Dean of Faculty for

Undergraduate Advising and the Office of the Registrar. The notification letter will indicate the title of the major and list the courses therein. The major advisor and the CIS shall have the right to reconsider a program at any time they may regard the candidate's work as unsatisfactory. Moreover, changes in the course program of the special major will not be made without the approval of the student's primary advisor and the Assistant Dean for Undergraduate Advising, who will send confirmation of any changes to the Associate Dean for International and Interdisciplinary Programs, the Office of the Registrar, and the secondary advisor.

Upon the student's completion of the major program, and upon receipt of a recommendation from the two advisors, the CIS will decide the student's final standing in the major.

Senior Fellowships

By vote of the Board of Trustees, each year there is selected from the junior class a group of students (usually no more than ten, but in exceptional circumstances a maximum of twelve) to be Senior Fellows during the following year. The Senior Fellows are chosen from among students of such intellectual caliber, independence of character, and imaginative curiosity that they have become interested in some personal project of study that will contribute to their own intellectual growth. Every Senior Fellowship must involve a project in which the intellectual scope and breadth of imagination goes beyond that which can be accomplished by taking courses offered in the existing curriculum. These students are permitted all the freedom they are capable of using profitably within the framework of the undergraduate college. The Senior Fellowships constitute recognition of the existence within the College of the kind of responsible individualism that must ever be a part of education in a free, democratic society, and provide exceptional opportunity for self-education for those who are best able to use it.

The Committee on Senior Fellowships is responsible for selection and oversight of the Senior Fellows. The regulations governing the program are as follows:

1. Application for a Senior Fellowship: Members of the junior class may become candidates for Senior Fellowships by individual application. To be eligible, students must have attained a grade point average at the end of the fall term of junior year that places them in the top 40% of their class. The Committee on Instruction is empowered to make small downward adjustments of this requirement when the Committee on Senior Fellowships strongly supports the application of a candidate who does not quite qualify

In the planning and execution of this program a Fellow shall be responsible to some member of the Faculty who shall act as adviser. No member of the Faculty may act as

primary adviser for more than one Senior Fellow during an academic year. In the exceptional case where two or more students collaborate on a senior fellowship, each student must have a separate primary adviser. If the primary adviser is not a tenure line member of the Dartmouth Arts & Sciences faculty, one of the secondary advisers must meet that criterion.

Each candidate must file an application in the third week of the term, two terms before the Senior Fellowship is to begin. Included in the application shall be an application form, itemized budget, and a detailed description of the project: what the candidate proposes to do, the reasons for doing it, and plans for achieving the goals. The applicant must also submit an academic plan specifying proposed coursework and credits for the fellowship year. The plan must include six courses directly related to the Senior Fellowship project. At least four of the six must be Senior Fellowship courses, with the remainder (if any) from relevant department and program course offerings. The applicant's potential adviser shall submit to the Committee on Senior Fellowships, in support of the candidate's application, a comprehensive written statement in which the merit and feasibility of the project, the qualifications of the applicant, and the commitment of the adviser are fully discussed. In addition, two other faculty members must submit recommendation letters for the candidate. If the applicant has a secondary adviser, that faculty member must be one of the recommenders.

2. Selection of Senior Fellows: The Committee on Senior Fellowships will review all applications and select candidates to advance to the interview phase. Selected candidates and their potential advisers will be required to attend an interview with the Committee on Senior Fellowships. Once the interview process is complete, the Committee on Senior Fellowships will vote on the selection of Senior Fellows. A list of the newly appointed Senior Fellows will be forwarded to the President of the College, along with the name(s) of their faculty adviser(s) and information about their Fellowship project.
3. Requirements for Senior Fellows: The Fellowship year comprises three terms of registered enrollment, at least one of which must be spent primarily in residence. Fellows are enrolled for four to six Senior Fellow courses over the three terms of the Fellowship, in addition to the other courses specified in their academic plans. Fellows must be enrolled in at least one Senior Fellow course in each of the three terms of the Fellowship. The Senior Fellow courses are graded on a Credit/No Credit basis, and citations are not awarded for Senior Fellow courses. Supervised independent research away from campus will count as an R-term. Senior Fellows are required to complete a total of thirty-five course credits before the end of their Fellowship year. Fellows must complete all distributive

and related requirements by the end of the second term of the Fellowship. The total number of courses in the three terms shall not exceed nine. All course enrollments and academic plans must be approved by the Committee on Senior Fellowships.

Fellows shall not be required to complete a major but may do so if they so desire; they do not receive any reduction in the requirements for a major. No part of the Senior Fellowship work may be submitted for departmental major honors. Students who plan to finish a major in addition to the Senior Fellowship should be aware that they must complete all of the major's requirements, including a culminating experience if required. The Senior Fellowship does not fulfill the culminating experience requirement for a major.

4. Continuation of Senior Fellowships: The Fellowship appointment is provisional for one term. Continuation for the remaining two terms requires the Committee on Senior Fellowship's approval of a Fellow's accomplishments and rate of progress during the first term. In making its determination, the Committee on Senior Fellowships shall evaluate a written report from the student, a detailed analysis and recommendation of the primary adviser, and such additional information as may be required. Senior Fellows should have a plan to complete a major in time for graduation in the event that the Fellowship is discontinued at the end of the first term.
5. Completion of a Senior Fellowship: Senior Fellowship projects are evaluated by three or more examiners. Except in special circumstances, at least one of the members is expected to be from outside the College. At the end of the first term of the Senior Fellowship, the candidate's primary adviser will recommend two or more examiners, in addition to the primary adviser, to serve on the candidate's Examining Committee. The Committee on Senior Fellowships must approve the list of examiners as well as any subsequent changes to the list.

Each member of the Examining Committee for a Senior Fellow will make a recommendation to the Committee on Senior Fellowships as to whether the Senior Fellow has completed the Fellowship and whether a completed Fellowship should be considered for Honors or High Honors. The Committee on Senior Fellowships will determine the final standing for each Senior Fellow based on the recommendations of all members of the Examining Committees and will notify the Registrar of these final standings. This standing shall become part of the Fellow's permanent record.

The Fellow must submit a draft of the project to the primary adviser by the end of the third week of the final term of the fellowship. The student's final Senior Fellowship project must be completed and submitted to the

Examining Committee three weeks before the beginning of the final examination period in the third term of the fellowship. Each Fellow must make an oral presentation to the Examining Committee within two weeks of submitting the final project. In addition, each Fellow must present the final project to the Dartmouth community in a public forum prior to the beginning of the final examination period in the third term of the fellowship.

Senior Fellows who do not meet these deadlines are not eligible for Honors or High Honors. In addition, the Committee on Senior Fellowships may declare failing a Senior Fellow whose work has not been of satisfactory quality. If this occurs, the Senior Fellow will not receive credit for one or more of the Senior Fellowship courses in the third term of the Fellowship. The Committee shall in such cases specify the requirements to be fulfilled before the degree is granted.

6. Tuition Reduction for Senior Fellows: All Senior Fellows are entitled to attend their final term at Dartmouth College tuition-free. Since this provision may have differing effects on individual students, a Senior Fellow has two options:
 - a. Tuition remission for the final term (for students receiving financial aid, this will mean a reduction in the self-help package for the entire year); or
 - b. A graduate fellowship equal to one term's tuition. The amount of the fellowship is based on the Dartmouth College tuition in the year in which the student completed the fellowship.

Senior Fellows who are receiving financial aid should contact the Financial Aid Office to discuss these two options before making a decision. Senior Fellows who are not receiving financial aid should contact Campus Billing and DartCard Services.

The Honors Program

Each of the various forms of major makes available an Honors Program that is required of candidates for Honors or High Honors in the major, the awarding of these to be decided upon when the student's department/program or other appropriate supervisory body is about to certify to the Registrar the completion of the major.

The program requires work that is clearly greater in depth and scope than that expected in the normal major program. As soon as a student declares a major, the student should receive a description of the Honors Program including requirements for eligibility, the procedure for admission, and the name of the faculty member in charge of the program.

This additional undertaking shall take the form of supervised independent work on an individual or small-group basis to enable students to progress toward an understanding of their major field at an accelerated pace. It

includes a thesis — or its equivalent, such as an experimental investigation — as well as the writing of papers or other creative activity suitable to the major subject. Beyond these stipulations a department/program (or other supervisory body) may at its discretion impose such additional requirements as a start upon the Honors Program in the junior year, a more demanding reading program than it requires of regular major students, and the use of honors courses or honors seminars. Examinations in the Honors Program will be regulated by the department or program. Students may receive a maximum of two course credits for participation in the program.

Admission to an Honors Program is by application to and with the consent of the department/program or other supervisory body. Each department or program publishes in this Catalog the criteria and procedure for admission to its Honors Program. The minimum requirement for admission is a grade point average of 3.0 in the major and a 3.0 general College average at the beginning of the senior year or at any other time that an application for admission is made. The Committee on Instruction is empowered to make small downward adjustments of these requirements when a department or program strongly supports the application of a candidate who does not quite qualify.

As indicated above, Honors Programs will vary, but all will include independent, sustained work. Those students who satisfactorily complete the Honors Program with a 'B+' average or better will earn Honors recognition in their major or, in appropriate cases, High Honors. High Honors will be granted only by vote of the department or program on the basis of outstanding independent work. Departments and programs are urged to make an interim evaluation of honors students after one term and to recommend the continuation of those students only whose work demonstrates the capacity for satisfactory (B+) work. Students who satisfactorily complete the Honors Program will have entered on their permanent record, e.g., High Honors in Chemistry, or Honors in History.

No record will be kept for completion of an Honors Program in the absence of the awarding of Honors or High Honors, since the department or program has thereby indicated that the performance was not 'satisfactory' (in the applied sense of the word).

Honors work in the Special Major requires a recommendation from the student's two advisers with full description of the planned approach to the Council on Interdisciplinary Studies; this recommendation must be submitted in time for the Committee to make its decision by October 1 of the senior year.

Students not meeting the usual requirements for the Honors Program may seek special admission to an Honors Program with department or program support and approval of the Committee on Instruction.

The Minor

Students who wish to elect a minor must officially sign up for it no later than the end of the first week of the last term in residence prior to graduation (and after they have an approved major on their record.)

A student cannot exceed two additional majors or minors beyond the required major (for a total of three). If the minor has been completed at the time of graduation, it will then be noted on the student's transcript, but the fact that a student is working toward a minor will not appear on the transcript prior to graduation. It will, however, appear on the student's degree audit.

Minors may be offered by departments, programs, or groups of faculty, and must be approved by the Faculty. A minor consists of at least six courses, no more than two of which may be designated as prerequisites (although more than two prerequisites may be required). The courses beyond prerequisite must be suitable for the major in those departments and programs offering a major, or of similar level in other departments and programs. The entire program for each minor is to form a unified and coherent intellectual whole. One or more faculty members will be designated as advisers for each minor.

A student enrolls in a minor by declaring the minor and submitting a plan, similar to declaring a major, indicating the courses constituting the minor program along with the terms in which the courses will be taken. See the Registrar's Office website for procedures on declaring a minor. In general, a minor may not be in the same department or program as the student's major. There are some exceptions to this; examples include: French with Italian, Physics with Astronomy, and Computer Science with Digital Arts. For a complete list of invalid major/minor and modifier combinations see the Invalid Combinations page of the *DartWorks Guide*. Departments/Programs may petition the Committee on Instruction for any additional combinations. As with Dual Majors, no course may count toward both a major and a minor or toward both of two minors (although a course may be part of one of these and prerequisite to the other, or prerequisite to both, subject to the approval of both departments or programs). At most one course in the minor, including prerequisite courses, in which the standing of NR is received may be used toward satisfying the minor. Individual departments or programs may disallow courses with NR standing to count toward their minors; see the individual department or program information in this Catalog to determine whether courses with NR standing are allowed to count toward their minors.

No more than half of all courses required for the minor, including prerequisites, may be satisfied by transfer.

A student may develop a special interdisciplinary minor working directly with two or more faculty advisors. A proposal for a special minor, including a written rationale,

must be approved by the Council for Interdisciplinary Programs. A special minor normally shall include no more than one course taken prior to petition and approval.

After consultation with appropriate faculty member(s), the student wishing to pursue a special minor should submit in writing the proposed individualized program of study to the Assistant Dean of Faculty for Undergraduate Advising.

Statement of Credits

For a student who was registered fall 1985 or later all courses are in the form of course units. Each course count unit may be considered the equivalent of a semester course worth 3.5 semester hours (4.5 if a laboratory course) or 5 quarter hours (6.7 if a laboratory course.) This statement appears with undergraduate official transcripts issued as of academic year 2018-2019 and thereafter.

Scholarship Ratings

Regularly Graded Courses: Since the fall term of 1973-1974, the grade assigned at the completion of a course has been one of the following: A, A-, B+, B, B-, C+, C, C-, D, or E. The following guidelines offer general criteria for evaluation and grading, with 'plus' or 'minus' designations indicating that, in the opinion of the instructor, the student has performed at a level slightly higher or lower than the norm for that category.

- A: 1. Excellent mastery of course material
 - 2. Student performance indicates a very high degree of originality, creativity, or both
 - 3. Excellent performance in analysis, synthesis, and critical expression, oral or written
 - 4. Student works independently with unusual effectiveness
- B: 1. Good mastery of course material
 - 2. Student performance demonstrates a high degree of originality, creativity, or both
 - 3. Good performance in analysis, synthesis, and critical expression, oral or written
 - 4. Student works well independently
- C: 1. Acceptable mastery of course material
 - 2. Student demonstrates some degree of originality, creativity, or both
 - 3. Acceptable performance in analysis, synthesis, and critical expression, oral or written
 - 4. Student works independently at an acceptable level
- D: 1. Deficient in mastery of course material

2. Originality, creativity, or both apparently absent from performance

3. Deficient performance in analysis, synthesis, and critical expression, oral or written

4. Ability to work independently deficient

E: 1. Serious deficiency in mastery of course material

2. Originality, creativity, or both clearly lacking

3. Seriously deficient performance in analysis, synthesis, and critical expression, oral or written

4. Cannot work independently

The following grade point values are assigned: A, 4; A-, 3 2/3; B+, 3 1/3; B, 3; B-, 2 2/3; C+, 2 1/3; C, 2; C-, 1 2/3; D, 1; and E, 0.

In view of the many grades assignable and differences in faculty policies, every faculty member will explicitly declare criteria for grading to students in their courses and provide as much information as possible with respect to an individual student's progress and the evaluation of the final grade assigned.

A course assigned a grade of E does not add to the student's total (course count) counting toward the minimum of 35 for graduation, nor does it serve in satisfying any other graduation requirement. The E is, however, a permanent part of the student's record, is included in all calculations of the student's grade point average and is shown on transcripts.

On May 23, 1994, the Faculty voted that transcripts and student grade reports should indicate, along with the grade earned, the median grade given in the class as well as the class enrollment. Departments and Programs may recommend, with approval of the Committee on Instruction, that certain courses (e.g., honors classes, independent study) be exempted from this provision. Courses with enrollments of less than ten are also exempted. At the bottom of the transcript there is a summary statement of the following type: 'Exceeded the median grade in 13 courses; equaled the median grade in 7 courses; below the median grade in 13 courses; 33 courses taken eligible for this comparison.' This provision applies to members of the Class of 1998 and later classes.

A student who has failed a course may elect it again. In this situation both of the grades are recorded and included in the cumulative average; only one course credit is earned. The same general principle applies to Credit/No Credit courses.

At the end of each term every undergraduate may view a grade report listing the courses taken, the grade in each, the term and total overall course count, and the grade point average for the term and overall. This information is available on DartHub.

At the end of each term every student's term and cumulative grade point average (GPA) are calculated. The GPA calculation includes solely courses taken at Dartmouth on a regular A through E grading scale (GPA courses). The calculation uses quality points which are three times the usual grade values to prevent the accumulation of errors: an A counts as 12 points, A- as 11, B+ as 10, B as 9, B- as 8, C+ as 7, C as 6, C- as 5, D as 3, and E as 0. The GPA is the sum of the quality points divided by three times the GPA courses. This quotient is rounded to two decimal places.

The grade reports show alongside a course entry, when appropriate, an asterisk to indicate the intention of the instructor to award a citation. Citations are designed to procure an official record of information about undergraduates who have made particularly favorable impressions on members of the faculty because of their unusual talents, dependability, initiative, resourcefulness, or other meritorious characteristics that are not indicated adequately by academic grades. The actual statement of citation is included with a student's transcript whenever such is issued unless the instructor has failed to supply it at the time of issuance of the transcript or the student does not wish it to be included.

If a student has elected a course under the Non-Recording Option, the grade assigned by the instructor is shown on the grade report, then the limiting grade selected by the student, and finally the officially recorded standing. If the assigned grade has at least matched the grade limit, the assigned grade becomes the official grade; if not, the standing 'NR' (Non-Recorded) is posted unless the assigned grade is E. Please consult the section on the Non-Recording Option.

It should be noted that grades that are high enough to satisfy the various degree requirements may not be indicative of overall satisfactory progress and may lead to action by the Committee on Standards; consult the Student Handbook.

Final Grades:

Final grades are the responsibility of the instructor.

Student-Initiated Appeal:

- A student who questions the appropriateness of a grade confers with the instructor.
- If the instructor agrees, the instructor makes a written request to the Registrar, with the approval and co-signature of the department/program Chair.
- The instructor must indicate one or more specific ways in which the student was done an injustice. A simple change of mind will not suffice.

- It may not be made on the grounds of course work completed after the term in which the course was offered other than in the case of an official incomplete.
- If the instructor refuses to make a grade change:
 - The student may appeal, in turn, to the Chair, the Associate Dean of the Faculty for the appropriate division, and the Dean of the Faculty; it is unusual for such appeal to go beyond the Chair.
- The student must initiate the appeal to the instructor, in writing, by the last day of the term following that in which the course was taken.
- The instructor must submit the final grade to the Registrar by the last day of the *second* term following the term in which the course was taken.
- If the student has been graduated, only the department/program Chair may initiate a grade change. It must be submitted within one year of the student's graduation in the case of clerical, computational or other similar administrative error.

Instructor-Initiated Grade Change:

- The Instructor makes a written request to the Registrar, with the approval and co-signature of the department/program Chair.
 - The Instructor must indicate one or more specific ways in which the student was done an injustice. A simple change of mind will not suffice.
 - It may not be made on the grounds of course work completed after the term in which the course was offered other than in the case of an official incomplete.
- The Instructor must submit the final grade to the Registrar by the last day of the term following the term in which the course was taken.
- If the Registrar refuses to make the change, the instructor may appeal to the Dean of Faculty;
- If the student has been graduated, only the department/program Chair may only initiate a grade change. It must be within one year of the student's graduation and only in the case of clerical, computational or other similar administrative error.

Note: These procedures also apply to undergraduate courses with the subject TUCK, however where required the Tuck School of Business Dean designates the appropriate Chair equivalent within the Tuck structure. If the appeal goes further, it proceeds to the Tuck Dean.

Temporary Transcript Designations

There are various circumstances in which the final grade in a course cannot be submitted by the instructor during the usual period immediately following the end of the final examination period. Three different designations, I (Incomplete), ON (On-Going), or AD (Administrative Delay), may appear temporarily on the end of term grade reports and on transcripts, depending on the circumstances, as described below.

There is no grade of Incomplete. Incomplete is a temporary notation placed on a student's record to indicate that the work in a course has not yet been completed and therefore a grade has not yet been submitted by the instructor. The assignment of Incomplete in a course may be made only by the Dean of the College⁴ upon request of the student and the instructor. Failure to complete a course on time without prior approval by the Dean will result in the grade of E. Generally speaking, an Incomplete is approved when there are circumstances that are judged to be beyond reasonable control by the student.

⁴ *Although the original vote of the Faculty was specific, all of the Deans in the Undergraduate Deans Office are qualified to act in the context of Incompletes.*

If the request is based on such an academic reason as an unanticipated difficulty in obtaining sources or the failure of a critical experiment, the student should consult first with the instructor. Approval by the instructor of the student's request should be in writing and should set forth the circumstances. This document should then be sent directly to the Dean of the College.

If the request for an Incomplete is based on non-academic reasons (illness, unavoidable absence, etc.), the student should make it directly to the Dean of the College who will grant or deny the request after consultation with the instructor in the course.

All Incompletes are granted for a specific period to be established jointly by the student and the instructor with the concurrence of the Dean of the College. If the student fails to complete the work of the course within the agreed period and no extension is granted, the instructor reports the appropriate grade for the student based on the student's performance, no credit being allowed for the fraction of the work not turned in. If the instructor fails to report a grade, the Dean, after consultation with the instructor, the department or program chairman, or both, may ask the Registrar to record the grade of E (or in courses offered on the Credit/No Credit basis, the final standing of NC). Extensions of time beyond the original deadline are granted only in exceptional cases. A request for an extension must be received by the Dean of the College before the established period has expired and are granted or denied after consultation with the instructor.

NOTE: All requests for the temporary standing of Incomplete must be received by the Dean of the College on

or before the last day of the corresponding examination period.

The designation ON (On-Going) may be used on transcripts when the assignments of a single course necessarily extend beyond the limit of a single term. Examples of such circumstances are certain senior honors courses where the work in a preliminary course cannot be evaluated until a second term of a thesis or other project is completed. It is also used for certain Music courses where three (3) terms are required to complete the course whereupon one credit is earned in the final term.

The *ORC/Catalog* course description indicates those courses in which a grade of "ON" may be assigned. Grades for any course not having such permission must be assigned at the end of the term in which the course is offered. For ongoing courses, except for Music courses described above, the first term of a two-term ongoing grade is replaced with same final grade as the final term when no other grade has been assigned. Students may receive no more than two (2) credits for a single ongoing course. In the case where the "ON" is assigned for certain three-term Music courses and a single credit is earned, the grade is earned, and the course load is applied in the final term only.

The designation AD (Administrative Delay) may be used on transcripts when the grades of one or more students in a course cannot be reported on time due to administrative or personal factors, but where the use of an Incomplete is not appropriate. Examples of such circumstances are a serious illness of the instructor at the time grades are due, or delays in receiving grades from Off-Campus programs. Requests for use of this designation, including an agreement on the date when the final grades will be submitted, will be made by the instructor or Chair to the Registrar.

Credit/No Credit Courses

Certain courses are offered on a Credit/No Credit basis. A student electing one of these courses receives a grade of CT (Credit) or NC (No Credit). A grade of NC is defined as failure to complete the course satisfactorily according to criteria to be announced by the instructor at the beginning of the term. Such a course will be counted, if the grade is CT, toward the minimum of thirty-five needed for graduation. A course with grade of CT or NC may not be used to satisfy a General Education requirement. If approved previously, a Credit/No Credit course may be counted toward the Major Requirement.

Courses under this system carry no grade units and are not used in establishing a cumulative average. If a student receives a grade of NC, the course is recorded as such, and no increase in course count is achieved.⁵ As in regularly graded courses, there can be a temporary standing of Incomplete.

⁵Students should note that, although a grade of NC does not affect the Dartmouth grade point average, certain outside agencies may count such grades as E's and will recalculate the student's grade point average to reflect this. Check their website for waivers related to COVID-19.

While endorsing the system here indicated, the Faculty believes it necessary to ensure that students have on their records an adequate number of regular letter grades. A limit has been set for each student of overall eight final standings of CT, NC, NR, and E (the last standing only when assigned in an NRO course). Accordingly, the degree of use of 'Credit/No Credit' courses affects the election of courses under NRO and vice-versa. (If a student never uses the Non-Recording Option or does so but always regains the eligibility temporarily invested, that student may accordingly elect as many as eight Credit/No Credit courses.)

The concept of essentially non-graded courses was developed mainly to offer an improved way of dealing with subject matter that is intrinsically ill-suited for grading. It may be applied, however, to any area when an instructor desires, provided in every case that the authorization of the Department or Program offering the course has been obtained sufficiently in advance. An individual course may accordingly be offered in different terms as a regularly graded course or in the fashion described here. The Registrar's Office website, including a link on the Timetable of Class Meetings lists the Credit/No Credit courses for the given term. No change in either direction may be made after publication of the published list and no individual student may be graded in a fashion different from the announced pattern.

In a given term all sections of a course offered that term in two or more sections must be offered under the same pattern: all must be regularly graded, or all must be Credit/No Credit (with the pattern having been earlier announced, as indicated previously).

Students should be sure to recognize the differences between a Credit/No Credit course and a course taken under the Non-Recording Option, as described in the following section. A department or program sets the grading pattern for a Credit/No Credit course. A student may elect a CT/NC course but may not determine the grading mode. However, the student does have the option to choose the Non-Recording Option unless the course has been placed 'out of bounds.'

Non-Recording Option

To support and encourage students who would like to elect courses that may pose greater than usual academic risk, the Faculty offers the Non-Recording Option to undergraduate students.

Eligibility - Students

Available to all students who are enrolled and taking courses except for students on Probation, Warning, or the first term following assignment of Risk.

Description

- Students may elect to receive an NR in one regularly graded course per term except for any courses departments or programs have indicated as “out-of-bounds”. The faculty member will submit a letter grade which will not be shown on transcripts or included in the calculation of students’ grade point averages.
- Students may either indicate that they wish to receive an NR, regardless of what grade the instructor assigns, or indicate the lowest grade they wish to display on their transcript.

Grades and GPA

- A regular letter grade is assigned by the instructor and recorded internally.
- If a student receives an NR:
 - The letter grade submitted by the instructor, while not used in computing any recorded grade average, is available for internal use (e.g., in connection with the limit on the number of D’s allowable).
- A ‘non-recorded’ D will be counted toward the maximum of eight D’s allowable in the minimum course count for the degree
 - It will make the student liable for academic action by the Committee on Standards.
- If an E grade is recorded it displays on the transcript and is averaged in the calculation of students’ GPA.

Eligibility – Courses

- Various departments and programs, or instructors, believe certain courses are unsuitable for use of the option. They are considered “out of bounds”.
 - A list of courses that are “out of bounds” is maintained and published by the Registrar on the Timetable of Class Meetings each term.
 - In addition to individual “out of bounds” courses, students may not use the NR option for any:
 - First-Year Seminars
 - Courses studied off-campus
 - Courses taken in satisfaction of the Language Requirement or prior thereto
 - Graduate courses

Restrictions - Faculty

- Departments and programs may not make any change to or from the out-of-bounds status for their course(s) following the publication of the Timetable of Class Meetings for a given term.
- Departments and Programs may not grant an exemption from the out-of-bounds status to an individual student.
- Instructors assign a regular letter grade.
 - Instructors are not informed which members of their class have elected the option.
 - Instructors may, however, know how many students elected the option.

Restrictions – Students

- Each undergraduate is allowed one NR in a term.
- Students may have up to a maximum of three total uses of the option that result in a standing of ‘Non-Recorded’ (NR) over their Dartmouth career; *For exceptions to the limit of three uses, see the section on Language Requirement Substitutions.*
- A course that receives NR is included in the student’s sum of credits toward graduation.
- A standing of NR prevents the course from being used to satisfy:
 - Distributive requirements
 - The World Culture requirement
 - Major requirements.
- An NR may, however, be used to satisfy:
 - Prerequisite courses to the major
 - At most one course in the minor, including prerequisite courses.
- Uses of the option resulting in the standing of NR or the grade of E (up to the maximum of three) are included in the total of eight courses that may be taken Credit/No Credit or under the Non-Recording Option.
- Students should note the crucial NRO dates published on the term calendar for selecting the option, changing the course chosen, withdrawing from the election of the option, and for altering the choice of grade.
 - The Registrar does not grant extensions of NRO deadlines for any but the most extenuating and compelling circumstances.
 - Should a student withdraw from the course selected for NRO after the end of the initial fifteen days, they do not use the eligibility associated with the

designated course but are not able to make use of NRO in that term.

- Students sometimes desire the release of the concealed letter grade, for example for use in a major, for general education credit, or for admission to a graduate school. Such requests are not considered.

Procedure

- Within the first fifteen days (usually eleven class days) of a term a student may indicate use of the Non-Recording Option for one course each term.
- The student indicates the lowest letter grade they are willing to have recorded and used in averaging for each course.
- The student may also, instead of a letter grade, indicate the intention to have a final standing in the course of NR (Non-Recorded).
- At any time after this initial period, but not later than five class days before the last day of classes for the term, a student may revise the choice of lowest acceptable grade or of NR.

Outcomes

- There are three possible outcomes for a course under the option:
 - If the grade assigned by the instructor matches or surpasses the student's final choice, it is entered and serves in all respects as a regular letter grade.
 - If the grade is not an "E" but otherwise lower than the student's final selection, or the student chose to receive an NR, the entry on the student's permanent record and on transcripts is NR.
 - The standing of NR is permanent: requests to revoke it and reveal the letter grade originally assigned by the instructor must be refused.
 - Should the assigned letter grade be E, this grade is recorded and averaged in the normal fashion no matter whether the student chose a grade or NR. The student receives no course credit.

Special Students

Special Students are non-degree candidates who are admitted on a temporary basis. They include academically prepared area high school students who participate in Dartmouth's Community High School Program (CHSP), administered by the Dean of Admissions, and qualified College students admitted through the Admissions Office for the summer term only.

In addition, the Dean of the Faculty may, in extraordinary, rare circumstances admit a special student temporarily for one or more terms other than summer term.

While the degree regulations do not apply to Special Students, most of those applying to specific courses and College Regulations do; Special Students should note particularly the following section on 'Working Rules and Procedures.' High school students should refer to the Community High School Program web page.

Enrollment Patterns (D-Plans)

First-Year Residence

All students must be on-campus in residence (R) during fall, winter, and spring of their first year. Shortly after the start of the spring term every first-year student must submit their enrollment pattern (D-Plan) for the remaining nine terms. The pattern must be within a period of four academic years (within fifteen terms after matriculation) and designed to meet degree requirements. After the first year, students may substitute an Off-Campus Program term (O) for one or more of the remaining nine terms.

Transfer students will have fewer terms to complete their requirements. They are subject to the number of terms to complete their degree as confirmed by the Registrar at the end of their first term. The number of terms in residence depends on the initial number of credits which transferred to Dartmouth.

After this initial enrollment, students may make subsequent changes in their enrollment pattern (D-Plan) online using DartHub.

Sophomore Summer Residence Requirement

All students are expected to be in residence during the summer term that immediately follows the sophomore year to take advantage of the presence of an entire class during that time. Dartmouth-sponsored off-campus summer programs or substitution of another summer residence term may be used in satisfaction of the sophomore summer residence requirement.

The Registrar may waive the requirement of a summer residence term with support from the appropriate Dartmouth official. It will be granted only in *truly exceptional* circumstances when demonstrated that it will significantly enrich that student's Dartmouth academic program. Other circumstances that may merit a waiver include cases of demonstrable serious financial hardship, a serious personal or health problem, or participation in varsity athletics in the fall, winter, and spring terms of every year. However, no more than eight percent of the class (including exemptions for three-term athletes) will be allowed for any college class. Students who receive a delay for sophomore summer are expected to be in residence the following summer.

Senior Residence Requirement

Seniors are expected to be in residence at least two terms their senior year. The senior year is normally considered the fourth year after matriculation. For students who graduate earlier or later, the senior year is the final academic year the students are enrolled. Students should plan carefully prior to senior year to ensure they meet this requirement. At most students may have seven fall or spring residence (R) terms in total unless one or more of those terms is participation in an Off-Campus Program (O).

Students who had expected to graduate spring term of the fourth year after matriculation but are unable to do so for whatever reason may enroll an additional term to complete their degree. The additional term may be during the subsequent summer or winter term (only).

Petitions to the Registrar for exceptions

Students may submit an enrollment pattern (D-Plan) petition to the Registrar for requests that do not meet the requirements above. Petitions must be accompanied by a copy of the student's approved major plan and in many cases require support for the exception by the appropriate Dartmouth official. Students submit all enrollment pattern (D-Plan) petitions to the Registrar each term no later than one week prior to the last day of the term.

Students who desire to file an enrollment pattern (D-Plan) distributing the thirty-five courses over a period of five academic years (sixteen to nineteen elapsed terms) or to change a previously approved pattern to a new one of this type, must petition the Registrar. Five-year patterns will not be reviewed until a student has progressed well into the sophomore year and has an approved major on their academic record.

In planning and modifying their enrollment pattern (D-Plan), students should be careful to accrue enough leave terms in the sophomore and junior years to avoid having a thirteen-term pattern when only twelve terms were required. Students who have or will have met all graduation requirements after twelve terms are not approved for additional terms. (The desire to add or complete a minor, additional major, or participate in an off-campus program does not qualify a student to enroll additional terms.)

Students may appeal the Registrar's decision to a subcommittee of the Committee on Standards, as described in the *Organization of the Faculty of Dartmouth College*.

Additional notes

Students who wish to take more than four consecutive terms with an enrollment pattern (D-Plan) of only leave (L) or administrative withdrawal (A) terms must withdraw from the College after the fourth such term by contacting the Undergraduate Deans Office.

International students should consult with the Office of Visa and Immigration Services about implications for their

visa status in SEVIS before initiating more than one leave (L) term within the United States or before initiating a withdrawal.

Off-Campus Activities

Students have a variety of opportunities for studying off-campus. Dartmouth strongly encourages students to study through Dartmouth-sponsored programs and exchange programs. In addition, students may independently seek out programs offered by other institutions which Dartmouth refers to as transfer terms. The Frank J. Guarini Institute for International Education administers Dartmouth-sponsored credit-bearing programs and applications to participate in exchange programs. The Office of the Registrar administers transfer term applications as well as exchange and transfer course approvals.

To be eligible for a Dartmouth-sponsored off-campus program or exchange program, accepted students must be in good standing, must not have the temporary standing of Incomplete in any course, and must have completed the First-Year Seminar requirement. The rules for approval of transfer courses taken while on an exchange program are the same as for all transfer courses. (See 3 below, Transfer Credit from other Institution.) Students who wish to participate in a transfer term must petition the Committee on Instruction (COI) outlining how the transfer term meets their academic goals.

Only programs taught by Dartmouth faculty, i.e. Dartmouth L.S.A. (L.S.A.+) and Dartmouth F.S.P. carry Dartmouth course credit. The Committee on Off-Campus Activities (COCA) is charged to review and supervise all Dartmouth-sponsored off-campus academic programs and activities. Other off-campus coursework activity, exchange programs or non-Dartmouth programs may be eligible for transfer credit.

The Off-Campus Programs Office determines the cost of each of the programs. While tuition remains the same, the total cost of most programs exceeds the cost of a term spend on campus due to increased travel and living/food costs. Students who receive need-based financial aid will receive scholarship assistance to cover costs in excess of those of a typical term, and their expected family contribution (EFC) will remain the same as a term here on Campus. If you have a work expectation for the term, it will be replaced by scholarship funding for programs that span the entire term. Work is not replaced for fall plus programs as students are in Hanover for the 10-week term and remain eligible to work.

The Committee on Instruction is charged with the oversight of transfer terms. Students may transfer no more than four Dartmouth-equivalent course credits from other institutions toward the degree at Dartmouth and transfer credits received for courses taken at other institutions prior to matriculation count toward the maximum permissible

total of four. A student participating in a transfer term pays an application fee to Dartmouth for each term of participation. No Dartmouth scholarship aid is available to students enrolled in an academic institution with which Dartmouth has no formal exchange agreement.

Dartmouth College does not investigate the issues of safety and security in the various transfer programs students may consider when taking a transfer term; it is the students' responsibility to investigate these issues. Dartmouth urges students to explore with their parents all issues of safety and security.

1. **Guarini Institute Off-Campus Programs:** Officially recognized programs that are administered and led by Dartmouth Faculty. Students receive specific course credits and grades. A list of programs is published on the Guarini Institute website.

The Guarini Institute website describes all programs in detail. Note: The Arabic, Chinese, Film Studies, German, Japanese, Portuguese, Russian, Spanish, and Theater summer programs serve in satisfaction of the summer residence requirement.

Candidates for Foreign Study (FSP) and Language Study Abroad (LSA) Programs apply online via the Guarini Institute website by the appropriate deadlines; selection is made by the sponsoring department or program. It is the student's responsibility to review information on the Guarini Institute website or contact the Guarini Institute staff for application deadline information. Although the Language Requirement is, by regulation, to be completed by the end of the seventh term, the Registrar can grant an extension to permit L.S.A. study at a later time if a student's program of study prevents earlier enrollment.

Specific Dartmouth course credit and grade can be given only for a course taught or directly supervised by a Dartmouth faculty member. Students must elect a three-course load; two- and four-course loads are not allowed on Dartmouth off-campus academic programs. Courses taken on such programs are out of bounds for the use of the Non-Recording Option. Students are expected to be at their program for its full duration.

For academic off-campus program courses delivered in the English language, elective courses must be closely related to the subject of the program and an integral part of an officially defined undergraduate Arts and Sciences curriculum. Thus, pre-professional, technical, business or graduate courses are not acceptable. The elective course does not satisfy distributive or world-culture requirements unless such requirements have been assigned by the Committee on Instruction at the time the off-campus program is authorized.

A senior who participates in an off-campus program must obtain special permission from their major department or program; such approval is strongly advised for juniors as well. A senior may, with the permission of the chair of the

major department/program and the Registrar, replace one of the required residence terms by a term of off-campus study in the principal field of the major, provided such will be of great benefit to the student's program and will in no way interfere with proper completion of the major or other requirements.

No Dartmouth student may participate in more than three terms of Dartmouth-sponsored off-campus programs (i.e., L.S.A. and/or F.S.P., etc.) for academic credit, except by special permission by the COCA based on a written petition presenting valid academic reasons and strongly supported by the student's major department or program.

2. **Transfer Credit from Dartmouth Exchange Programs:** A student may participate in one of Dartmouth's established Exchange Programs by applying online via the Guarini Institute website by the appropriate deadline. Grades received in courses transferred from other institutions are not recorded on the Dartmouth transcript or included in the Dartmouth cumulative average. Credits earned on Exchange Programs are included in the maximum of four transfer credits allowed toward the degree. Information regarding procedures for pre-approval of transfer credit from exchange programs is available from the Guarini Institute and the Registrar's Office.

It is the student's responsibility to seek and obtain department or program pre-approval for the transferability of each course, for distributive and world culture attributes, and for possible major and/or minor credit, if appropriate.

3. **Transfer Credit from other Institutions:** Students desiring transfer of course credit from any other institution not part of a formal exchange program with Dartmouth submit a Transfer Credit Application and Transfer Credit Approval Form to the Office of the Registrar by the appropriate deadline date listed on the Registrar's website. A non-refundable, non-petitionable application fee of \$2,200 is assessed for the winter, spring, and summer terms. No fee is assessed for fall term. To initiate the process, students should review the policies and procedures on the Registrar's web site regarding transfer credit, research transfer term possibilities by talking with professors and reviewing online resources, and prepare a statement describing how they plan to incorporate the transfer term into their Dartmouth academic program. Students obtain the required transfer credit application forms on the Registrar website. Following are the policies surrounding transfer credit:

- a. Prior Dartmouth approval is required for the specific program as well as individual courses. It requires review and approval by a sub-committee of the Committee on Instruction, the Registrar, and the Departments/Programs accepting transfer of the courses. It is the student's responsibility to initiate the process and to seek and obtain department or program approval for the transferability of each course. This would include distributive and world

- culture attributes, as well as possible major and/or minor credit, if appropriate.
- b. Potentially acceptable programs and undergraduate courses. Courses offered by accredited degree-granting institutions are potentially acceptable for transfer credit provided the courses are an integral part of an officially defined undergraduate Arts and Sciences curriculum; online courses, those given by extension programs, or internship programs are not transferable. Students should be aware that some departments and programs have restrictive policies toward transfer credit.
 - c. Length of term. For each potential transfer course, students must be enrolled for a minimum of three weeks and thirty contact hours per Dartmouth course credit.
 - d. Credits, grading, and general education attributes. A minimum of three semester hours or four quarter hours are required to earn one Dartmouth course credit. A minimum grade of C quality or better must be earned. Grades received in courses transferred from other institutions are not recorded on the Dartmouth transcript or included in the Dartmouth cumulative grade point average. A pass/fail course is not accepted in the absence of proof that the grade is a minimum C quality. Courses elected under such a grading option do not carry distributive or world culture attributes.
 - e. Deadlines. Deadlines for each term and the Transfer Term Application and Transfer Credit Approval forms are available on the Registrar's website and from the Office of the Registrar.
 - f. Approvals. A sub-committee of the Committee on Instruction (COI) reviews each Transfer Term Application and will inform the student whether or not their transfer term has been approved. Approval of a course(s) by department/programs is required but not sufficient for transferability. Normally no more than 5 students may participate in the same program in the same term.
 - g. Course changes. A student with approved plans for an exchange or transfer term at another institution, who finds after enrollment that an approved course is not available, may apply for approval of a substitute course. After the transfer term starts, it may be possible to substitute a course for one that was approved previously, but such approval is not guaranteed. Additional non-related courses are not approved. Students must contact the Registrar's Office to initiate such changes.
 - h. Transcripts. Upon completion of the transfer term the student must personally request that an official transcript from the host institution be sent directly to the Dartmouth College Registrar's Office. All

transcripts must be on file in the Registrar's Office by the end of the term immediately following the transfer term. No credit is entered on the Dartmouth record until an official transcript has been received from the transfer institution.

- i. Limits of transfer credit. Students admitted as first-year students may transfer a maximum of four course credits toward the thirty-five required for the Dartmouth degree, whether such credits have been earned prior to matriculation or subsequently. Students with special academic plans may petition the Registrar for transfer study up to a total of one academic year (i.e., nine credits). Normally one additional credit may be approved, and the Committee on Instruction may review petitions for further credits when unusual circumstances arise.

Academic Standing Limits on Transfer Courses

Normally, because of residence requirements, the option of studying during the fall, winter, and spring terms at another institution for transfer credit is not open to first-year students or to seniors. Students on probation or withdrawn on probation, or those suspended or withdrawn with prejudice, are also ineligible except in the following instances:

1. Probation. Students on probation (or withdrawn on probation) may, with the strong support of a dean, and prior to enrolling at another institution, petition the Committee on Instruction (COI) in advance for permission to take courses at that institution for credit toward the Dartmouth degree; the resulting credits are included in the maximum of four allowed toward the degree. Students whose academic standing changes to probation after approval of the transfer term are then on probation, and permission for the transfer term is automatically revoked. Such students who enroll in another institution will not be awarded transfer credit without further petition to the COI as indicated above.
2. Suspension. Students who have been suspended for a definite period and who take courses after the period of suspension ends but before they have been officially readmitted to Dartmouth may, with the strong support of the Dean of the College, petition the COI to be allowed to apply for transfer credit. Students submitting such petitions should present convincing reasons for transferring the desired courses and be aware that (a) only courses taken after the period of suspension has ended may be considered for transfer credit (for students withdrawn with prejudice, no courses taken during the first three terms after leaving Dartmouth will be considered for transfer credit), (b) in no case will COI grant permission to transfer more than four courses taken prior to readmission, and (c) those transferring courses under such circumstances ordinarily must return to Dartmouth for at least one term in residence before graduating. Students whose

academic standing changes to suspension after approval of the transfer term are then on suspension, and permission for the transfer term is automatically revoked. Such students may not apply for transfer credit from another institution without further petitioning the COI after the period of suspension ends but before they have been officially readmitted to Dartmouth, as indicated above.

3. Suspension or withdrawal with prejudice. Students who have been suspended or withdrawn with prejudice and subsequently readmitted may apply for transfer credit for courses that they take after readmission but before they actually return to Dartmouth. The regular rules and deadlines for receiving transfer credit will normally apply in such cases.

Transfer Credits for Matriculating Transfer Students

Only students admitted by Dartmouth Admissions Office to Dartmouth College as transfer students qualify for the special regulations that follow. Transfer students may not transfer further credits after matriculation. This prohibition includes exchange terms and other transfer work.

Students who have spent one or more years at another institution before matriculation at Dartmouth are subject to various special academic regulations. The eighth of these relates to the transfer of credit: 'Course equivalencies are determined by the Registrar or their designate. In the event of a question regarding the equivalency or appropriateness of a course, the department or program involved will be consulted. Courses applied for major credit must be approved by the major department or program.'

The basic principle guiding this regulation is that credit for matriculating transfer students is granted based on the same criteria that it is based for students who matriculate as first year students. Pre-matriculation credits on entrance (such as Advanced Placement) given by the original institution are evaluated according to Dartmouth standards. There are exceptions to this general principle, for example departments or programs which restrict transfer credit (for instance, only to majors) or which place certain courses out of bounds for transfer credit (for instance, elementary language courses) may approve such credits for matriculating transfer students, assuming the courses qualify otherwise. Also, matriculating transfer students may transfer credit from Community Colleges if the department or program approves the credit.

Transfer students are notified upon admission that they must submit syllabi for all work requested for transfer credit, official transcripts, SAT, ACT, AP, and other scores unless they are available from the Admissions Office. These transfer credits are evaluated by the same criteria and procedures used for currently enrolled students going away on transfer terms. This includes methods of conversion of quarter or semester hour courses into the Dartmouth course credit system, determination of

distributive credit, language requirement completion, etc. Only courses and/or credits that were not used to satisfy any high school graduation requirements are eligible for transfer. Once a student has filed a major or minor, any courses in the major or minor field that have already been granted degree credit are reviewed for approval for major or minor credit by the appropriate academic department or program. It should be noted, however, that no more than half of all courses required for the minor or major, including prerequisites, may be satisfied by transfer.

All transfer credits will be evaluated, and credit placed on the student's record before the end of the first term of enrollment, provided that the transfer documentation is received prior to the start of the term.

Credits and Proficiencies on Entrance

Prematriculation credit is any credit such as credit on entrance or transfer credit earned prior to matriculation (before starting at Dartmouth). Credit on entrance is recognized for achievement on a test that may be equivalent to a course, however it does not reduce the number of credits (35) required for graduation. Examples of tests include Advanced Placement (AP), International Baccalaureate (IB), A-Levels, SATs and local placement tests.

Both course credit and credit on entrance appear on the academic transcript. Credit on entrance, such as AP credit will be listed on the transcript showing either an "EX," for exemption, or with a "CR," and with 0 credits. Placements ("PLC") as well as a summary of prematriculation credits are available on students' DartWorks degree audit.

The evidence that may be used to demonstrate mastery of college-level work is limited to: (1) standardized test scores (Scholastic Assessment and Subject Tests, AP exams, British A-Levels, International Baccalaureate), (2) official transcripts from four-year colleges, and (3) Dartmouth placement exams. The awarding of prematriculation credit based on French, Swiss, Italian and German Baccalaureate results is evaluated on a case-by-case basis and is limited to two credits on entrance granted in any one discipline.

See the Registrar's Office website for more information on credit on entrance.

Working Rules and Regulations

Course Loads

The normal course load in each of the four terms of the academic year is three courses. While two- or four-course loads are allowed within specified limits, no matriculated undergraduate may have in any term a load of fewer than two courses or may in any term take, or receive credit for,

five or more courses. Any registered student not officially enrolled in at least two courses by the end of the tenth day of classes in a term is liable for administrative withdrawal.

Should a student have what they believe is a compelling reason for adding a course after the tenth day, a petition may be addressed to the Registrar. The petition must explain fully the circumstances that have arisen since the start of the term to cause the request and must be accompanied by written permission from the intended instructor. Regulations regarding withdrawal from courses after the tenth day of classes are enumerated elsewhere in the *ORC/Catalog*.

Two-Course Loads

A student may have a two-course load in any three terms, as a maximum, during their college career. There is no reduction in tuition associated with the taking of a two-course load. (See the section on tuition reduction for possible exceptions involving disabilities.) The end of the tenth day of classes of any term is the deadline for a student to reduce a course load from three to two or increase it from two to three. No change in either direction may be made after that date. See the first paragraph of this section for the possibility of filing a petition to add a course. There are no special restrictions as to the taking of Credit/No Credit courses or courses under the Non-Recording Option that apply to the course load chosen. Election of a two-course load is intended to permit increased concentration of effort upon the student's courses or to allow other unofficial academic effort. Although it is not necessary for a student to have at least one extra course credit accumulated before undertaking a two-course term, the election of a reduced load should not impair normal progress toward graduation.

Four-Course Loads

A student may without permission or extra charge undertake during a college career a four-course load up to a maximum of four times. Each qualifying student has until the end of the tenth day of classes of any term after the student's first term of enrollment at the College, within the maximum of four, to add a fourth course. Note: It is not possible to elect four courses until the term in question has begun. A fourth course may be dropped until the end of the sixth week of classes. After the end of the sixth week, the rules for withdrawal from courses apply and one of the four uses of this provision is thereby lost.

A student who has already exhausted the quota of four, four-course loads may undertake additional four-course loads only by permission of the Registrar and the Chair of the Committee on Instruction (COI). Such permission is intended to allow students to take advantage of unexpected opportunities or to deal with unavoidable scheduling conflicts, not to allow students to do more than can be

accommodated by the ordinary quota of four-course terms or to graduate early. There is no extra charge.

Permission to undertake a four-course load beyond the quota of four must be justified by petition to the Registrar and the Chair of the COI, explaining the value of the intended course of study and the necessity of the additional four-course term. The petition must be accompanied by a letter of support from the student's major department or major advisor endorsing the value of the intended course of study and indicating the student's capacity for the additional work. If the four-course load includes course credit for reading, independent study, or independent research, the petition must also be accompanied by a letter from the instructor of that course, verifying that the intellectual content, time commitment, academic requirements, and grading policy are at least equivalent to the demands of a classroom course.

Election of Courses

After approximately seven weeks of each term every student scheduled to be enrolled with a D-plan of 'R' (Resident) or 'O' (Off-Campus Program) elects courses for the following term. All students make use of the newly published Timetable of Class Meetings each term which updates this *ORC/Catalog*.

On occasion a student who has already taken and passed a course will wish to elect it again, sometimes with the intention of improving upon the earlier performance. Such is not allowable unless a student gains permission from the Registrar to elect such a course as a no-credit, grade-only, non-averaged third or fourth course. Such a course does not count in that term's course load. Students may not elect a course that has been renumbered but is wholly or effectively identical to one already passed; they should also make sure that a repetition in course number is not also a repetition in content that will lead to loss of credit.

A student who has failed a course may elect it again. In this situation both of the grades are recorded and hence both are included in the cumulative average; only one course credit is earned. The same general principle applies to Credit/No Credit courses.

Full directions for electing courses are outlined on the Registrar's Office website. Numerous courses have enrollment limits set prior to release of the Timetable; others are limited as enrollments grow. If the demand exceeds the limit, students are enrolled according to priorities established by the offering departments and programs. Dartmouth College reserves the right to make changes in the offering of any listed course and to cancel it when the enrollment is fewer than five students.

Students registering for courses that require instructor permission, a prerequisite override, or any other special permission/override must first consult with the instructor and/or the instructor's proxy, if appropriate, and provide

the instructor with their ID number so the instructor may apply the appropriate permission/override to their record. After the permission/override has been applied, the student receives a confirmation email that the permission/override was applied. The student then registers for the course. Students who have not obtained a permission/override are not permitted to register for the course. After submitting their courses, students review their class schedule to ensure they have entered it correctly. Students are responsible for ensuring that their schedule is accurate. Students should note that addition of their name to Dartmouth's learning management system, Canvas, without registration in DartHub does not constitute official registration for the course and may result in a loss of expected credit.

Many courses at the College have prerequisites, either in the form of prior course work, permission of the instructor, or both. It is the responsibility of each individual student to see that he or she has met the requirements for each course elected. Failure to heed published prerequisites may place the student in an untenable position in the course. Effective in the 2003 summer term, an instructor may require a student to drop a course during the first eight class days of the term if the student lacks the published prerequisite courses. Some departments/programs use prerequisite checking and do not allow a student to gain entry without a prerequisite override, while some departments/programs simply list prerequisite requirements in this Catalog. In either case, the student is required to meet the prerequisites listed.

Each term, students who have filed proper course elections for the following term may make changes in them through the last day of classes in the current term.

Undergraduate students may enroll for graduate courses taught by faculty members in Dartmouth departments and programs within the Arts and Sciences with permission of the instructor of the course and may receive credit towards their Bachelor of Arts degree. Undergraduate students may only receive credit towards their Bachelor of Arts degree for graduate courses offered by other Dartmouth graduate programs if the course is cross-listed as an undergraduate Arts and Sciences course. *Students must enroll in the undergraduate section of the cross-listed course and receive a final letter grade.

*(Arts and Sciences courses are those with undergraduate departments and programs overseen by the Dean of Faculty of Arts and Sciences. See "Divisions of the Faculty" for a list of those departments and programs.)

Auditing a Course

Any student wishing to earn credit for a course offered at Dartmouth must elect the course for a term in which he or she will be registered (having the enrollment pattern letter R or O), paying tuition, and performing in that term the full normal work of the course. Accordingly, it is not permissible for a student to do the work of a course when

not registered and then elect it for credit later when officially registered.

With the permission of the instructor, a student may choose to audit a course instead of electing it for credit. The student should not expect to participate in class discussion or laboratory work or expect the instructor to read or grade any work the student undertakes. No formal record is kept concerning courses audited; the student may not call on the instructor to write letters concerning their accomplishment or suggesting the quality of performance.

Registration and Course Changes

At the beginning of each term students must check-in online using DartHub. Students may begin check-in the day before classes begin and have until the end of the third day of class to complete check-in. This process requires the on-line verification/update of the student's local address, emergency information, confirmation of missing student information, an enrollment commitment for the term, and other important information. The check-in process indicates any holds that may have been placed due to failure to settle the tuition bill or Dartmouth Card account or meet certain other College requirements. If holds exist, information is provided to indicate where and how to remove the holds. (Note: In-person processes to remove holds must be recorded during regular office hours, M-F, 8am-4pm, and may require completion earlier than the published deadline date. All online transactions must be completed before midnight of the published deadline date.)

A fifty-dollar charge will be made for check-in after the deadline. Students may submit a petition to Campus Billing and DartCard Services for a fee waiver only if supporting documentation from the office who initiated the hold is provided. (Petitions without supporting documentation will not be considered.) Any student scheduled to be in residence who has not completed the check-in procedure ten calendar days after the term begins is subject to administrative withdrawal from college immediately thereafter. Any student whose enrollment pattern calls for a residence term (R), but whose plans change, should be sure to change the pattern by the end of the ten days.

Beginning with the first day of classes, students are eligible to change courses online using DartHub. Each term a five-day period is available for the adding, dropping, or exchanging of courses or sections. Information about adding, dropping and exchanging courses using DartHub are on the Registrar's website. During the second five class days of a term students may add or exchange courses only by securing the approval of the instructor of the intended new course(s). Students should note that the last day of this period is the tenth class day of the term, i.e., the final day to settle on a load of three or, if desired and allowable, two or four courses. Any

student not officially enrolled at the end of the tenth day of classes in any term in at least two courses becomes liable for administrative withdrawal by the Dean of the College.

After this second five-day period a student may exchange courses only under certain conditions. They must obtain the written approval of the instructor of the intended new course, the written certification of the instructor of the course the student wishes to drop that he or she is not failing the course, and the written agreement of the Registrar to the overall change. Courses that are normally approved for exchange, per the Committee on Instruction, include section changes, those where the subject matter is essentially the same, where there was inappropriate placement within the same department/program (for example language courses), thesis and independent study courses, or courses that may be offered with or without laboratories. Completely unrelated courses and those exchanged late in the term are not normally approved.

On May 29, 1995, the Faculty approved changes in procedures for dropping or withdrawing from courses. These procedures took effect with the 1995 Summer term.

Each term is divided into three parts with regard to the rules and procedures governing course drops and withdrawals. The specific dates involved appear in the Academic Calendar. As the various deadlines are regulated by faculty policy and are consistently administered, students should be careful to be aware of them each term.

During the first ten class days of a term, as indicated above, students may drop courses as they please. Courses dropped in this period will not appear on the transcript. For students taking four courses, this period extends to the end of the sixth week.

After this period, and until ten class days before the last class day of the term, students may withdraw from a course at their own discretion. They must, as a courtesy, notify their instructor of their intention, submit the withdrawal to the Office of the Registrar on or before the withdrawal deadline. The course remains on the student's transcript with the notation W for Withdrew. First-year students must also obtain the signature of one of the Deans of Undergraduate Students. Neither the instructor nor dean has the authority to forbid the withdrawal (excepting the case of first-year Writing and first-year seminar courses). Note: Requests to remove a W from the transcript will not be considered.

During the last ten days of classes in the term until the final examination begins, students must petition to withdraw from a course. Such petitions must be accompanied by a written response from the instructor in the course, and confirmation that the student has discussed the matter with one of the Deans of Undergraduate Students. It will be expected that almost none of these petitions will be approved except in the most extreme medical or other circumstances, arising after the deadline.

Petitions are reviewed and approved or denied by a committee that meets weekly during this period. Students whose petitions are denied may appeal to the COS Subcommittee. Once the final examination period has begun, it will be assumed that students intend to complete their courses, and no course withdrawal requests will be accepted.

It is important to note that no student may have more than three terms in which he or she is enrolled in only two courses (courses from which the student has withdrawn do not count toward the course load). A student may never be enrolled in just one course.

At any time during a term, students may view their course schedule on DartHub to confirm the courses in which they are officially enrolled, as well as classrooms and instructors. Checking this source in the first two weeks of the term is strongly advised to ensure that course elections officially on file match the student's intentions.

Administration of Courses; Scheduling of Final Examinations; Pre-Examination Break

Not later than two weeks after the start of each academic term, every course instructor should provide students with a list of the papers, reports, examinations, and other requirements that are the components for a grade in the course, and the approximate dates on which the work is due.

By vote of the Faculty, effective the spring term of 1981-1982, during the last five days of classes of each term, no major tests or examinations may be given. Routine quizzes and drills may, however, be administered. Also, by vote of the Faculty, in every term there shall be a mandatory two-day break (Pre-Examination Break) between the last day of classes and the first final examination, during which no classes or tests may be scheduled. The academic calendar lists the various dates term by term. Because of the adoption of Memorial Day as a College holiday in 1998, the two days of the Pre-Examination Break in spring term will normally fall on Monday (Memorial Day) and the following Thursday, with final class days on Tuesday and Wednesday and examinations beginning on Friday.

Since problems sometimes arise in the reconciling of classroom and extracurricular schedules, the Executive Committee of the Faculty has established the regulations of the following three paragraphs:

“Regular class attendance is expected of all students. Though academic schedules may sometimes conflict with College-sponsored or College-recognized extracurricular events, there are no excused absences for participants in such activities. Students who participate in athletics, debates, concerts, or other activities should check their calendars to see that these events do not conflict with their academic schedules. Should such conflicts occur or be anticipated, each student is responsible for discussing the

matter with their instructor at the beginning of the appropriate term. Instructors may be accommodating if approached well in advance of the critical date.

Such accommodations can be made only when the conflict occurs because of a scheduled College-sponsored or College-recognized event. No participant should expect to be excused in order to attend a team meeting or orientation session, practice session, meal, or other such activity.

No College-sponsored or College-recognized regular-season event may be scheduled during a Pre-examination break or a Final examination period except with the permission of the Provost, Dean of Faculty, and Dean of the College. One such exception is the regularly scheduled Saturday football game that is scheduled during the fall final examination period; during this time normally final examinations are suspended.”

The Registrar announces the annual schedule of final examinations at the beginning of the academic year, effective fall term 2002. The schedule is arranged so that any instructor can allow up to three hours for the final exam. If a student is scheduled to have two examinations in actual conflict or three examinations on a single calendar day, the student may seek relief from one of the instructors to take that examination at another mutually convenient time during the final examination period. Therefore, students should be prepared to be available for examinations through the last day of the examination period. It is not uncommon for a student to have two examinations on a single calendar day or three examinations in two days. In these circumstances, no adjustment should be expected.

All regularly scheduled final examinations occur during the announced examination period; no undergraduate may be either allowed or required to take any final examination prior to the start of the examination period. Take home examinations, papers, or assignments due after the last day of class cannot be due earlier than the end of the second day of the examination period or the time of the regularly scheduled exam. (By vote of the faculty on May 23, 2005.) A student who is not able to take a final examination or otherwise complete a course on time due to illness or other compelling cause must work with the instructor and the Dean of the College Office to make arrangements for an Incomplete well in advance of the examination or other deadline. Be sure to consult the section on standings of ‘Incomplete.’

Final Grades

Whether or not there is a final examination, the instructor submits grades no later than four days after the end of the final examination period, subject to the following stipulations:

- In those courses in which there is the requirement of a term paper or overall project, but no final examination,

instructors may defer the required date for students to submit this work as late into the examination period as they may find convenient, provided that the final grades are nonetheless reported to the Registrar no later than four days after the close of the examination period.

- If, however, the paper or project is to be submitted prior to the beginning of the examination period, the final grades are to be reported no later than five days after the start of the examination period.
- For all final examinations scheduled after the Sunday prior to Thanksgiving Day in the fall term, the instructor reports final grades to the Registrar no later than the Wednesday after Thanksgiving Day.
- For spring term final grades for seniors are to be reported no later than 10:00 a.m. the Thursday prior to Commencement.

Several days thereafter, the Office of the Registrar posts final grades. At that time, students may access their grades on DartHub. Should you wish to learn a grade prior to this you must obtain it from your instructor. By vote of the Faculty every instructor has the obligation to make grades available to the students; the instructor may leave grades with an administrator, ask you to supply a self-addressed postcard, or use any other convenient method that does not violate confidentiality. The Office of the Registrar will not supply these grades; such is done only in the case of standings of Incomplete for which grades have since been assigned.

Final grades are the responsibility of the instructor.

Student-Initiated Appeal:

- A student who questions the appropriateness of a grade confers with the instructor;
- If the instructor agrees, the instructor makes a written request to the Registrar of the College, with the approval and co-signature of the department/program Chair;
 - The instructor must indicate one or more specific ways in which the student was done an injustice. A simple change of mind will not suffice.
 - It may not be made on the grounds of course work completed after the term in which the course was offered other than in the case of an official incomplete.
- If the instructor refuses to make a grade change:
 - The student may appeal, in turn, to the Chair, the Associate Dean of the Faculty for the appropriate division, and the Dean of the Faculty; it is unusual for such appeal to go beyond the Chair.

- The student must initiate the appeal to the instructor, in writing, by the last day of the term following that in which the course was taken.
- The instructor must submit the final grade to the Registrar by the last day of the *second* term following the term in which the course was taken.
- If the student has been graduated, only the department/program Chair may initiate a grade change. It must be submitted within one year of the student's graduation and only in the case of clerical, computational or other similar administrative error.

Instructor-Initiated Grade Change:

- The Instructor makes a written request to the Registrar of the College, with the approval and co-signature of the department/program Chair;
 - The Instructor must indicate one or more specific ways in which the student was done an injustice. A simple change of mind will not suffice.
 - The Instructor must submit the final grade to the Registrar by the last day of the term following the term in which the course was taken.
 - It may not be made on the grounds of course work completed after the term in which the course was offered other than in the case of an official incomplete.
 - If the Registrar refuses to make the change, the instructor may appeal to the Dean of Faculty.
 - If, however, the student has been graduated, the department/program Chair may initiate a grade change. It must be submitted within one year of the student's graduation and only in the case of clerical, computational or other similar administrative error.

Note: These procedures also apply to undergraduate courses with the subject TUCK, however where required the Tuck School of Business Dean designates the appropriate Chair equivalent within the Tuck structure. If the appeal goes further, it proceeds to the Tuck Dean.

Election of a Major

As indicated under the Requirements for the Degree, students declare a choice of major after the beginning, and must do so by the end of their fifth term of residence or, in some cases, immediately thereafter.

Students in residence (R) during the winter term of their second year may start the major declaration process at the start of winter term and must declare it by the second Thursday of spring term, whether or not they will be in residence that term. As a practical matter, most students who will not be enrolled in the spring term must declare

their major before leaving at the end of the winter. Students not in residence in their second winter will be required to declare their major by the last day of class in their next term of residence. Since no student is required to declare a major before the end of the fifth term of enrollment (R, O, and X all being included) in a few cases the deadline for declaring is delayed from that indicated above until the end of the fifth term of enrollment is reached.

Early in the appropriate term, every student required to declare a major submits a major plan using DartWorks which requires the approval of the chair of the appropriate department or program (or other authorized faculty member designated by the chair). The student also lists the courses that are prerequisite to the major and the culminating experience. Detailed instructions for major declaration and the use of DartWorks are available on the Registrar's website.

Important Note: In working out your major with the department or program adviser you may find it necessary to modify your enrollment pattern (D-plan). If you do modify your D-plan, be sure to alter your official D-plan accessed from DartHub or by contacting the Office of the Registrar. It is the official enrollment pattern as filed with the Registrar and as displayed in DartHub, not what is listed in DartWorks program planner or any other document, that certifies your actual enrollment pattern (D-plan).

Clearly, it takes a great deal of time and effort to work out a desirable major program, and the more individualized it is, the more thought, consultation, and possible committee action will be required. Be sure to become familiar with the descriptions in this Catalog. Highly structured standard majors, such as Engineering Sciences, and worthwhile individualized ones, although quite opposite in nature, are likely to require the earliest starts and most careful planning and early discussions. Bear in mind that most advanced and many fundamental courses are offered only once a year, and that quite a few are offered only every other year. As indicated earlier, it is to allow the careful planning especially needed for the Dartmouth Plan that this Catalog covers a two-year period.

Frequently students are reluctant to sign up for a major because they do not feel sure enough that they are ready to make a suitable choice. They should not worry unduly in this respect: what is necessary is to make a start. Many students change to another major; there is no penalty of any sort for making a change but note that students may not change major (or type of major, including the addition of a second major) later than the first week of their last term in residence.

As indicated earlier in this Catalog, there are three main possibilities for majoring, namely, the Standard Major, the Modified Major, and the Special Major. You should be sure to review these descriptions. As suggested by the

name, most students pursue a Standard Major as offered by most departments and programs.

Multiple Majors

Many students major in two or more separate fields, often quite dissimilar, for instance, Theater and Government. To do so, the student must submit separate major plans to each department or program, approved by all Chairs. Multiple majors may not be within the same department or program except when a department/program offers separate and dissimilar majors. *(Astronomy and Physics, French and Italian, and Spanish and Portuguese). The culminating experience must be satisfied for all majors. In designing the multiple major program, it is not possible to use any individual course as part of more than a single major (although a course may be part of one major and prerequisite to the other, or prerequisite to each major). A student may start with one major and later add, through appropriate submission, a second or third. Any of the majors may be Standard, Modified, or Special. The student may at any time decide to return to a single major by officially dropping one or more of the majors. See the Registrar's website for detailed instructions on procedures. The regulation concerning the deadline for making a change of major (or type of major) is not intended to keep a student who has been carrying a multiple major from dropping one or more majors in the last days of the term preceding graduation.

*NOTE: Invalid major combinations are not approved within the same department/program and departments and programs should take care when advising to identify any conflicting majors.

Preparation for Graduation

A Dartmouth student of the Class of 1988 or later class is eligible for graduation at the end of any term in which he or she has completed at least six terms in residence with course count of at least thirty-five and the various other requirements, including the completion of the major as certified by the major department or program.

Students whose enrollment patterns indicate that they plan to receive the degree during the current academic year must apply for the degree. Students are annually notified of deadlines and instructions for this process. The student must indicate exact plans for completing the minimum 35 credits required, that is, by what combination of R, O, X, and T study the total will be achieved. Students who have studied elsewhere and failed to supply a suitable transcript of credits eligible for transfer, and certain others, may not be approached since they do not appear to be current degree candidates. It is up to them and to any student who wishes to graduate at other than the usual time to inform the Office of the Registrar and their major department or program of this intention. No student who has failed to apply for the degree will be graduated. In addition, students who have or will have met graduation

requirements after twelve terms (or fewer if a transfer student and if sufficient credits have been transferred to Dartmouth) are expected to apply to be graduated. They will be included on the graduation list.

Students are advised not to study off-campus or to plan to transfer credits in their last term, particularly if it is the spring term: the only acceptable evidence of work performed is a Dartmouth faculty grade report or an official transcript in the case of transfer credits. Students who do hope to transfer credits in time for graduation must, therefore, order an official transcript to be delivered directly to the Registrar's Office at the earliest possible date.

It is the duty of each student to keep track of progress in completing the various requirements. Each student has access to DartWorks, a degree audit report that is available on DartHub. The audit indicates the current standing of the student with respect to each degree requirement (other than those pertaining to a few majors).

No student may graduate who has any course recorded as incomplete, ON, or AD, no matter how large the course count. The problem may be resolved by normal completion of the course or conceivably by a drop without penalty if authorized by the Registrar and if the final course count is still at least thirty-five. Otherwise, the course may be assigned the grade of E without credit, provided again the final course count is still adequate.

Academic Standing

All students are considered to be in good academic standing who are eligible to enroll the next term. Note, however, the following regulation:

A student not in good academic standing as a result of their performance in the last term of enrollment preceding intended graduation, but otherwise eligible for graduation, may graduate only with special approval of the Committee on Standards.

Honors

General (Latin) Honors

The regulations of the following three paragraphs apply to the awarding on graduation of the degree of Bachelor of Arts summa cum laude, magna cum laude, or cum laude:

A student with final average exactly matching or exceeding the final cumulative average of the lowest standing of the past three academic years' top 5% of graduates will be awarded the degree summa cum laude.

A student with lower standing but with final average exactly matching or exceeding the final cumulative average of the lowest standing of the past three academic years' top 15% of graduates will be awarded the degree magna cum laude.

A student with lower standing but with final average exactly matching or exceeding the final cumulative average of the lowest standing of the past three academic years' top 35% of graduates will be awarded the degree cum laude.

The lowest averages for these three groups of graduates in the three academic years 2023-2025 were, in descending order, 3.97, 3.92, 3.83. Accordingly, these values govern the awarding of the corresponding honors in 2025-2026.

A Senior Fellow may be eligible for these honors by application of the regulations already given, provided that the Committee on Senior Fellowships certifies that the level of the student's work during the fellowship year justifies the awarding of the honor.

The students who attain the first and second highest standings in each graduating class shall be given respectively valedictory and salutatory honors (which shall not necessarily consist of appointments as commencement speakers). No student shall be eligible for salutatory or valedictory honors who has not been enrolled at Dartmouth College (enrolled in either a resident term, exchange term, or a Dartmouth sponsored off-campus program) for at least nine (9) terms.

The following selection process was established in 2014 for determining the Valedictory speaker:

- The Registrar determines in mid-May the possible Valedictory candidates based on the highest GPA in the graduating class, and informs the Dean of the College and the Dean of Faculty of those candidates.
- Students in this group are asked by the Dean of the College whether they are interested in speaking at Commencement if they attain Valedictory rank and, if they are, that they inform the Dean of the College of this.
- The candidates interested in speaking are considered by a Committee consisting of the Dean of Faculty, two of the Associate Deans of Faculty, the Dean of the College, and two of the Associate Deans of the College. This committee will devise and articulate a set of criteria and make a recommendation directly to the President.
- The President makes the final decision about who will speak at Commencement. The students are informed of the decision by the Dean of the College or designate.
- If, in a particular year, none of the Valedictory candidates wishes to speak, the Salutatorian candidates will be invited to be considered. The same process should be used as the one for selecting the Valedictory Speaker.

Honors in the Major

Students with sufficiently high grade point averages overall and in their major may be admitted to the corresponding Honors Program. For details of admission and requirements see The Honors Program section in this *ORC/Catalog*. To be certified for graduation they, like other students, must complete in at least passing fashion all of the courses of their major along with any other

requirements normally specified by the department or program.

Those graduating honors candidates who achieve at least a B+ average in the work of the Honors Program (but not necessarily an overall minimum B+ average in the major) will have officially completed the Honors Program and will so earn Honors in their major. If the department or program deems that the student has performed outstanding independent work, it may assign High Honors in the major by an individual vote.

Honors or High Honors in the major will be entered on a student's permanent record, e.g., Honors in History or High Honors in Chemistry. No entry will be made concerning Honors or completion of an Honors Program for a student who does not achieve the indicated B+ average in the work of the Honors Program.

A number of departments and programs have described fully their Honors Programs in the description of their majors; others refer to this statement and to the general requirements for the Honors Program.

Honor List

At the close of the spring term an Honor List is calculated for all the classes, based upon the work of the year starting the previous summer, and divided into three groups; to be included, students must have been enrolled for at least two of the terms, have received at least five regularly recorded grades (i.e., other than CT, NC, or NR), and have no standing of Incomplete in any course for the year. The regulations of the following three paragraphs apply:

An eligible student with annual average exactly matching or exceeding the annual average of the lowest standing of the previous year's top 5% of eligible students will be placed in the first honor group (i.e., will be designated as a Rufus Choate Scholar) for the year.

An eligible student with lower standing but with annual average exactly matching or exceeding the annual average of the lowest standing of the previous year's top 15% of eligible students will be placed in the second honor group for the year.

An eligible student with lower standing but with annual average exactly matching or exceeding the annual average of the lowest standing of the previous year's top 35% of eligible students will be placed in the third honor group for the year.

Approximately January 1 in the current academic year the annual averages for the past academic year of all the eligible students of that year (as defined in the first paragraph) will be examined and the lowest annual averages for the students in the top 5%, top 15%, and top 35% will be determined. These values accordingly govern the placement in honor groups for 2025-2026. Preliminary examination suggests that the required averages will closely approximate, in descending order 4.00, 3.96, 3.88.

Phi Beta Kappa

Phi Beta Kappa is an honorary society, originally founded at the College of William and Mary in 1776, in which membership is conferred for high scholastic standing only. The Alpha of New Hampshire was established at Dartmouth in 1787, being the fourth oldest chapter in the country. Membership is determined by vote of the chapter according to scholarship record, no initiative being taken by the student. The secretary-treasurer and chapter contact is Kate Soule.

The following persons are eligible for regular membership:

1. Any undergraduate who on October 15 of the fall term three years after matriculation has completed at least eight R (Residence) or O (Off-Campus) terms at Dartmouth College, and who then ranks in cumulative average among the twenty highest in that category. To be considered on October 15, such a student should have completed (with final grades) all courses for previous terms; if such is impossible, the student may present the reasons to the Chapter Secretary for due consideration.
2. Any student who at the time of graduation from Dartmouth College has a cumulative average no lower than the average achieved by graduates within the top tenth of those graduating in the preceding three academic years. If the application of this figure results in the selection of less than ten percent of the graduating class, additional students will be invited to join Phi Beta Kappa to bring the total membership to ten percent of the graduating class.
3. No student who has been suspended from Dartmouth College is eligible for membership in Phi Beta Kappa.

Note: The cumulative average required of candidates during the academic year 2025-2026 is 3.94 which was the dividing line for the top tenth of those graduated in the academic years 2022-2023 to 2024-2025.

The Society of Sigma Xi

Sigma Xi is a scientific honor society, originally established at Cornell University in 1886. Its mission is to honor scientific accomplishments, to encourage and enhance the worldwide appreciation and support of original investigation in science and technology, and to foster a creative and dynamic interaction among science, technology, and society. A fundamental responsibility of the Society is honoring research scientists or those with aptitude for research. Candidates are nominated by full members of Sigma Xi. Membership is determined by a vote of the Dartmouth College chapter's Committee on Admissions. The president of the Dartmouth College chapter is Dean E. Wilcox, the vice-president is Timothy P. Smith, the treasurer is Douglas W. Van Citters, and the secretary is Robyn Barbato.

The following persons are eligible for associate and full membership:

1. Associate Membership. Nominees for Associate Member should be seniors or early graduate (e.g., master's) students who have demonstrated strong aptitude for scientific research. They must have done research that has resulted in an excellent written report, which should be available to the Committee on Admissions if requested. They should also have a demonstrated interest in further study and/or research in a pure or applied science.
2. Full Membership. Nominees for election or promotion to Member should be graduate students in the final stage of a Ph.D. program, or those who have already completed the Ph.D. (including postdoctoral associates and faculty members). They should have demonstrated noteworthy achievement in research, as evidenced by a completed Ph.D. dissertation or at least two published papers on their research, at least one of which lists the nominee as the principal author.

Fellowships and Scholarships

James O. Freedman Presidential Scholars

The James O. Freedman Presidential Scholars Program was initiated under the auspices of the Faculty of Arts and Sciences in 1988 to encourage and facilitate the attainment of intellectual and artistic excellence among Dartmouth undergraduates. In 2007 the program was renamed in honor of James O. Freedman who was President of Dartmouth College from 1987 through 1998. The James O. Freedman Presidential Scholar Research Assistantships offer students the opportunity to serve as research assistants to individual members of the faculty. This venture in student-faculty collaboration introduces third-year students to approaches and methods of research that may prove useful in their own future scholarship. By working closely on a project with individual faculty mentors, juniors receive apprenticeship training in research that may facilitate pursuit of an honors thesis or Senior Fellowship.

The assistantships are two terms in length and must be completed during the junior year. The two terms can be sequential or may be split by mutual agreement of the student and directing faculty member. Assistantships must be completed during R (residence) terms when both the student and faculty are on campus. It is expected that students devote the equivalent time and effort to the research as they would to an academic class (approximately 10 hours a week throughout the academic term). Students receive a stipend at the end of each research term but may opt to receive one course credit for the second term of the research assistantship in lieu of the stipend if this is deemed appropriate by the directing

faculty member (subject to department criteria). Students pursuing this option must register for Independent Study credit through the faculty mentor's department/program and the Registrar prior to the start of the term.

Assistantships for which Independent Study credit is to be granted will involve a greater time commitment and intellectual engagement than non-credit assistantships. Students who do not elect or qualify for this option will receive a stipend for the second term of the assistantship. Students may not receive both stipend and credit for the same research.

Upon completion of two terms of research and submission of all required documentation, the student's transcript will carry the notation James O. Freedman Presidential Scholar Research Assistant. To be designated a James O. Freedman Presidential Scholar at Commencement, students must successfully complete the honors program in their major department/program or receive honors for the project for which they were appointed a Senior Fellow.

Eligible students are notified in winter term of their sophomore year. To be eligible, students must have attained a grade point average at the end of the fall term that places them in the top 40% of their class. Students interested in the program are responsible for contacting potential faculty mentors and arranging interviews. If a student and faculty mentor agree on a project, students submit an online application and faculty endorse the application. Final decisions are made by the Office of Undergraduate Research. If the number of students applying for the program exceeds the number of Presidential Scholar stipends available, acceptance to the program will be made on the basis of academic standing and the relevance of the assistantship to the student's course of study.

Students may obtain further information in the Office of Undergraduate Advising and Research.

Awards for Graduate Study

The office of Fellowship Advising oversees the application process for multiple national and international fellowships (including the Fulbright, Rhodes, Marshall, and Schwarzman) and for Dartmouth College post-graduate fellowships and prizes.

Dartmouth-funded grants are awarded each year to seniors and recent graduates (up to five years after graduation) for graduate study or to pursue research or an independent project in the U.S. or abroad. There are three categories of Dartmouth post-graduate fellowships:

- Fellowships for graduate study

- Fellowships for post-graduate projects (including a special grant for applicants in the fields of architecture, urban planning, land conservation, historic preservation, architectural and urban history and/or art history)
- Prizes for seniors intending to pursue a career in the law

Information about the application processes for all grants can be found on the Fellowship Advising website.

Financial Aid

Scholarships, federal grants, subsidized and unsubsidized loans, and employment are administered by the Financial Aid Office for the benefit of students who are unable to meet the full cost of a college education through their own and their families' reasonable efforts.

Scholarships and grants are gifts made to students with financial need and are offered as part of a financial aid 'package' that may also include loans and employment. Scholarship students continue to receive aid throughout their undergraduate years, for the first twelve terms of enrollment, as long as their need continues. Renewal applications must be filed each year. In addition to demonstrating financial need, students must make satisfactory progress toward the degree, as described fully in the Student Handbook.

Need-based College loans, Federal Perkins Loans, and both subsidized and unsubsidized Federal Direct Loans through the Federal Direct Lending Program enable the College to offer financial assistance each year to more students than could otherwise be aided.

Many employment opportunities are available to students on campus and in the community. These employment opportunities are for students who are eligible for Federal Work-Study as well as those who are not eligible. Employment information can be found at www.dartmouth.edu/~seo.

The Financial Aid Office can provide information concerning a variety of private and federal parent loan plans to supplement family resources and offer suggestions on other college financing options and plans. For full information on all available financial aid, families should contact the Financial Aid Office (McNutt Hall). Additionally, current and prospective students can access financial aid general information and forms at <https://financialaid.dartmouth.edu>.

For financial aid purposes, students are considered to be sophomores at the end of the spring term of their first year following matriculation if they have completed three terms, or whenever they have a course count of 7; to be juniors at the end of the spring term of their second year following matriculation if they have completed five terms with 14 course credits, or whenever they have a course count of 17; to be seniors at the end of the spring term of

their third year following matriculation if they have completed eight terms with 23 course credits, or whenever they have a course count of 26. For the purposes of this classification, a ‘completed term’ means a term in which the student had an enrollment pattern of R, O, X, or T and received Dartmouth credit for at least two courses. Students receiving credits upon matriculation will be considered to have completed one term of work if two or more credits are granted, two terms if five or more credits are granted, and three terms if eight or more credits are granted.

Students participating in the Army ROTC program are eligible to apply for Army ROTC scholarships on a competitive basis to commence during their first year. Contact the ROTC Office in Leverone Field House for additional information.

College Charges

Tuition Charges

Tuition of twenty-three thousand sixty-nine dollars (\$23,069) per term is charged each student for instruction, instructional facilities, and other services. Although this tuition charge covers the normal three-course load, students may, without permission or extra charge, elect a fourth course during each of four terms during their college career. After use of the four allowed four-course terms a supplementary charge of seven thousand six-hundred ninety dollars (\$7,690) will be assessed. Students should consult the Student Handbook and the Regulations section of this Catalog for details of the regulations concerning extra courses. Students taking a two-course load receive no reduction in tuition.

The Trustees believe that all Dartmouth students should appreciate that the tuition charge covers about one half of the cost to the College of each student’s education at Dartmouth. For the remainder, he or she is the beneficiary of endowments received during the last two centuries from those who wish to support Dartmouth’s kind of education, from current gifts, and especially from the very generous support of the Dartmouth Alumni Fund.

Tuition charges listed above apply to the summer, fall, winter, and spring terms of the academic year 2025-2026. Charges for the summer term of 2026-2027 will be announced at a later date.

Students who require reduced course loads because of disability-related circumstances, as approved by Student Accessibility Services (SAS), that significantly affect the number of terms they need to be enrolled at Dartmouth to be graduated may be eligible for reduced tuition through Campus Billing. Permission from the Registrar for a reduced course load is not sufficient grounds for tuition reduction. Tuition-reduction requests to Campus Billing must be submitted after SAS approves a reduced course load. If a student who has been granted tuition reduction

then takes a normal course load, the student must re-petition for reduced course load and reduced tuition in subsequent terms. Reduced tuition eligibility may also be reviewed if a student’s disability-related circumstances change significantly. For more details, please see SAS’ reduced course load page. Inquiries about reduced course load due to disability should be sent to the SAS office, while inquiries about reduced tuition should be sent to Campus Billing.

Room and Meal Charges

Students living in College residence halls are charged rents that vary depending on the quarters occupied. Room rent will be four thousand one hundred ninety-three (\$4,193) per term for the 2025-2026 academic year. If College property is damaged, those found responsible are charged for the required repairs.

All students are required to purchase a nonrefundable dining plan each term they are living in College or College-approved housing. All first-year students will receive the Ivy Unlimited plan. In addition, first year students may be charged two hundred fifty dollars (\$250.00) for meals during the Orientation program.

More information about dining plans and costs at Dartmouth can be found at the Dining Services (DDS) website (<https://dining.dartmouth.edu/>). To make a dining plan selection, please visit the Dartmouth Card Office website (https://www.dartmouth.edu/finance/tuition/dartmouth_card/id_card_accounts/dining_plan_change_requests.php). Meal plan application form is now on StarPortal (available via DartHub).

Room and board charges are billed to students through their Dartmouth student account. Payment is due by the date indicated on the student account statement subject to a late charge if the payment deadline is not met. Please refer to regulations covering payment of student charges for information regarding assessment of late charges.

Computing Equipment Charges

All first-year and transfer students are charged for the required purchase of a basic package of computing equipment to be used in their education, unless granted a waiver by the Director of Computing. Ownership of adequate computing equipment would justify such a waiver. Purchase of computing equipment in addition to the basic package is at the option of the student.

Class Dues

At the beginning of their first-year undergraduate students are assessed a one-time charge of thirty-two dollars (\$32). Funds collected from these charges will be made available to that class council over the four years that class is in attendance at the College.

Document Fee

In their first term of enrollment each undergraduate is assessed a one-time document fee of two hundred twenty-eight dollars (\$228). This fee entitles the student to an unlimited number of official transcripts. Additionally, the fee covers a number of services offered by the undergraduate Center for Professional Development while the student attends Dartmouth. The fee continues to cover unlimited transcripts post attendance.

General Student Services Fee

All undergraduate students are assessed a four-hundred twenty-one dollar (\$421) General Student Services fee each term enrolled. The general fee partially supports a variety of services provided for all enrolled undergraduate students including but not limited to technology costs, library services and facilities, and recreation activities and facilities.

International Services Fee

The one hundred twenty-one dollar (\$121) per term international services fee helps offset costs generated by the visa sponsorship process and the support services offered to international students. This fee is assessed to all actively enrolled international students at the College—both undergraduate and graduate. An international student for the purposes of this fee is defined as one who is not a U.S. citizen or a U.S. permanent resident, and who holds, or is applying for, a valid U.S. visa or immigration status under Dartmouth's sponsorship.

Student Activities Fee

All undergraduate students are assessed a one hundred thirty-six dollar (\$136) Student Activities fee for each term in residence. Funds collected from these charges will be used to support the Student Assembly, other co-curricular organizations, and campus-wide cultural, educational, social, and athletic activities. Student Activities fee funds are managed directly by students through the Council on Student Organizations (COSO).

Health Access Fee

The one hundred twenty-nine dollar (\$129) per term fee supports the College's continuing commitment to providing health services to enrolled undergraduate, graduate and professional students. These services include those listed on the College's Health Service website at: <https://students.dartmouth.edu/health-service/>

Health Insurance Charges

All full-time students must purchase the Dartmouth Student Group Health Plan (DSGHP) unless they complete the waiver process. A nonrefundable fee of four thousand five hundred fifty-six dollars (\$4,556) will be billed to the student account, except those having an approved waiver,

in early July for the 2025-2026 plan year. To begin the waiver process, go to the DSGHP website located at: <https://students.dartmouth.edu/health-service/fees-insurance/insurance/waiver-information>. Please note that waivers received after July 1, 2025, will incur late fees.

Supplemental Course Fees

In limited circumstances supplemental fees may be assessed for students enrolling in certain courses. Supplemental course fees must meet the standards detailed below to be processed on the student bill. Courses for which such fees will be levied will be identified in any course descriptions published in this Catalog or its supplements.

Special course fees must be recommended to the Executive Vice President by the responsible faculty Dean, and generally will be approved only when the following three criteria are met:

1. The fee must be required of each member of the class,
2. The fee must be the same for each class member, and
3. The services or goods related to the fee must be warranted by special circumstances and not be readily available from local vendors.

Students will be notified of actual fee amounts no later than the first week of class.

Miscellaneous Charges

The following miscellaneous fees and penalties are commonly applied:

A penalty of fifty dollars (\$50) is imposed on any student who fails to check-in by the prescribed deadline at the opening of any term.

A non-refundable application fee of two thousand two hundred dollars (\$2,200) is assessed for the winter, spring, and summer terms. No fee is assessed for fall term.

A separate charge will be assessed for late payment of any student account bill. Payment is due and payable not later than the due date indicated on the billing statement. If payment is not made by the specified due date a late charge equal to 1.5% of the amount payable will be assessed.

A charge of twenty-five dollars (\$25) will be assessed when a personal check or on-line payment is offered in payment of charges on a student's account and the check or payment is not honored.

Student Penalty Fees and Fines Policy

Fines and penalty fees may be assessed to students for various rule infractions and violations of policy. With due notification penalty fees and fines may be charged to the student's Administrative Fees and Fines Account. Failure to pay such fines or penalties may prevent a student's registration or release of transcripts or a diploma.

The Executive Vice President shall review and in consultation with the Student Assembly and Graduate Student Council approve all student fines and penalty fees that may be assessed. Student fines shall be consistently applied within the Dartmouth Community and will be approved only when the following criteria are met:

The amount of the fine or assessment must be reasonably related to the costs and/or seriousness of the infraction or violation of policy.

Revenue realized from the assessment of penalty fees and fines will be recorded to a general revenue account of the College. Generally, such revenue may not accrue to the department that assesses the fine.

Administrative costs associated with assessing and posting fines, hearing appeals, and collecting payments can be substantial, accordingly, alternative means to ensure compliance with rules and regulations must be considered before a penalty fee or fine will be approved.

Once the Executive Vice President has approved a penalty fee or fine, the following requirements or procedures must be met:

All rule infractions and violations of policy which will result in the assessment of a fine or penalty fee, must be identified in the Student Handbook and appropriate College or departmental materials and mailings. Specific reference shall be made in the Student Handbook that fines and penalty fees may be appealed.

Departmental materials shall include the amount of the fine, a statement of purpose, the circumstances under which penalty fees or fines are assessed, and the consequences of noncompliance.

Departments must publicize in their materials and mailings or by other means that an appeals process exists for students or parents who believe that their individual circumstances warrant an exception to assessment of the penalty fee or fine. Specific information should be available in connection with the handling of appeals and appeals must be heard and resolved within a timely manner.

Students who commit rule infractions subject to a fine or penalty must be notified that a violation has occurred and that a charge is being assessed. If a fine is caused by the student's failure to meet a published deadline, notification of the fee is not required.

Fines and penalty assessments must be submitted to the Dartmouth Card Office within 30 days of the date the violation has been confirmed. Fees and fines may not be charged to a student's administrative account once the 30-day period has lapsed or the student is no longer enrolled because of graduation or withdrawal from the College. In cases where fees are assessed to reimburse the College for the actual cost of damages, fines must be submitted to the Dartmouth Card Office as soon as possible after final costs

have been determined, but no longer than 30 days. Note: departments and offices may not receive or deposit direct payments from students for fines or penalty fees. They must be submitted to the Dartmouth Card Office.

If it is determined that a fine has been assessed incorrectly or waiver of the penalty fee has been approved as a result of the appeals process, the appropriate credit must be expeditiously applied to the student's Administrative Fees and Fines account.

Regulations Covering Payment of Student Account Charges

Account statements for tuition, room, and board will be available on D-Pay, Dartmouth's electronic billing and payment system, approximately six weeks before the beginning of each term. When the account statement is available, an electronic mail message is sent to the student and anyone else authorized by the student. Payment is due approximately 25 days after the statement is available; the exact due date will be indicated on the statement. If payment is not made by the specified due date, a late charge equal to 1.5% of the amount payable will be assessed.

No student will be permitted to enroll for any term unless the total amount due, including tuition, room rent, and applicable board charges has been paid in full.

The flexibility of the Dartmouth Plan makes it possible for an upper-class student, through a change in term patterns, to incur a tuition charge or other charges after statements have been produced. In such instances, since tuition, room charges, and dining plan charges are fixed or determined prior to the start of the term, the student must pay these charges by the payment deadline established even though a statement reflecting the charges may not have been produced and made available.

All students enrolled at the College have an account in their name through which tuition, room and board, and other costs of attendance are billed. Periodic account statements reflecting charges and credits posted to this account will be available on D-Pay. Financial aid awards which have been confirmed and documented, but not posted to a student's bill, can be considered as anticipated credits in calculating the balance due and any known when the statement is produced will be reflected on the statement. All necessary steps for processing such awards must be met before they will be accepted as deductions.

No transcript of a student's record will be issued until amounts due the College have been paid, nor will a senior receive a diploma until all College and community financial commitments have been met. In instances where a student's account becomes delinquent through flagrant neglect, the student may be subject to disciplinary action.

In those instances where a personal check or online payment is offered in payment of charges on a student's

account and the check or on-line payment is not honored, a charge of twenty-five dollars (\$25) will be assessed. If the returned check or rejected on-line payment was the means of meeting an amount due or registration deadline, the deadline will not be considered met and the appropriate penalties relating to failure to meet the deadline may be assessed. The College reserves the right to demand payment by money order, certified check, or other mode of payment acceptable to the College in instances of repeat offenders. Additionally, flagrant or habitual offenders may be subject to disciplinary action.

Refund Policy

REFUND POLICY

Tuition

Refunds for students who withdraw after tuition has been paid, but prior to registration and the first day of classes, will be 100% of tuition. After the beginning of classes, refunds will be calculated as follows: a refund of 100% for withdrawal during the first week of the term, a refund of 90% for withdrawal during the second week of the term, a refund of 75% for withdrawal during the third week of the term, a refund of 50% for withdrawal during the fourth week of the term, and a refund of 25% for withdrawal during the fifth week of the term. No refund will be made after the fifth week of the term. The term begins on the first day of classes; the first week is the first 7 days beginning with the first day of classes.

Meals

Students who withdraw in the first week of the term will receive 100% meal plan refund. Students who withdraw in the second week will receive a 90% meal plan refund. Meal plan refunds will be calculated on a pro rata basis for any student who withdraws voluntarily or who is dismissed from the College after the second week.

Residence Hall Room Rents

The policy for residence hall room rent is identical to the tuition refund policy: 100% before classes begin; 100% during the first week; 90% during the second week; 75% during the third week; 50% during the fourth week; and 25% during the fifth week. There is no refund after the fifth week. This policy applies to all dormitory rooms and to room rents in College-owned fraternities and organizations.

Other Charges

Charges for computing equipment and for Dartmouth Student Group Health Plan are non-refundable. Other miscellaneous fees and charges, including student activity

fees will be refunded during the first two weeks according to the percentage listed above during this term.

Adjustments to Dartmouth scholarship awards will be calculated by the Financial Aid Office based on the date of withdrawal and percentage of tuition refunded.

Adjustments to federal aid eligibility (Pell Grants, SEOG Grants, Federal Work-Study, Direct Loans, and PLUS Loans) will be calculated by the Financial Aid Office using the pro rata refund formula proscribed by federal regulation. This applies to any student whose enrollment ends prior to the completion of 60% of the term. Federal aid earned is based on a proration of the time enrolled. For example, 1 of 10 weeks completed earns 10% of federal aid awarded. The 90% of federal aid unearned would be returned.

All necessary scholarship adjustments and return of federal funds are recorded to the student's account. Any credit balance remaining after these adjustments are complete may be returned to the student or family. All requests for student account refunds shall be submitted in writing to Campus Billing and any balance due the student upon the making of such adjustments shall be paid to the student within 30 days.

For more information about financial aid adjustments related to withdrawal, please contact the Financial Aid Office.

NOTE: For complete information regarding student life, and appropriate regulations, consult the Student Handbook

Student Residence

Dartmouth is a residential college. Therefore, all first-year students who are not married or in a college-recognized domestic partnership are required to live on campus during their first three academic terms at Dartmouth. Housing is not required after the first year. All remaining registered undergraduates who are not married or in a college-recognized domestic partnership may live in College undergraduate housing or in a College-recognized coed/fraternity, sorority, or undergraduate society house if space is available. Students who reside off campus during an enrolled term must file a local address as part of the on-line check-in process. Enrolled Dartmouth students may not live in coed, fraternity, sorority, or undergraduate society houses that are not recognized by the College.

NOTE.: For complete information regarding residence life and appropriate regulations, consult the Student Handbook, the Office of Residential Life publication Welcome Home, or the Student Life web site.

Graduate Study

Professional Schools

The Professional Schools of Dartmouth College are the Geisel School of Medicine, the Thayer School of Engineering, and the Tuck School of Business. Information on their entrance requirements, courses of instruction, and other matters is published in separate catalogs, which may be obtained from the Registrar of each School. For requirements for the degrees of Doctor of Medicine, Master of Public Health, Bachelor of Engineering, Master of Engineering Management, Master of Engineering, and Master of Business Administration, see the catalogs of the Geisel School of Medicine, the Thayer School of Engineering, and the Tuck School of Business, respectively.

The Degree of Master of Fine Arts

Graduate work is offered leading to the degree of Master of Fine Arts in the field of Sonic Practices.

To receive the degree of Master of Fine Arts from Dartmouth College, a graduate student must have spent at least seven terms in residence at Dartmouth and must have received credit for eight courses at the graduate level. These courses may be replaced in part by research or special study approved and supervised by the department accepting the student for graduate work, provided that not more than four of the required courses may be so replaced. Additional requirements may be imposed by the individual departments.

Candidates whose preparation is deemed deficient by the department accepting the candidate may be required to correct this deficiency by taking courses in addition to those required for the degree.

A thesis is required of candidates for the Master of Fine Arts degree.

The Degree of Master of Science

Graduate work is offered leading to the degree of Master of Science in Chemistry, Computer Science, Earth Sciences, Engineering Sciences and Master of Energy Transition.

Refer to the Thayer School catalog for graduate work leading to the degree of Master of Engineering Management (MEM) or Master of Engineering (MEng) and the Geisel School catalog for the degree of Master of Public Health (MPH) and Health Science Education Master of Science programs (Epidemiology, Health Data Science, Healthcare Research, Implementation Science and Medical Informatics).

To receive the degree of Master of Science from Dartmouth College, a graduate student must have spent at least three terms in residence at Dartmouth and must have

received credit for eight courses at the graduate level. These courses may be replaced in part by research or special study approved and supervised by the department accepting the student for graduate work, provided that not more than four of the required courses may be so replaced. Additional requirements may be imposed by the individual departments.

Candidates whose preparation is deemed deficient by the department accepting the candidate may be required to correct this deficiency by taking courses in addition to those required for the degree.

Graduate Degrees from the Guarini School of Graduate and Advanced Studies

The Guarini School of Graduate and Advanced Studies awards all of Dartmouth's PhD, M.S., MALS, MFA, and M.A. degrees across a broad range of programs, including several interdisciplinary programs and doctoral programs connected to the professional schools at Dartmouth. The requirements for the degrees awarded by the Guarini School of Graduate and Advanced Studies are described below. Inquiries regarding graduate study should be addressed to the department to which admission is sought. Visit our website at: <https://graduate.dartmouth.edu/>

Graduate Special Students: Under special circumstances holders of the Bachelor's degree may be admitted to College courses and register as Graduate Special Students. Permission to register must be secured from the Dean of the Guarini School of Graduate and Advanced Studies. Students in this category are not candidates for any Dartmouth degree.

Grades: Course work and grades are only one component of graduate education, and the grading system is designed to reflect this. The following grades will be used in courses acceptable for credit toward a graduate degree:

HP: High Pass, indicating work of quality which is distinctly superior to that normally expected of a graduate student.

P: Pass, indicating work of good quality, worthy of graduate credit. This would be the most common grade denoting satisfactory graduate performance.

LP: Low Pass, indicating work which is acceptable for graduate credit, but in which the student exhibited one or more serious deficiencies. Graduate programs may limit the number of LP grades acceptable for a degree.

CT: Credit, indicating satisfactory work in certain courses, such as research courses, in which assignment of a grade of HP, P, or LP is considered inappropriate. The grade CT is not intended as a routine alternative to the HP, P, and LP system, and CT is the only passing grade in a course in which it is used. Approval of the use of CT in any course

must be obtained from the Council on Graduate Studies by the graduate department offering the course.

NC: No Credit, indicating work which is not acceptable for graduate credit.

When it is not possible to assign a grade in a course at the end of the term, the instructor may request permission to record the temporary status of Incomplete. Use of Incomplete will require approval of the Graduate Registrar and the request must include an agreed upon completion date. All Incompletes for any term must be removed by the end of the following term and may be extended only upon approval of the Dean of Guarini School. Incomplete grades which have not been resolved by submission of a permanent grade will revert to No Credit after the stated deadline.

The designation ON (On-going) may be used when the work of a course extends beyond the limit of a single term, such as in Research Rotation.

Graduate students enrolled in courses for which they are not receiving graduate credit will be graded using the undergraduate grading system.

Transfer of Credit: Upon recommendation of the department accepting the student for graduate work, credit for graduate courses (not research) taken may be granted by the Registrar of the Guarini School. No more than three of the courses required for the Master's degree or more than six for the PhD degree may be fulfilled in this way.

Course Changes: Courses may be added or dropped at any time during the first two weeks of a term. Courses dropped after that will normally result in a grade of No Credit. Exceptions for unusual circumstances require the joint approval of the instructor, the student's advisor or graduate committee (depending on the program) and the Guarini School of Graduate and Advanced Studies Registrar. A student wishing to drop a course after this deadline must be passing the course with a minimum grade of P at the time the request is made.

It is expected that the requirements for the PhD degree will be completed no later than seven years after initial enrollment, unless the student enters with a Master's Degree in their field of proposed study, in which case the student is expected to complete the doctorate in five years. Failure to complete the work in the time periods specified or failure to meet the academic standards of the student's graduate program shall necessitate reevaluation of the student's progress and may result in a notice of termination.

The Degree of Master of Arts

Graduate work is offered leading to the degree of Master of Arts in the fields of Comparative Literature.

To receive the degree of Master of Arts from Dartmouth College, a graduate student must have spent at least three

terms in residence at Dartmouth and must have received credit for eight courses at the graduate level. These courses may be replaced in part by research or special study approved and supervised by the department accepting the student for graduate work, provided that not more than four of the required courses may be so replaced. Additional requirements may be imposed by the individual departments.

Candidates whose preparation is deemed deficient by the department accepting the candidate may be required to correct this deficiency by taking courses in addition to those required for the degree.

The Degree of Doctor of Philosophy

The Guarini School of Graduate and Advanced Studies offers programs leading to the PhD degree in the following areas: biochemistry and cell biology; biological sciences; cancer biology; chemistry; cognitive neuroscience; computer science; earth sciences; ecology, evolution, environment & society (EEES); engineering sciences; health policy and clinical practice; integrative neuroscience; mathematics; microbiology and immunology; molecular and systems biology; physics and astronomy; psychological and brain sciences; and quantitative biomedical sciences. Refer to the Medical School catalog for the program leading to the Doctor of Medicine (MD) degree.

Degree requirements are established by the individual departments. Further information about these programs may be obtained by looking under the offerings of the appropriate department in this Catalog or by writing to that department.

The Degree of Master of Arts in Liberal Studies

The Guarini School of Graduate and Advanced Studies offers a graduate program leading to the degree of Master of Arts in Liberal Studies (MALS). This program, which is also available to current Dartmouth employees, features an interdisciplinary approach to advanced study in the liberal arts. It is intended for students dedicated to furthering their liberal education by both directed and independent study.

MALS participants design an individualized plan of study in consultation with the program's faculty advisors, choosing courses from a series of special interdisciplinary courses offered by the MALS Program as well as from regular offerings of the College. Completion of the MALS coursework normally requires a minimum of two summers plus another term of study at Dartmouth. While it is possible to take courses on a year-round basis, a student must be in residence for a minimum of one summer, participating in two summer symposia or one symposium and an approved symposium substitute. All MALS students also produce a thesis as the final program component to receive the degree.

Dartmouth College's MALS program is a member of the Association of Graduate Liberal Studies Programs. For more information on the MALS Program at Dartmouth, visit their web site <http://www.dartmouth.edu/~mals/> or send an e-mail to: MALS.Program@Dartmouth.EDU.

Special Interdisciplinary Training Programs

The Guarini School offers several interdisciplinary training programs including Medical Physics, MD/MS Program in Biomedical Engineering, PhD Engineering Innovation Program, MD/PhD, and PhD/MBA.

INSTRUCTION

Course Election

Students elect their courses for the following term in the preceding regular term using DartHub. The details are explained on the Registrar's website for each term, which is made available to students just before course election. The Timetable of Class Meetings includes an up-to-date listing of courses scheduled to be offered and indicates any courses with limits on enrollment or which require permission of the instructor. It also includes the most accurate and up-to-date information on the distributive and world culture attribute associated with the course. Students should pay close attention to this and note that it may not match what is listed elsewhere. For example, the information on the Timetable supersedes information that may appear next to courses in this Catalog. Exact dates of when the Timetable of Class Meetings becomes available are published in the academic term calendar. Students who elect courses late lose priorities in limited enrollment courses.

Prerequisite

Some courses have prerequisites which are stated in terms of class standing in college, the requirement of the completion of certain specified courses, and/or the obtaining of instructor permission. While some departments/programs use DartHub for prerequisite checking, some list prerequisites in this Catalog only. In either case, the student is responsible for meeting prerequisite requirements.

Numbering and Level

The number of each course indicates the level of the course. Numbers 1-9 are used primarily to designate courses on an introductory level; numbers 10-79 are used for the general course offerings of the department or program. The significance of the various levels depends on the needs of the department or program, but the higher numbers generally indicate courses of more advanced and specialized nature. Numbers 80-89 are used for certain special types of courses, such as seminars, thesis courses, independent study, and honors courses. The numbers 90-99 are used for certain advanced undergraduate major courses. Numbers 100-299 are used for graduate courses. Special topics courses, and certain other related courses, are numbered using a two-digit leading number followed by a "point," then a two-digit number starting with .01 for the first topic, .02 for the next, etc.

Time Sequence

In the course listings to be found on the following pages, below the line with the course number and the title there appear in most cases two-digit numbers, indicating the year, and letters F (fall), W (winter), S (spring), or X (summer), to show the term(s). In most cases, a symbol follows (after a colon) to indicate the time sequence(s) in which the course is to be offered, usually according to the following weekly schedule.

65-Minute periods three times weekly:

8L	MWF	7:30-8:35	x-period:	Th: 7:45-8:35
9L	MWF	8:50-9:55	x-period:	Th 9:05-9:55
10	MWF	10:10-11:15	x-period:	Th 12:15-1:05
11	MWF	11:30-12:35	x-period:	Tu 12:15-1:05
12	MWF	12:50-1:55	x-period:	Tu 1:20-2:10
2	MWF	2:10-3:15	x-period:	Th 1:20-2:10

50-Minute periods four times weekly:

8S	MTuThF	7:45-8:35	x-period:	W 7:45-8:35
9S	MTuThF	9:05-9:55	x-period:	W 9:05-9:55

110-Minute periods twice weekly:

10A	TuTh	10:10-12:00	x-period:	F 3:30-4:20
2A	TuTh	2:25-4:15	x-period:	W 5:30-6:20
3A	MW	3:30-5:20	x-period:	M 5:30-6:20
3B	TuTh	4:30-6:20	x-period:	F 4:35-5:25
6A	MTh	6:30-8:20	x-period:	Tu 6:30-7:20

180-Minute period once weekly:

6B	W	6:30-9:30	x-period:	Tu 7:30-8:20
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It should be noted that there are two possible modes of conducting classes in the 8 or 9 periods, depending upon the instructor's preference for frequent meetings and need for use of x-periods.

Laboratory periods are most commonly scheduled in the afternoon, but morning and evening sessions are also held.

Various courses are listed as 'Arrange' since the sequence has not yet been set or the meetings will be tutorial. Dartmouth reserves the right to alter, including cancellation of course offerings if enrollments (fewer than five students), resources and/or other circumstances in the judgment of the Trustees and Administration require.

Weekly Schedule Diagram

Note: when scheduling a required class meeting outside the normally scheduled times, faculty members are encouraged to provide specific date and time information to students in advance.

DEPARTMENTS/PROGRAMS AND COURSES - UNDERGRADUATE

African and African American Studies

Chair: Matthew Delmont

Appointed Professors: R. M. Baum (AAAS, Religion), M. A. Chaney (English), A. A. Coly (AAAS, Comparative Literature), L. Edmondson (AAAS), T. D. Keaton (AAAS), J. W. Shipley (AAAS), Appointed Associate Professors: N. Maskiell (AAAS); Appointed Assistant Professors: M. Chochotte (AAAS), K. M. Middleton (AAAS); Associated Faculty: Shaonta' Allen (Assistant Professor, Sociology), M. F. Delmont (Professor, History), A. Martin (Assistant Professor, Music), A. H. Neely (Associate Professor, Geography), J. Rabig (Associate Professor, History), N. Sackeyfio-Lenoch (Associate Professor, History); Affiliated Faculty: K. J. Brown (Associate Professor, English), W. Cheng (Professor, Music), S. A. Moodie (Associate Professor, English), M. White Ndounou (Associate Professor, Theater), I. E. Kwayana (Assistant Professor, Film and Media Studies), Ernesto Mercado-Montero (Assistant Professor, History)

The Department African and African American Studies (AAAS) offers a multidisciplinary program designed to provide students with a critical understanding of the history, art and cultures, economics, politics and social organization of the African diaspora. The focused as well as comparative study of Africa, North America and the Caribbean are central components of the program. Students explore the innovative scholarship within the field of African and African American Studies while integrating theoretical perspectives and methodologies from various disciplines.

To view African and African American Studies courses, click here (p. 63).

Requirements for the Major

The AAAS major consists of eleven courses:

1. Two survey courses (must include one of the following: AAAS 9, AAAS 10 or AAAS 11).
One African survey course: AAAS 11, AAAS 14, AAAS 15, AAAS 18, or AAAS 19.
One African-American survey course: AAAS 10, AAAS 12, or AAAS 13.

2. Eight elective courses, including at least two courses from each of the following distributive designations. The program office has a current list of courses satisfying each distributive requirement.

Two courses with SOC, TMV, or TAS.

Two courses with ART or LIT.

One course focused on Africa and one course on African America (including the Caribbean) must be among the eight elective courses. AAAS 10, AAAS 11, AAAS 12, AAAS 13, AAAS 14, AAAS 15, AAAS 18, or AAAS 19 may be used to fulfill this requirement, but more advanced courses are strongly recommended.

3. One of the following culminating experience options:
Senior Seminars: AAAS 90-96.
Senior Independent Research: AAAS 97 (p. 91).
Honors Thesis: AAAS 98 and AAAS 99 (p. 91).

Majors are encouraged to take at least one diaspora course, which may be used to satisfy either area requirement. Courses with the INT distributive designation may satisfy either of the disciplinary requirements. With approval of the Chair, one associated course may be counted toward the major.

Requirements for the Modified Major

African and African American Studies may be undertaken as the secondary part of a modified major. A modified major should be planned to form a coherent program of study with the major. The requirements are four courses in African and African American Studies in addition to those listed for a modified major in the particular department or program. Early approval of a modified major should be obtained from the student's major department or program and from the African and African American Studies Program.

Requirements for the Minor

Students desiring a minor in African and African American Studies must complete six courses. Minors are encouraged to take Senior Seminars and Senior Independent Research courses as part of their four electives. In order to officially file the minor, students must meet with the Chair or a program faculty member to discuss minor requirements and to arrange for online approval.

The Minor consists of six courses:

1. Two Introductory courses chosen from:
AAAS 9: Introduction to AAAS Diaspora Studies,
AAAS 10: Introduction to African American Studies.
AAAS 11: Introduction to African Studies.
2. Four additional elective AAAS courses.

Off-Campus Study

Accra, Ghana

AAAS offers a biennial Foreign Study Program (FSP) in Accra, Ghana, in the fall term. Classes are taught on the campus of the University of Ghana, Legon, with faculty and lecturers drawn from the University and elsewhere in Ghana, and a Dartmouth faculty member affiliated with AAAS. In this program, classroom learning is integrated with research conducted in the community and local archives as well as visits to important historical and cultural sites in Accra and throughout Ghana. Students will have the opportunity to participate in volunteer and other community engagement activities during the term. There are no prerequisites for this FSP, but preference for admission will be given to students who have completed at least one African Studies course.

For more information visit the Ghana Foreign Study Program page.

Paris, France

AAAS offers an FSP in Paris, France, entitled *Afro/Black Paris, The African Diaspora in the City of Light*. The AAAS Paris FSP takes place in one of the most extraordinary destinations in the world. It embodies experiential learning, and is intensive, interdisciplinary, and immersive. Comprised of three courses taught in English, this Program offers a unique opportunity to explore "another Paris," the exceptional and lived-experience that we refer to as Afro/Black Paris, described by former students as "life-altering!" Professor Trica Keaton is the Faculty Director. For more information visit the Paris Foreign Study Program page.

Honors Program

Qualified majors may apply for admission to the Honors Program during the second or third terms of their junior year. Completion of the Honors Program is prerequisite to graduation with Honors or High Honors in the major subject. In order to qualify for an Honors Program at Dartmouth College, the student must have at the time of application a cumulative grade point average of 3.0 in all subjects and a 3.3 grade point average in the major. During two terms of the senior year the honors student will pursue the project under the guidance of a selected primary faculty advisor and a secondary reader by enrolling in AAAS 98/AAAS 99 (p. 91). The student is expected to produce a substantial thesis as the culmination of the project. A grade of A or A- over the two terms earns High Honors; and a Grade of B+ in the first term is satisfactory to continue for Honors. 1. 2.

AAAS - African and African American Studies Courses

To view African and African American Studies Requirements, [click here](#) (p. 62).

AAAS 7 - First Year Seminar

Offered: Fall.

AAAS 9 - Introduction to AAAS Diaspora Studies

Introduction to AAAS Diaspora Studies is a pluridisciplinary comparative and trans-historical course composed of three three-week units, respectively Africa, the Caribbean, and the United States. In addition to literary and social sciences texts, the course will consider music, the visual arts, science, diaspora theory, and research strategies. Topics include the coloniality of modernity; religio-racial self-fashioning; Diaspora identity and identification; African diaspora gender and sexuality; cuisine; pathogenicity, disease and chemical catastrophes.

Degree Requirement Attributes: Dist:INT; WCult:CI

AAAS 10 - Introduction to African-American Studies

A multidisciplinary investigation into the lives and cultures of people of African descent in the Americas. Topics may include: the African background, religion and the black church, popular culture, slavery and resistance, morality and literacy, the civil rights movement, black nationalism, theories of race and race relations.

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 11 - Introduction to African Studies

This course introduces a global socio-historical framework within which to examine Africa in relation to multiple African Diasporas and notions of mobility. Considering the historical contexts of contact between Africa, Europe, and the Americas, we examine cultural, economic, and philosophic aspects of Africa. We will examine how ideas of what it means to be African culturally, racially, and politically are continually produced and contested. The moment of independence of many African nation-states from European colonial rule in the mid 20th century operates as a centering point from which we will examine economics, race, politics, and artistic expressions. We will consider ideas of "tradition" and "modernity," representations of Africa, more recent processes of commodification, as well as various cultural and political responses to them.

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 12 - Early America and African American History: From the Colonial Era to the Gold Rush

This course examines the history of African Americans in early America, from the colonial period to the Gold Rush. This class will explore the formation of both free and enslaved black communities in the early northeastern states and the expansion of slavery westward in the South and later in the American West. By analyzing primary and secondary sources, students will gain a comprehensive understanding of the historical development of African

Americans' ideas and practices around major themes in the field such as labor, economics, politics, and kinship.

Cross-Listed as: HIST 016

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 13 - Black America since the Civil War

This course is a continuation of HIST 16. Among the topics to be discussed are Black Reconstruction, segregation and disfranchisement, migration, nationalism, Blacks and the New Deal, the impact of war on Blacks, and the 1960s. Open to all classes.

Cross-Listed as: HIST 17

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 14 - Pre-Colonial African History

Instructor: Sackeyfio-Lenoch

This course will examine the social and economic history of Africa to 1800. Several interrelated themes of social organization, the expansion of trade, rise of new social classes, the emergence and disintegration of various states and European intervention will be discussed. Through our readings, we will visit every major historical region of Africa (north, east, central, west and south) at least once during the semester to illuminate the various themes.

Cross-Listed as: HIST 5.01

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 15 - History of Africa since 1800

Instructor: Sackeyfio-Lenoch

This course explores some of the major historical processes unfolding in Africa since 1800. Our analysis will focus on social and economic history as we examine Africa's integration into the international economy during the nineteenth century, the rise of new social classes, and the creation of the colonial and post-colonial state. Our primary case studies will be drawn from east, west and southern Africa to highlight both the similarities and differences of their historical development. Open to all classes.

Cross-Listed as: HIST 66

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 16 - History, Culture and Society: The Many Faces of Latin America

Instructor: varies

The Spanish discovery and conquest of this continent created Latin America and the Caribbean out of the diverse and complex realities of the pre-Columbian world. Since colonial times Latin American and Caribbean cultures have developed against a background of cultural repression, racial conflict, political domination, colonial exploitation,

and gender inequality. And yet, in the midst of all this turmoil, Latin America and the Caribbean have produced an extraordinary variety and wealth of artistic creations, ranging from literature to the visual arts, from music to film. In this course we will turn to some of the works by Latin American and Caribbean artists and writers in an attempt to illuminate and explore some of the wonders of the cultural dynamics that shape the many faces of what we call Latin America and the Caribbean.

Cross-Listed as: LACS 4

Degree Requirement Attributes: Dist:LIT; WCult:NW

AAAS 18.03 - Introduction to African Religions

Instructor: Baum

This course introduces the study of Indigenous African Religions, their cosmologies, histories, ritual structures, and their relationships to other aspects of African cultures. Of particular importance will be ideas of gendered spiritual power, the spread of African-inspired religions to the Americas, and the nature of orally transmitted religious traditions. Conversion to Islam and Christianity and reconversion from these religions will also be studied. Finally, we examine the role of African religions in post-colonial African societies and the impact of globalization. Open to all.

Cross-Listed as: REL 014

Degree Requirement Attributes: Dist:TMV; WCult:NW

AAAS 19 - Africa and the World

This course focuses on links between Africa and other parts of the world, in particular Europe and Asia. Readings, lectures, and discussions will address travel and migration, economics and trade, identity formation, empire, and cultural production. Rather than viewing Africa as separate from global processes, the course will address historical phenomena across oceans, deserts, cultures, and languages to demonstrate both the diversity of experiences and the long-term global connections among disparate parts of the world.

Cross-Listed as: HIST 5.08

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 20 - Feminist Theory

This seminar is designed to provide an overview of significant themes and debates within feminist theory. It is organized around several topic areas - most centrally Intersectionality and the Body (including the racially marked body, the covered body and the body in motion, across both national and gender boundaries).

Cross-Listed as: GOVT 86.35 WGSS 67.05

Degree Requirement Attributes: Dist:SOC

AAAS 20.01 - Dartmouth Black Lives

This course equips students with research methods, critical frameworks, and interview skills to document the lives of Black alumni and contribute to an archive of oral sources on Black history at Dartmouth. Students will be immersed in the theory and practice of oral history, a field in which historians conduct collaborative interviews with narrators to create new records of past events.

Cross-Listed as: HIST 10.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 20.02 - Race and Archival Silences

This course will cover the methods scholars use to uncover narratives that seem to lie outside of the traditional archive, broadly defined. We will look at the history and foundations of archival practice, with a specific focus on the rise of archives in the United States, and the effect that race and this history have had on the ways historical narratives are constructed. Does recent scholarly interest in such silences actually distort the records that do exist for marginalized people? We will analyze strategies for reading "silences" in the archival record, such as critical fabulation, reading "against the grain," and "presencing." We will also analyze the critical debate around the concept of archival "silences."

Cross-Listed as: HIST 10.06

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 20.06 - Race, Slavery and the Family

Ideas of family and practices of slavery have stood as enduring concepts within human communities across time and geography, shaping every facet of social organization. But to what extent were they intertwined? How do region, gender, religion, race and socioeconomic status affect the ways in which both slavery and family were constructed and understood? Do these conceptions change over time? Together, we will explore various notions of slavery and the family as well as diverse historical disciplines that wrestle with the varied legacies of these ideas. The events, ideas, and themes that shape the study of slavery as it relates to the construction of the family are controversial and challenging. They wrought seismic change in the past and still shape modern-day political, social, and even religious debates. This course is not intended to tell you what to think about the interaction between slavery and the family but equip you with the tools to explore and come to your own informed conclusions.

Cross-Listed as: HIST 16.03

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 20.07 - Early America and African American History: From the Colonial Era to the Gold Rush

This course examines the history of African Americans in early America, from the colonial period to the Gold Rush. This class will explore the formation of both free and enslaved black communities in the early northeastern states and the expansion of slavery westward in the South and later in the American West. By analyzing primary and secondary sources, students will gain a comprehensive understanding of the historical development of African Americans' ideas and practices around major themes in the field such as labor, economics, politics, and kinship.

Cross-Listed as: HIST 13.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 20.15 - Introduction to Black Feminist Thought

What is Black Feminist Thought? Why Black Feminist Thought? And just whom is Black Feminist Thought for? This course considers the disciplinary formations and political happenings of Black Feminist Thought in the United States—from its role in the university department to its presence on the ground. Highlighting interlocking issues related to gender, sexuality, race, and economics, we will mine political speeches, visual art, live performance, literature, and theoretical discourse.

Cross-Listed as: WGSS 66.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 20.50 - Lest We Forget: History, Collective Memory and Slavery at Dartmouth

Instructor: King

Beyond noting that Wheelock owned slaves, little is known of Dartmouth's other historical connections, if any, to the institution of slavery. This research seminar investigates the college's economic entanglement in the trade and slaveholding; as a site for the intellectual legitimization and contestation of slavery; and the contributions of enslaved persons to its development. We will also review the origins, findings and responses to similar collective memory projects at other institutions including Brown, Emory and Yale.

Cross-Listed as: SOCY 79.08

Degree Requirement Attributes: Dist:SOC

AAAS 21 - Racial Justice

This course introduces students to major contemporary racial justice debates. It also considers how theories of racial justice might better include the concerns of women of color as well as LGBT and trans persons of color. Throughout the course we will examine questions such as: What constitutes racial injustice? How is gender implicated in said injustice? What, if anything, do blacks and other people of color owe to one another? Should political

possibility and pragmatism bound thinking regarding corrective racial justice?

Cross-Listed as: GOVT 27 WGSS 40.03

Degree Requirement Attributes: Dist:SOC

AAAS 21.05 - Carceral Geographies: Explaining Mass Incarceration in the US

Why are there so many people incarcerated in the United States and why are so many people in the US and beyond calling for an end to police violence, some even for the abolition of policing? Is mass incarceration an inevitable product of slavery and Jim Crow? Why did prisons expand in the United States as crime rates were going down? Was it the War on Drugs, or the long term effects of housing discrimination? This course is designed to explore and explain these questions by unpacking the roles of surveillance, criminalization, policing and incarceration to historical and contemporary US state formation and global capitalism. Proceeding from the idea that carceral geographies such as prison towns, policing, and surveillance are spatial fixes for social, economic, and political crises, we will engage scholarship from a variety of fields including: critical prison studies, geography, cultural studies, gender and sexuality studies, and critical ethnic studies. Students will have an opportunity to understand the historical and contemporary organization of people, places, ideas, and infrastructure that makes up US carceral geographies of the United States. This course requires dedicated and rigorous reading. Each week we will read an entire book and analyze it in depth to create shared language and understandings about carceral geographies. |||f

Degree Requirement Attributes: Dist:SOC

AAAS 21.10 - Race and Modernity: W.E.B. DuBois, James Baldwin, Lorraine Hansberry

This course will examine the classical works of three towering modern intellectuals: W.E.B. Du Bois, James Baldwin, and Lorraine Hansberry. We will wrestle with the rich formulations, subtle arguments, and courageous visions of three Black thinkers who continue to speak with power and passion to our turbulent times.

Cross-Listed as: ENGL 53.43 PHIL 01.17

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 21.15 - Black Ethnicities in the United States

This course examines the historical processes of identity formation among varied groups of African-descended people in the United States, problematizing the concept of "African-American" by interrogating the history of the Gullah-Geechee, the Black Seminoles, the Freedmen (Choctaw, Cherokee, and Chickasaw), and the Creoles of the Gulf Coast (Louisiana, Mississippi, and Alabama). In particular, students will examine the ethnogenesis of these

groups and, where appropriate, the phenomenon of emerging linguistic distinctiveness, and the historical relationship between linguistic minority groups and Anglo-American hegemony.

Cross-Listed as: HIST 09.06

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 21.50 - The Color Line, Lynching and the Black Public Sphere: Social & Political Thought of Ida Wells & DuBois

This course will explore the black public sphere through close readings of the writings of W.E.B. Du Bois and Ida B. Wells as well as secondary source material on these thinkers as well as the black public sphere itself.

Cross-Listed as: GOVT 86.36

Degree Requirement Attributes: Dist:TMV

AAAS 21.75 - Black Political Thought

This course will explore the black political thought from the antebellum period through the middle of the twentieth century. The course will include the political writings of major black political thinkers such as Frederick Douglass, Harriet Jacobs, Booker T. Washington, W. E. B. Du Bois, Ida B Wells, Martin Luther King, Jr. and Ella Baker as well as secondary source material on these thinkers.

Cross-Listed as: GOVT 60.19

Degree Requirement Attributes: Dist:TMV

AAAS 21.76 - Black Political Theory

This class examines main ideas and key thinkers within African American, Black American, and Africana political theory. This course compares goals, viewpoints, and strategies of various African American political and social movements of resistance and social and political voices that helped to shape them. Rather than proceeding chronologically, the course is structured around thematic units designed to give a foundational understanding of the development of Africana, Black American, and African American thought on a series of major socio-political topics, such as class, nationality, race, white supremacy, gender, body politics, and culture. The course is structured to give students an understanding of these topics and the multiplicity of methods employed in Black socio-political theory and philosophy.

Cross-Listed as: PHIL 38.05

Degree Requirement Attributes: Dist:TMV

AAAS 21.77 - Racial Capitalism

This class provides students with an advanced geographic understanding of the relationship between race and capitalism using three core questions: What is racial capitalism, and under what conditions did it emerge? How do we understand the role of the Atlantic World

historically in the development of this economic system?
How do these histories permeate into 20th century and early 21st century global economic policy?

Cross-Listed as: GEOG 72.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 22 - Religion and the Civil Rights Movement

Instructor: Booker

This course presents the religious dimensions of civil rights activism in twentieth-century United States history. Students will explore the theologies of African American Protestants, liberal religious thinkers, and adherents to Gandhian philosophy as they waged nonviolent struggle against Jim Crow oppression in the United States. In-class discussions and exercises will examine the religious rhetoric and creative protest strategies of movement activists. Open to all.

Cross-Listed as: REL 061

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 22.10 - African American Religion and Culture in Jim Crow America

Instructor: Booker

Jim Crow segregation in the United States compelled many African American men and women to use their bodies—their hands, feet, and voices—to create sacred scenes, sounds, and spaces to articulate their existence in America. This seminar focuses on religious production to explore African American culture in the post-Civil War era. Students will analyze a variety of sources, including music, visual art, film, religious architecture, sermons, food, theater, photography, and news media. Not open to students who have received credit for AAAS 80.08.

Cross-Listed as: AAAS 80.08 REL 054

Degree Requirement Attributes: Dist:TMV; WCult:CI

AAAS 22.50 - Islam in America

This course is about Muslims in America, past, present, and future—how American Islam is an extension of global Islam and how it is uniquely American. As we study religious identity and understandings of Islam in enslaved Muslim narratives, the civil rights movement, waves of immigration, pre- and post- 9/11, current Muslim geopolitics, we pay close attention to theorizations of contested histories, race, gender, and class dynamics, intersectionality, model minorityhood, assimilation, discrimination. We will also study Malcolm X's visit to Dartmouth, and the significance of the Malcolm X murals in Dartmouth's Shabazz Center.

Cross-Listed as: REL 026 REL 16.03

Degree Requirement Attributes: Dist:TMV; WCult:W

AAAS 23 - Black Sports: Theorizing Blackness in Contemporary Athletics Culture

This course examines Black athletes' cultural, historical, and political impact on American society. We will pay particular attention to how Black athletes of all genders respond to racial injustice and the call of protest, hypersexualization and the politics of desire, exploitation and issues of image likeness, and public scandal and celebrity. Through theories in Black Studies and Gender and Sexuality Studies, we will consider how athletes navigate their Blackness, giftedness, and love of the game.

Cross-Listed as: HIST 030

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 24 - The Black Radical Tradition in America

This course introduces major currents in the history of black radical thought, with a particular focus on the U.S. after emancipation. This class encourages students to define and evaluate radicalism in the shifting contexts of various liberation struggles. By exploring dissenting visions of social organization and alternative definitions of citizenship and freedom as expressed through nonviolence, armed rebellion, black nationalism, Pan Africanism, socialism, communism, anticolonialism, feminism, queer theory and integrationism, students will confront the meaning of the intersection of race, gender, class and sexuality in social movements.

Cross-Listed as: HIST 037

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 24.50 - Contemporary Black Political Thought and the Modern World

In the era and “return” of mass political social movements, the question is perhaps *not* what is the most urgent political struggle of today; rather, what remains unheard, unseen, and unthought in the struggle for political freedom? This course seeks to familiarize students with the works of contemporary black political thinkers who have contributed to the rich theoretical developments and productive tensions in Black Studies, discourses on black resistance and freedom struggle, and political action itself. The course focuses on several key concepts—such as civic and social death, sovereignty, the collective unconscious, the radical imagination—as a way to examine notions of agency and the psychic life of racial violence, particularly in the context of the United States. What is the dream-work of Black freedom? And how do dreams of (black) freedom become realized and/or barred from larger socio-political, economic, and legal structures to the more abstract registers of language, aesthetics, culture, and the imagination? The course investigates the theoretical tenets within contemporary Black Studies *as* critical theory, arguing that these are equally contributive to the

continental philosophical tradition on questions of life, rights, civil society, and personhood.

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 25 - Constructing Black Womanhood

Instructor: King

This course is a critical examination of the historical and contemporary status of black women in the United States, as presented in fiction, primary accounts, and social science literature. We will explore the nature, extent, and consequences of the multiple discriminations of race, sex, and class, as the context in which these women shaped their social roles and identities within the black community and the larger society. We will consider the themes of family, motherhood, and sexuality; educational, economic and political participation; aesthetics and religious traditions; self and social images.

Cross-Listed as: SOCY 046 WGSS 33.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 26 - Toni Morrison

Instructor: Moodie

This course is an in-depth study of Toni Morrison's major fictional works. We will also read critical responses by and about the author. We will examine Morrison's earliest and arguably most foundational and influential works. Required texts will include, *The Bluest Eye*, *Sula*, *Song of Solomon*, *Tar Baby*, *Beloved*, *A Mercy*, and *Conversations with Toni Morrison*. Central to our exploration will be an analysis of Morrison's observation that "the past affects the present." Therefore, we will explore the social and historical factors that contribute to Morrison's artistic constructions. Some of the issues we will examine include, alternative constructions of female community and genealogy, and representations of race, class, nationhood, and identity.

Cross-Listed as: ENGL 63.02

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

AAAS 27 - Transformative Spiritual Journeys. Contemporary Memoirs of African American Religion

Instructor: Booker

This course presents African Americans who have created religious and spiritual lives amid the variety of possibilities for religious belonging in the second half of the twentieth century and the early twenty-first century. By engaging an emerging canon of autobiographies, we will take seriously the writings of theologians, religious laity, spiritual gurus, hip hop philosophers, LGBT clergy, religious minorities, and scholars of religion as foundational for considering contemporary religious authority through popular and/or institutional forms of African American religious

leadership. Themes of spiritual formation and religious belonging as a process—healing, self-making, writing, growing up, renouncing, dreaming, and liberating—characterize the religious journeys of the African American writers, thinkers, and leaders whose works we will examine. Each weekly session will also incorporate relevant audiovisual religious media, including online exhibits, documentary films, recorded sermons, tv series, performance art, and music.

Cross-Listed as: REL 08.01

Degree Requirement Attributes: Dist:TMV; WCult:CI

AAAS 28.10 - Race, Space, and Nature

Ideas of racial difference are frequently advanced as "natural" truths about the world, linked to normative conceptions of environmental relations. Reciprocally, racism—as a set of deadly ideological and material practices articulated around purported group differences—has profoundly shaped conceptions of non-human nature. This course asks how race is inflected in the politics and practices through which humans interact with the "natural" world, and explores the implications for contemporary movements and mobilizations for environmental justice.

Cross-Listed as: GEOG 40.03

Degree Requirement Attributes: Dist:SOC

AAAS 31 - Black Theater, U.S.A.

Instructor: Varies

This course will examine African American playwrights, drama, and theater from 1959 to the present. Further exploration will focus on the impact of civil rights, the Black Arts movement, and cultural aesthetics on the form, style, and content of African American plays. Readings will include plays of Hansberry, Baldwin, Baraka, Kennedy, Childress, Shange, Wolfe, Wilson, Parks and others. Open to all classes.

Cross-Listed as: THEA 22

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 31.10 - Dance Theatre of Harlem Workshop: Collaborative Storytelling Through Movement

Instructor: Ndounou, Heginbotham

Synthesizing aspects of cultural storytelling, theater, movement, activism and biography, this course is focused on the creation of new performance work. Students will have a rare opportunity to engage with the singular Dance Theatre of Harlem (DTH) during their summer residency at Dartmouth College. This course explores the company's relationship and history with ballets that tell a story and the potential for collaborative storytelling across platforms. During THEA 10.57, students will also create, collaborate, and organize performances of their own movement-based works.

Cross-Listed as: THEA 10.57

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 31.50 - Black Theatre Workshop: The August Wilson Experience

Using legendary playwright, August Wilson's ten-play cycle of African Americans' experiences throughout American history as our inspiration, this course provides hands-on, experiential learning of acting, script analysis, and theatrical production. With no previous performance, design, or production experience required, students will read Wilson's plays and related commentary with opportunities to perform selected scenes from the Wilson cycle while exploring possibilities for design and technical elements. In this process-oriented course, students also learn basic acting techniques by strengthening observation and listening skills, risktaking, imagination, improvisation, concentration, exploration of self, voice, and body. Activities include textual analysis of Wilson's plays and related works as well as documenting and revising performance philosophy and process. While providing a safe space for exploring the roles we play in our daily lives and taking on the roles of others in given or imagined circumstances, students will learn widely accepted theories, practices, and terminology of the actor's craft in order to facilitate the practice, writing, and discussion of acting and producing Wilson's plays and others.

Cross-Listed as: THEA 10.56

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 31.80 - Performing Histories, Performing Us

Performing Histories, Performing Us is an interactive course, taught by scholar artist, Dr. Monica White Ndounou, with a residency component with actor/writer/director Roger Guenveur Smith. The course utilizes performance as a tool to interrogate, examine and explore the concept of history, particularly at the intersection of culture and performance. This course uses traditional and nontraditional archives and multiple platforms to illuminate the possibilities for performing histories; performing us.

Cross-Listed as: FILM 47.33 THEA 10.84

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 31.90 - Black Theatre & Storytelling Workshop in XR: Reimagining The Purple Flower (1928)

Instructor: Ndounou

Recognizing the intrinsic value of Black lives and Black storytelling across media platforms, this course will explore the staging of Black theatre texts in virtual reality (VR) and related XR technology. Participants will explore VR technology at the intersection of Black cultural storytelling through the performance of monologues and

scenes as well as design/tech, music and movement culminating into a pilot production of Marita Bonner's *The Purple Flower* (1928), a non-realistic, one-act play that pushes the boundaries of theatrical staging. No prior experience or pre-requisites required.

Cross-Listed as: FILM 49.02 THEA 10.51

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 32.01 - Race & Gender in American Film

This course is an introduction to the history of race and gender in American film. These fundamental social constructs in American life have been central to the development of American film narrative from the beginnings of cinema at the turn of the twentieth century. In turn, American films have profoundly shaped the ways that we think about race and gender and racialized and gendered beings. We will analyze the shifting and situational meanings of race and gender throughout the twentieth century, and in particular, how they have been influenced by the forces of history, including wars, economic depressions, and social movements. While we will focus our attention on Hollywood cinema of the "golden age", the period from the 1920s-1960, we will also spend significant time considering American independent cinema and the post-classical period of filmmaking from the 1960s to the present. In our consideration of race and racialized peoples, we will include African Americans, Native Americans, Asian Americans and Latinos. Our discussions of gender will be expansive to include not just women and femininity, but men and masculinity as well.

Cross-Listed as: FILM 47.24 LACS 25.01 LATS 025

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 32.02 - Black Queer Literature and Film

This seminar will combine elements of black (trans) feminist theory and black queer theory to examine the written works and films/videos by and about lesbians, bisexual, transgender, gay and queer Black people. Emphasis will be on tracing the emergence of black literary and cinematic voices from the late twentieth century to the present. We will read poetry, fiction and essays as well as watch films with an eye towards understanding the historical and theoretical construction of sexual and gender identities, politics and sexual/cultural practices in Black communities. Special attention will be paid to the construction of race, gender and sexual identities in North America, the Caribbean and the United Kingdom.

Cross-Listed as: WGSS 56.12

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 32.05 - Cinema of Black Protest

This course considers Black histories of protest in conjunction with the history of Black representation in

film. We will analyze historical documents, scholarly articles, legal cases and historical accounts of the major moments in Black resistance in the United States. We will begin with the protests against lynching in the early twentieth century and the Civil Rights and Black power era of the 1970's Blaxploitation film genre through contemporary independent films. We will discuss issues of race and gender, racism, sexuality and homophobia as well as misogyny and sexism in Black representation. Students will be expected to watch and discuss films as well as read scholarly articles on race theory, queer theory, feminist theory and cultural criticism.

Cross-Listed as: FILM 42.16

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 32.15 - The Making of 21st Century Exhibits: Curating a National Black Theater Museum/Institution

Instructor: Ndounou

This course is designed for those interested in theatre and performance, African American studies, history, and culture. Students will study influences on the development of black theater and performance in the USA as well as processes for preserving, curating, and exhibiting culture in institutions, examining how museum concepts intersect and/or collide with representations of black history and culture. In collaboration with the Hattiloo Theatre in Memphis and the DeVos Institute of Arts Management, who are drafting plans for an institution devoted to black theatre practitioners, students will determine and develop content for an interactive venue. They will consider strategies for the use of technology and live exhibits, involving black communities in exhibits and curation, and providing access to diverse communities. Projects and findings will be shared with the institution's developers and will be considered in their ongoing plans. The course will include a visit to the National Museum of African American History and Culture in Washington.

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Cross-Listed as: THEA 10.55

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 32.50 - Black LGBTQ History

This course is an introduction to the study of Black LGBTQ history in the United States. We will examine a range of primary and secondary source material from the nineteenth century through the late twentieth century. This material includes documentaries, scholarship, newspaper articles, newsletters, diaries and letters. We will look at sexual relationships in the nineteenth century among slaves and free people as well as the cultures of sexual diversity and gender transgression a couple of generations after slavery that gave rise to the jazz age and the Harlem

Renaissance. We will also take a look at post-war America, the Civil Rights and Black Power era for their moments of sexual expression and gender variance as well as repression. The course will continue to examine Black experience into the AIDS crisis, gay marriage debates and transgender rights movements.

Cross-Listed as: WGSS 65.08

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 33.10 - Rituals of Breath: Black Performance and Resistance

This interdisciplinary course explores the historical legacy of public rituals of extreme violence against African American peoples as both sites of anti-black state and non-state sanctioned disciplinary projects as well as time-spaces of radical resistance. From the slave trade to life and labor under conditions of slavery to post-reconstruction segregation to lynching to police violence, American history can be read through the changing nature of the public torture of Black peoples. At the center of these forms of violence are the control of breath as life force and sign of freedom. This course examines the murder of Eric Garner in 2014 in a police-executed choke hold as a key event that both harkens back to a long history of lynchings and shootings and also to a history of how Black communities have organized around and resisted these forms of violence. Aesthetic representation has been intimately connected to anti-Black racial violence from photographs and postcards of lynchings in which white perpetrators pose alongside dead Black bodies to representations of Emmitt Till's mutilated body at his funeral in an open casket to video of Rodney King's beating to the continuing stream of video and images of extra-judicial killings of black citizens. Generations of artists in film, theater, painting/sculpture, dance, and across media have challenged and confronted this aesthetics of violence. This course explores theories of ritual and performance to understand how artists and communities come together as collectives to contextualize and re-present impossible terrors. Artists and political organizers use aesthetics and collective action to transform the horror of being subject to violence at any moment into rituals of potential social transformation. This course then teaches students theories of ritual and performance as ways that communities have historically engaged and confronted histories of anti-Black violences in order to conceive of new future possibilities in the face of disciplinary actions meant to contain and choke black people(s). In some manner, the course links African American experiences of violence and resistance to those of other African peoples around the world. This course is team taught and also draws upon the expertise of various faculty at Dartmouth. This course aims to link theories of Black life and performance to active practices of performance-making, interrogating the intersections between art and scholarship.

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 34 - Early Black American Literature

Instructor: Chaney

A study of the foundations of Black American literature and thought, from the colonial period through the era of Booker T. Washington. The course will concentrate on the way in which developing Afro-American literature met the challenges posed successively by slavery, abolition, emancipation, and the struggle to determine directions for the twentieth century. Selections will include: Wheatley, *Life and Works*; Brown, *Clotel*; Douglass, *Narrative*; Washington, *Up from Slavery*; DuBois, *Souls of Black Folk*; Dunbar, *Sport of the Gods*; Chestnut, *House Behind the Cedars*; Harriet Wilson, *Our Nig*; Johnson, *The Autobiography of an Ex-Coloured Man*; and poems by F. W. Harper, Paul L. Dunbar and Ann Spencer.

Cross-Listed as: ENGL 30

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 35 - Modern Black American Literature

Instructor: Varies

A study of African American literature from the Harlem Renaissance to the present, this course will focus on emerging and diverging traditions of writing by African Americans. We shall also investigate the changing forms and contexts of 'racial representation' in the United States. Works may include those by Hurston, Hughes, Wright, Ellison, Morrison, Schuyler, West, Murray, Gates, Parks.

Cross-Listed as: ENGL 33

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 35.01 - Black Elegies

This course is structured around iterations of black grief within, but mostly beyond the genre of poetry. What curator Okwui Enwezor calls the contemporary "emergency of black grief" is over four centuries old. We will explore modes of release from black cultural producers who attend to the multiple losses sustained by black subjects. The resulting productions span the range of representation from dance, painting, photography, music, film, and craftwork. The course will be organized around three parts, each focusing on the sensorial: *Sight*, *Sound*, and *Touch*. Together we will consider what it means to mourn in an antiblack world resistant to acknowledging the violences endured by black subjects in the United States and beyond its borders.

Cross-Listed as: ENGL 73.03 WGSS 66.11

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 35.02 - Disability and Madness in African American Literature and Film

Disability and madness are often overlooked analytic and lived experience in African American Studies and African American criticism, though recent work in Black disability studies is shifting this. The goal of this course is to pull disability and madness to the center of course readings to understand the complexities of Black life, such as: grief, sexuality and gender identity, geography, and the impact of incarceration and institutionalization. Students will be asked to approach canonical texts and less familiar texts for messier readings, unraveling(s) and ravings that complicate Black life. Likewise, we will watch film adaptations that also represent disability and madness on screen. Because disability and madness are recurrently represented visually, as is race, this course will trace representation from the page to the screen as part of a deeper understanding of how disability and race become co-constituted in American culture. Lastly, we will ask, again and again: what does disability and madness look like in literature? What images, language, etc., are used to represent disability and madness as it intersects with Blackness? And finally, what things are made possible through a disabled and mad lens? How are freedom, injury (and healing), and salvation better imagined through disability and madness?

Cross-Listed as: ENGL 53.54 WGSS 66.27

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 35.03 - The Idea of Black Culture

The Idea of Black Culture offers a reading of conceptualizations of the subject of black culture across a historical time line that begins with W.E.B. DuBois's *Souls of Black Folk* (1903) and proceeds through successive periods of black cultural apprenticeship in the geopolitical context of the Americas. Those eras may be characterized according to four broad rubrics or temporal themes as follows: 1) the Pan-African movement, pursued as a practice by black activists at the turn of the twentieth century and after the end of WWI; 2) the era of decolonization and the mounting of the Civil and human rights campaigns in the United States, the Caribbean, and independence movements on the Sub-Saharan African Continent, which events share the global context of the "Cold War" (from the Marshall Plan to the collapse of the Berlin Wall, 1989, and the dismantling of the Soviet Union, 1991); 3) the birth of the Black Studies movement (alongside the resurgence of black nationalism) and the development of the new epistemologies of the post-'sixties and beyond, and finally 4) the emergence of the concept of the African Diaspora and the post-race/post-colonial thematics of the late twentieth-early twenty-first century, marked by the presidency of Barack Obama. Each of these eras of human and social engagement has engendered its own distinctive work on the idea of black culture. This seminar will examine some of those ideas by analyzing

selective texts by W.E.B. DuBois, C.L.R. James, Aimé Césaire, and Frantz Fanon. The course will be taught in two halves, beginning with the seminal texts of canonical figures like Du Bois, and proceeding to a critical inquiry into the projects of contemporary scholars and theorists that will include selective work by Saidiya Hartmann, Fred Moten, Nahum Chandler, Denise da Silva, and Frank Wilderson, as well as other representative figures of the schools of Afro-Pessimism and Critical Race Theory.

Cross-Listed as: ENGL 53.51

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 35.05 - Black Speculative Worlds

This course will explore futuristic speculative worlds as they are imagined by major Black women writers in the field of science fiction and fantasy, specifically focusing on works by Octavia Butler, Nalo Hopkinson, and N.K. Jemisin. We will explore utopias/dystopias and post-apocalyptic alien worlds in order to interrogate the ways in which they reflect and comment on our own human condition. Understanding each literary text as a thought experiment in its own right, we will unpack various themes associated with the reconfiguring of the constructs of race, class, gender and sexuality as well as Black women's reproductive rights and politics. We will closely analyze alien invasion contagion narratives that comment on the histories of slavery, settler colonialism, and imperialism, and that speak to the operations of white supremacy. Lastly, we will examine how a revisionist mode of writing functions as an essential part of Black feminist speculative thought.

Cross-Listed as: ENGL 53.57 WGSS 66.31

AAAS 35.50 - Introduction to African American Environmental Thought: The Black Outdoors

Instructor: Bennett

The persistence of black life, and blackness as a way of thinking about the organization of both human and nonhuman forms of life, has been absolutely central to the story of the United States and the Americas more broadly. This course provides an interdisciplinary exploration of the writing of thinkers from across the African diaspora, with special emphasis on literary works and criticism centrally concerned with the intersections of black literary studies and African American environmental thought. We will draw on a range of texts in order to wrestle with some of the key concerns of African American writers from the 19th century through the present. Students will be introduced

to a range of methods and approaches to the meta-disciplinary work of black literary studies. By the end of the course, students will be expected to possess a working knowledge of several major themes, figures and moments within the black expressive tradition.

Cross-Listed as: ENGL 53.29

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 35.60 - Poetry for the People

Instructor: Bennett

The central concern of this class is the historical relationship between the social lives of everyday people and U.S. American poetics, with a special emphasis on what June Jordan once termed the “difficult miracle of Black poetry in America.” How does poetry help us to know one another? And how might we better understand the particular role of poetry, of *poesis*, for those historically barred from the very practice of reading or writing, from ownership (even of one's own body), and various generally recognized forms of belonging? For the purposes of this course, these will be some of our animating questions.

As a group, we will study the works of Audre Lorde, Toni Morrison, Tongo Eisen-Martin, Jericho Brown, and Claudia Rankine, among others. Largely toward the end of elaborating, in concert, a working theory of social poetics, a poetics of sociality, a new way for us to be together in a cultural moment marked by distance, as well as the disintegration of the public commons. In the midst of this ongoing catastrophe, this state of emergency and emergence, this course will seek to chart a way forward using the instruments left to us by luminaries both dead and living, a cloud of witnesses beckoning us toward a future with room enough for all of us to flourish.

Cross-Listed as: ENGL 53.48

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 36.50 - Rasta and Rastafari

Instructor: Campbell

This course examines the Rastafari spiritual and political movement from its genesis in Jamaica to its transformation into a global phenomenon. Today's perception of Rastafari is informed by popular images of marijuana smoking, reggae musicians and a laid-back lifestyle. Consequently, Rasta is often mistaken for practicing a countercultural phenomenon of no global significance, a poster child for the undesirable other, or merely a misguided rebel. Rastafari however, is significantly more profound. Rastafari has offered, cloaked in revolutionary black hermeneutics, some of the sharpest critiques against European imperialism and exploitation. Despite the presence of burgeoning scholarship, Rasta's global significance remains hidden in the fissures of most historical discourses and behind the haze of marijuana smoke created by popular understandings of the movement. This course employs monographs, scholarly articles, documentary films and primary sources and music to and explore Rastafarian ideologies that among other things, promoted decolonization while decrying racism and imperialism. It is open to students seeking to broaden their

knowledge of religions and socio-political movements in the African diaspora.

Degree Requirement Attributes: WCult:NW

AAAS 39 - Jazz: Black Creative Music and American Culture

The music known as ‘jazz’ has been one of the most revolutionary and influential artistic movements of the past century. *Jazz: Black Creative Music and American Culture* will provide a basic historical overview of the music, with major themes including the relationship between composition and improvisation; the reinvention of traditional roles of performer, composer, bandleader, and collective ensemble; and the music’s connection to African-American history and the civil rights movement. Not open to students who have received credit for MUS 05.01, MUS 05.02, AAAS 39.01, or AAAS 39.02.

Cross-Listed as: MUS 005

Degree Requirement Attributes: Dist:ART

AAAS 39.01 - History of Jazz to 1965

This course examines jazz from its origins to 1965, with special attention given to pivotal figures such as Louis Armstrong, Charlie Parker, Miles Davis and John Coltrane. Class work includes listening to, analyzing, and discussing jazz recordings and watching jazz films. Students will also attend live jazz performances and read about the artists who brought this music to life, with the goal being to increase understanding, appreciation and enjoyment of this great American art form.

Cross-Listed as: MUS 5.01

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 39.02 - History of Jazz since 1959

Instructor: Glasgo

This class examines developments in jazz, starting with historic 1959 recordings by Ornette, Coltrane and Miles Davis, followed by soul jazz, modal jazz, jazz funk, the avant-garde, big bands, Afro-Latin jazz and world jazz. Class work includes close listening, discussions, collaborations and in-class presentations. Students also complete required reading, listening and writing assignments and attend jazz performances, resulting in a deeper understanding and appreciation for jazz and improvisation, both worldwide and in our daily lives.

Cross-Listed as: MUS 5.02

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 39.03 - Advanced Studies in Jazz History: A Century of Jazz at Dartmouth

Advanced Studies in Jazz History offers students the opportunity for in-depth research into specific topics pertaining to Black Creative Music. This term we will be

turning our gaze inward, exploring Dartmouth’s own history with jazz and other forms of Black music over the past century. Through a combination of primary source research, interviews and oral history, and creative storytelling and writing, the goal of this course is to generate lasting, honest, insightful, and engaging documentation of the complicated history of jazz at Dartmouth.

Cross-Listed as: MUS 45.12

Degree Requirement Attributes: Dist:ART

AAAS 39.05 - Utility of Death and Dying in African American Music

This course explores the topics of death and dying and their multiple uses across the span of African American music from the time of enslavement to the present day. Through an engagement with sound recordings, scholarly writings, journalism, lyrical analysis, film, and other sources, we will expand our understanding of how and why death is so frequently invoked in African American music. Although some reasons for these invocations - for instance, loss or mourning - may seem obvious, this course will require us to reframe our perceptions of death as simply the ending point of life. As we will learn, death and dying can serve a number of purposes, from ‘deadness’ serving as a necessary aesthetic for creation, to death being an integral part of an artist’s identity.

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 39.06 - Hip-Hop in the United States

Instructor: Martin

This course is an introduction to hip-hop music and culture, intended to offer interdisciplinary perspectives on what is one of the most popular genres in the United States. From its humble origins in New York to now, hip-hop and rap music have changed the sonic landscape of the US and the world. We will examine rap music and hip-hop culture as artistic and sociological phenomena with emphasis on historical, cultural, economic and political contexts. Discussions will include the coexistence of various hip-hop styles, their appropriation by the music industry, and controversies resulting from the exploitation of hip-hop music and culture as a commodity for national and global consumption.

Cross-Listed as: MUS 18.02

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 39.07 - Verzuz: A History of Black Popular Music

During the Covid-19 pandemic, superproducers Swizz Beatz and Timbaland created “Verzuz,” an event that matches artists with their contemporaries as they trade songs back and forth for nostalgia, competition, and celebration. In this class, we will use Verzuz battles to

study Black popular music beginning in the mid 20th century. Drawing on music and materials pertaining to broader social and cultural contexts, we will analyze Black popular music from a sonic and cultural perspective.

Cross-Listed as: MUS 18.03

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 39.08 - Black Sound Studies

This upper-level reading and writing intensive seminar explores the field of Black sound studies. We will explore Black music, sound technologies, performance styles, aesthetics, and sonic epistemologies, all the while asking what might Black sound studies be and why. Each week, we will engage a text and an album together, moving through the sound sources of both pieces to generate moments of connection and silence between the two.

Cross-Listed as: MUS 24.01

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 39.09 - Music and Social Justice

This course asks what we can do for music and what music can do for the world. Our research and discussions lead us not simply to concrete examples of music functioning as an agent of change, but furthermore to contested notions of what it even means (and takes) to claim that something—society, art, people, culture, values—has undergone notable transformation. How do we think and talk about change via discourses of reform, revolution, rehabilitation, activism, innovation, progress, and productivity? What are some distinguishing features of music and sound that might enable them to serve as flashpoints or vehicles for change? And how might you—in this class and beyond—engage with music and its technologies to fulfill causes most meaningful to you?

Cross-Listed as: MUS 45.04

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 40 - Gender Identities and Politics in Africa

Instructor: Coly

This interdisciplinary course explores the constructions of gender identities in different African socio-cultural contexts. The emphasis is on contemporary Africa, although we will discuss some of the historical framework of these identities. We will read historical accounts of gender in some pre-colonial African societies, investigate the impact of colonialism, and examine gender in some anti-colonial movements. We will also analyze gender in urban and rural contexts, and address such questions as homosexuality and gay rights.

Cross-Listed as: WGSS 34.02

Degree Requirement Attributes: Dist:INT; WCult:CI

AAAS 42 - Women, Religion and Social Change in Africa

Instructor: Baum

This introductory, multidisciplinary course examines women's religions ideas, beliefs, concerns, actions, rituals and socio-cultural experiences in African societies and cultures from a comparative, historical and gender perspective. We will look at women's experiences of social change in African religions, the encounter with Islam, slavery, Christianity, and colonialism. We will analyze the articulations of economic and political power or lack of power in religious ideas as we ask questions such as: What are the different antecedents and circumstances in which women exercise or are denied agency, leadership, power and happiness in their communities? Texts will include nonfiction, fiction, and film narratives. Open to all students.

Cross-Listed as: REL 066 WGSS 44.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 44 - Contemporary Africa: Exploring Myths, Engaging Realities

This course focuses on processes, relationships, and experiences that have shaped, and continue to shape, the lives of Africans in many different contexts. These include issues of ecology and food production, age, gender, ethnicity, exchange, colonialism, apartheid, and development. We will then embark on in depth readings of ethnographies that engage these issues and themes. In the processes we will move beyond prevailing stereotypes about Africa, to engage the full complexity of its contemporary realities.

Cross-Listed as: ANTH 036

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

AAAS 45.01 - Environmental Crises & Human Rights

Environmental crises are occurring around the world at a rate never seen before. Lake Chad. Indonesia. The DRC. Martinique. The Niger Delta. These places have become tragically associated with most of the ecological issues threatening our planet. In this course, we will turn to recent texts and media to investigate the extent of rising waters and displacement, drought and exodus, pollution, and deforestation, as such and as linked to human rights, in an attempt to understand the violence of the contemporary crises playing out in locations already plagued with inequalities and human rights violations. In our analysis, we will also consider the rise of climate migration and what it means for the future of these regions, as well as what literature has to offer to represent environmental crises.

Cross-Listed as: COLT 70.07

AAAS 46 - History of Modern South Africa

Instructor: Sackeyfio-Lenoch

After an initial overview of colonialism in Africa, this course will concentrate on Southern Africa, with special emphasis on the historical development, effects, and implications of the racial situation in the Republic of South Africa. Readings will be drawn from primary and secondary materials and from works of fiction. Illustrative films will be shown, and some opportunity offered to compare the history of race relations in South Africa with that in other African countries and in the United States. Open to all classes.

Cross-Listed as: HIST 067

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 50 - Colonialism, Development, and the Environment in Africa and Asia

Instructor: Haynes

This course examines the environmental history of Africa and Asia, focusing on the period of European colonialism and its aftermath. Topics include deforestation and desertification under colonial rule; imperialism and conservation; the consequences of environmental change for rural Africans and Asians; irrigation, big dams and transformations in water landscapes; the development of national parks and their impact on wildlife and humans; the environmentalism of the poor; urbanization and pollution; and global climate change in Africa and Asia. Open to all classes.

Cross-Listed as: ENVS 045 HIST 075 ASCL 54.07

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 51 - African Literatures: Masterpieces of Literature from Africa

Instructor: Coly

This course is designed to provide students with a specific and global view of the diversity of literatures from the African continent. We will read texts written in English or translated from French, Portuguese, Arabic and African languages. Through novels, short stories, poetry, and drama, we will explore such topics as the colonial encounter, the conflict between tradition and modernity, the negotiation of African identities, post-independence disillusion, gender issues, apartheid and post-apartheid. In discussing this variety of literatures from a comparative context, we will assess the similarities and the differences apparent in the cultures and historical contexts from which they emerge. Readings include Chinua Achebe's *Things Fall Apart*, Naguib Mahfouz's *Midaq Alley*, Calixthe Beyala's *The Sun Hath Looked Upon Me*, Camara Laye's *The African Child*, and Luandino Vieira's *Luanda*.

Cross-Listed as: COLT 51.01 ENGL 53.16

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

AAAS 53 - Islam in Africa

Instructor: Baum

This course aims to introduce students to the formation of Islam in the Maghrib, Saharan Africa, and Africa south of the desert. Assignments will address continuities with and differences from the practices of Muslims in other parts of the world while emphasizing the central role the religion has played in the unfolding of history in various parts of Africa. Topics covered will include conversion, popular religion and mysticism, cultural formations, and social organization. Open to all classes.

Cross-Listed as: HIST 69 REL 74.17

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 54 - Postcolonial African Drama

This course explores selected theatre and performance traditions of sub-Saharan Africa. How do African playwrights negotiate and transform the colonial legacy of Western drama, and how do they use theater to challenge neocolonial regimes and to advance ideas of democracy, human rights, and gender equality? Plays from Nigeria, South Africa, Kenya, and Uganda receive special emphasis. No prior knowledge of African studies or theater is necessary, just a willingness to expand critical and creative horizons.

Cross-Listed as: THEA 23

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 54.05 - Feminist and Queer Africa on Stage & Screen

This course explores representations of feminist and queer Africa in theatre, dance, and film. How do female-identified, nonbinary, and/or queer African artists use creative expression to navigate and challenge neocolonial, heteropatriarchal regimes and advance ideas of LGBTQIA rights and gender equality? Although several countries will be considered during the term, Kenya and Uganda receive a particular emphasis. All students are welcome; no prior knowledge of Africa and/or theories of gender and sexuality are needed.

Cross-Listed as: THEA 10.64

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 55.01 - African Cinema

This course focuses on the cinemas of Francophone Africa. We will examine early Western filmic representations of Africans as savages devoid of culture and history. We will

then examine how African filmmakers have challenged those images by creating new depictions of their societies, offering Africa through African eyes. We will explore the social, historical, and political contexts of these films and explore their aesthetic and narrative characteristics. We will discuss issues and theories related to the definition of the so-called third world cinema, postcolonial cinema, and postmodern cinema.

Cross-Listed as: FILM 42.09

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 55.02 - The Idea of Africa: Deconstructing Race in the Iconography of a Continent

This course will consider the mapping of race onto the idea of Africa and how Africa came to constitute a unique racial category. We will therefore conduct an “archeology of race” and engage the argument by historians of race in Africa that Africa was a major laboratory of race. Our primary material will consist of motion pictures, in an effort to reckon with the role of motion pictures as prime technologies of racial othering and their deep imbrications in colonial projects.

Cross-Listed as: FILM 44.12

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 56 - The African Political Novel

Instructor: Coly

This course examines the relationship between politics and the novel in Africa. I have selected novels from different parts of Africa. We will approach the selected novels as instruments of political interest and products of political contexts. We will then proceed to put these novels in a triangular conversation with political theorists of Africa and the political philosophies of African leaders. Topics include democracy and governance, clientelism and patrimonialism, failed states, gender, and grassroots activism.

Cross-Listed as: COLT 51.03

Degree Requirement Attributes: Dist:LIT; WCult:NW

AAAS 60 - Slavery and Emancipation in Latin America and the Caribbean

For over 300 years, Africans were transported to Latin America and the Caribbean to work as enslaved laborers. This course will examine the history of African slavery in the region from the beginning of the Atlantic slave trade to the abolition of slavery in Brazil in 1888. For each class session, students will review primary source documents such as autobiographies, slave codes, plantation journals, visual images, and anti-slavery tracts as well as historical scholarship.

Cross-Listed as: HIST 92.03 LACS 25.07

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 60.01 - Plantations and Slavery in the Americas

Instructor: Musselwhite

The plantation evolved in the Americas as a place for European exploitation of colonial environments and enslaved laborers. It played a foundational role in shaping settler colonialism, racial slavery, and capitalism across the Americas and it has also framed debates around the legacies of slavery and colonial appropriation up to the present. This course explores the evolution of the plantation as an institution and an ideology of racialized exploitation, but also traces enslaved peoples’ resistance to the plantation and their construction of rival geographies and institutions.

Cross-Listed as: HIST 16.02

Degree Requirement Attributes: Dist:SOC; WCult:W

AAAS 60.02 - Black and Indigenous Slavery

This course explores how slavery in the New World emerged out of multiple traditions, such as Roman, Mediterranean, African, and Amerindian bondage, as well as diverse forms of captivity and forced labor. Primarily, we will focus on the expansion, overlaps, and variations between Indigenous and African slavery; the legalities justifying these institutions; and varying forms of emancipation in areas such as West and West Central Africa, Europe, Mesoamerica, North and South America, and the Greater Caribbean.

Cross-Listed as: HIST 85.02 NAIS 054

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 60.50 - Racial Geographies: Race and the Politics of Place

This course will explore various themes surrounding the ways in which race shapes the way we understand ideas of place. With a focus on Africa and its diaspora, the course looks at the movement of people and ideas inherent in the concept of diaspora and reflects on how people also reshape social worlds that challenge the way we commonly understand the world to be divided (i.e. by political territories like “countries” or by physical geographies like “continents”). The goal of the course is to start with the concept of “Blackness” and unpack the complexity of various other racial and spatial categories like “Sub-Saharan Africa” “Arab North Africa” “the West” and “diaspora.” The three general themes of territory, flows, and space/futurisms, will be explored in relation to the way they are experienced by people in everyday life, therefore the readings will primarily be ethnographic, following African descendant communities in Africa, Europe and the Americas. However, we will tackle these issues through

history and fiction writings as well. Not open to students who have received credit for GEOG 063.

Cross-Listed as: ANTH 50.28 GEOG 071

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 61 - Caribbean History: 1898 to the present

This course surveys the major issues that have shaped Caribbean society from the late 19th-century to the present, including: imperialism, urbanization, migration and globalization, struggles for national independence, the transition from plantation to tourism-based economies, and the global spread of Caribbean popular culture. Our readings and discussions will focus on the historical trajectories of Cuba, Haiti, Jamaica, Puerto Rico, Trinidad, and the Dominican Republic using historical scholarship, music, literature, film, and personal narratives.

Cross-Listed as: HIST 92.01 LACS 25.10

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 61.05 - Haiti and American Empire: History of Revolutions and Authoritarianism

Instructor: Chochotte

The course explores the historical struggle between democracy and authoritarianism in Haiti throughout its two hundred seventeen years of independence as a free black nation, which also makes the island one of the oldest sovereign countries in the Western Hemisphere. To understand the island's history, students are expected to read what historians and writers have written about Haiti; and to read the primary letters of frantic French planters, rebellious African slaves, egalitarian peasants, entrepreneurial market women, conscientious revolutionaries, exuberant military generals, loquacious politicians, feared dictators, and dreaded militias through time. The course will, indeed, move through four important, though overlapping, historical moments. First, we begin with an examination of the 1791-1804 Haitian Revolution when enslaved Africans revolted against the French colonial planters to successfully abolish slavery and to achieve national independence. Second, we read through the formation of grassroots and institutional democratic traditions in the nineteenth century and how they were undone during the 1915-1934 US Occupation of Haiti, where US President Woodrow Wilson ordered the American military to invade Haiti and control the island for almost two decades. Third, we will explore how the undoing of democracy led to the rise of the Francois and Jean-Claude Duvalier dictatorship (1957-1971) and its dreaded militia called the *tonton makout* militia (often spelled in the following French orthography: *tonton macoutes*). Finally, we will conclude the class by looking at how and why the Haitian peasantry overthrew the dictatorship to replace it with the democratically elected President Jean-Bertrand Aristide (1991).

Cross-Listed as: LACS 25.09

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 62 - Nationalism and Revolution in the Caribbean

The islands of the Caribbean have served as the site for two of the most significant revolutionary upheavals of the modern era-the Haitian Revolution and the Cuban Revolution and have produced anti-colonial luminaries such as José Martí, Frantz Fanon, Marcus Garvey, and Claudia Jones. This course will explore the origin, trajectory, and outcome of nationalist struggles in the Caribbean from the eighteenth-century to the present through primary and secondary materials, memoirs, fiction, and film.

Cross-Listed as: HIST 92.02 LACS 25.11

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 62.75 - Race, Gender, & Revolution in the Atlantic World

Instructor: Voekel

This course examines how the events and intellectual production of the Haitian Revolution and decolonization struggles in the Spanish Empire shook the Atlantic World and forced a reconsideration of political categories such as liberty, tyranny, citizenship, rights, and the relationship of race and gender to all of these concepts. The Enlightenment influenced Latin American and Caribbean revolutionaries, but these rebel intellectuals in turn challenged some of the Enlightenment's fundamental tenets, ushering in new polities with radical notions of citizenship and belonging. Not open to students who have received credit for HIST 41.02.

Cross-Listed as: HIST 09.09 LACS 25.05 WGSS 025

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 63 - Race Matters - Race Made to Matter

Instructor: Keaton

What is race? What are the effects of race in our everyday life? How has science shaped our understanding of race and human diversity? This course explores how and why race is a social construction with profound implications in our social world not only in the U.S. but also beyond its shores. Diverse sciences have established that human beings are well over 99% genetically identical, but race remains a potent vision through division that has been *made* and *made to matter* across multiple spheres of life. This ranges from ancestry testing to our identities to how we are categorized to where we live and whom we are taught to love and hate in society. How race intersects with socio-economic disparities related to inclusion and exclusion are among the topics examined in this course.

Cross-Listed as: SOCY 071

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 64 - Afro/Black Europe

The goal of this course is to examine the contemporary experiences of people racialized as black in Europe—including those who do not self-identify as such—and analyze aspects of race and racialized relations that are unique to Europe. Through guest lectures, reading, and film, students will gain a critical awareness of race/racialization and its impact in a variety of European countries, and attain exposure to an evolving, international field of inquiry: Afro/Black European Studies.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 65 - Introduction to Postcolonial Literature

Instructor: Khan

An introduction to the themes and foundational texts of postcolonial literature in English. We will read and discuss novels by writers from former British colonies in Africa, South Asia, the Caribbean, and the postcolonial diaspora, with attention to the particularities of their diverse cultures and colonial histories. Our study of the literary texts will incorporate critical and theoretical essays, oral presentations, and brief background lectures. Authors may include Chinua Achebe, Ngugi wa Thiong'o, V.S. Naipaul, Merle Hodge, Anita Desai, Bessie Head, Nadine Gordimer, Paule Marshall, Tsitsi Dangarembga, Salman Rushdie, Earl Lovelace, Arundhati Roy.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

AAAS 65.01 - Revolutionary Imagination: Religion, Modernity, and the Otherwise

In this course, students work together to reckon with our dystopic present—and to build a dynamic toolkit for imagining and realizing more livable futures. To do so, we capacitate a vibrant understanding of religion (in theory and method) and examine the potentialities that this approach to religion opens in emergent movements for social change. Through interdisciplinary coursework and ethnographic research, this course trains students to study and practice everyday life towards futures otherwise. Open to all.

Cross-Listed as: REL 74.16

Degree Requirement Attributes: Dist:TMV

AAAS 65.06 - Jews and Race

The question of Jewish difference has been foundational in the formation of both Christendom and Islam. Of course, the question of race, and the racialization of the Jews, is often thought to be modern phenomenon when Race Science became prominent in the nineteenth century. But

lately scholars have begun to re-think the category of race in connection with modernity and to reconsider race as a construct that extends back at least into the Middle Ages.

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This course will look at the long historical trajectory of Jews and race, beginning in the Middle Ages and focusing primarily on European modernity, America, including the complex alliance of Jews and Blacks from slavery to BLM, the role of race in the Israeli/Palestinian conflict and the rise of Islamophobia. The goal of this course is to better understand the nature of Jews as a *genos/race/ethos/people* as they are labeled by others as well as how they self-identify. Jews identified as a “race,” and were identified as such by others, until the 1930s, after which *ethnos* served as a substitute. The question of “whiteness” loomed large for Jews in America; are Jews white, and if so, what are the implications of their “whiteness”? Finally, we will explore more recent iterations of this vexing issue in contemporary politics that includes “Jews of Color,” Zionism, Israel/Palestine, conversion to Judaism, and progressive politics in America.

Cross-Listed as: JWST 013 SOCY 49.25

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

AAAS 65.65 - Silence, Exile, and Cunning: Comparing Jewish and African Diasporic Literatures

Instructor: Caplan

The diasporic subject is by definition a dislocated subject. This dislocation manifests itself not only with respect to space, but also in relationship to history, language, political power, and above all in the psychological relationship that diasporic subjects maintain with themselves. This course will focus on two primary examples of diaspora in the late nineteenth and twentieth centuries, Jews and Africans, to examine the multiplicity of relationships among language, literary structure, as well as gender and sexuality that inform the construction of diasporic literatures. Although this course cannot be comprehensive in its survey of either Jewish or African literatures, it will offer suggestive juxtapositions of the two to emphasize commonalities between their historical and political experience. It will also explore how the once exceptional condition of diaspora increasingly has become representative for more and more people in the world today.

Cross-Listed as: COLT 51.05 JWST 15.01 MES 16.39

Degree Requirement Attributes: Dist:LIT; WCult:NW

AAAS 66 - B/black Migration: Diversity, Identity, and Solidarity Politics in the U.S. and Beyond

Instructor: Keaton

This course will explore tensions and misunderstandings between people referred to as “B/black im/migrants” and

“B/black natives.” Questions for interrogation include: Who is “African American,” “B/black,” and/or “native?” Who decides? What accounts for hostilities among groups racialized and politicized as “b/Black?” What issues do newcomers confront when immigrating to a highly racialized society? Focusing on the United States, students will also travel through time and space exploring this topic’s relationship to global anti-blackness and anti-racism.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 67.06 - African Diaspora Women Writers

Instructor: Brown

This course will be organized around four themes prevalent in contemporary portrayals of Black women across the African diaspora. The themes, *Body*, *Voice*, *Memory*, and *Movement* provide a center from which discussions of agency, representation and counter-narrative can be situated within a larger discourse of canon formation. We will explore various parts of the United States and the Caribbean through analyses of literature and visual culture, paying particular attention to shifting dialogues of culture and identity. Among the central questions posed will be: What constitutes a feminist ideology in black women’s literature? How are images of subjection and victimization re-appropriated by Black women writers and image-makers and utilized for their own empowerment? What are the penalties inherent when a Black woman “comes to voice” in the arena of self-representation?

Cross-Listed as: ENGL 53.47 WGSS 66.07

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 67.07 - Elles viennent d’ailleurs : Women and Migration

Through a series of Francophone literary texts and films, this course examines how contemporary female writers, filmmakers and artists respond to the migration, immigration, and displacement of peoples today. From the written and the visual materials, students will consider how women such as Fatou Diome, Marie NDiaye, Kim Thúy among others address the range of critical issues and factors contributing to displacement, particularly under conditions of poverty, uneven development, competition for resources, political instability, violence, and natural disasters.

The course gives participants an opportunity to participate in current immigration debates whether it is the Syrian refugee crisis, the Mexican Border crisis, Haitian TPS status, the Haitian migrants’ mistreatment at the Texas border or the current Afghan relocation project.

Cross-Listed as: FREN 052

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

AAAS 67.09 - Self, Subject, Photography

Instructor: Brown

Before the oft-reproduced social-media mechanism of the selfie, there existed (and still does) the artistic self-portrait. Utilized in the creative realm to create a representation of the artist as both subject and object, self-portraits can be whimsical, grim, tantalizing, performative, or combative. In this course we will examine gendered constructions of self-portraiture as they exist in poetry, memoir, and photography. Specifically, our task will be to examine the registers of possibility present when women use their bodies and stories to claim authorial space. Our goal during the term will be to think through all of the mechanisms of the self that are deployed in the context of artistic practice. Students will produce their own photographic self-portraits and write an analytical paper on a contemporary writer or visual artist.

Cross-Listed as: ENGL 63.29 WGSS 66.08

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 67.50 - Black Consciousness and Black Feminisms

Instructor: Neely

This seminar seeks to decenter mainstream (what bell hooks calls “imperialist, white supremacist, capitalist, [heteronormative], patriarchal”) thinking to understand the world differently. Reading primary and scholarly texts from the US, Caribbean, and Africa about the Black Consciousness Movement and black feminisms, we will trace the evolution of thinking about race, gender, sexuality and their interrelationships through time and across space. Assignments include weekly reading response papers and an independent research project.

Cross-Listed as: ASCL 54.04 GEOG 072 HIST 92.04
WGSS 66.09

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 67.80 - Black Queer & Trans Futures: An Experiment

Engaging with the histories and present realities of colonial dispossession, racial violence and cisheteropatriarchy on campus and beyond, we will examine and craft visions of alternative futures grounded in prison abolition. Drawing on archival research, critical theory and speculative fiction from Black queer and trans thinkers such as Miss Major, Edouard Glissant, Marie Vieux-Chauvet, Octavia Butler, and Samuel Delany, our goal will be to challenge our current carceral order, chart how we move past it, and imagine what liberatory prison abolitionist futures lie beyond.

Cross-Listed as: AAAS 32.02 FRIT 37.05 WGSS 52.06

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 68 - Afro/Black Paris

Instructor: Keaton

This course takes students on a journey, not to a place but rather *through* a lived experience in France, one referred to as “Afro/Black Paris.” In exploring the lives, times, and representations of African descended people in French cinema and various readings, students will gain an understanding of broader social issues pertaining to identity, exclusion and inclusion, race, racialization, racism, and anti-racism alongside ideologies and myths of Paris and France as colorblind and race-free.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 68.01 - Everyday French Beginning Learners

This immersive French language course is specifically designed for beginners who aim to rapidly acquire practical communication skills in everyday French while participating in AAAS’ Afro/Black Paris FSP. This course offers an interactive, hands-on approach that enables students to gain essential oral and written proficiency for navigating common real-life situations and interactions. By the end of the course, students will be equipped to engage confidently in elementary French conversation, understand key vocabulary related to everyday life in French society, and interact in common social situations. This course does not count towards satisfying the foreign language requirement.

AAAS 68.02 - Everyday French for Intermediate and Advanced Learners

This intensive, immersive French course is tailored for advanced students participating in AAAS’ Afro/Black Paris FSP. Combining interactive learning with real-world application, the course provides students with opportunities to refine their spoken and written French through hands-on activities and authentic, everyday interactions. Throughout the program, students will deepen their proficiency in navigating social situations, cultural contexts, and conversations in French. By the end of the course, students will confidently engage in intermediate-level French for common social situations. This course does not count towards satisfying the foreign language requirement.

AAAS 68.08 - Afro/Black Paris in Film and Life

Instructor: Keaton

This course takes students on a journey, not to an actual place per se in France, but rather through a lived experience, known as “Afro/Black Paris.” Paris, an historical site of freedom from racial enslavement, has long been a contested home and homeland for Africans and their descendants, that is, diverse people racialized as black

whose presence in Paris results from colonization, exile, expatriation, and im/migration, including African Americans. The City of Light is arguably one of the most beautiful and exciting destinations in the world. However, all that glitters is not gold. Matters of race and anti-blackness co-exist with a variety of myths, narratives, and representations of Paris and France as color-blind and race-free. Through French film, students will explore these and related issues and thereby gain a broader understanding of pressing social questions, involving anti-racism, belonging, inequality, racism, and their intersections. This course follows a lecture-discussion format.

Cross-Listed as: FILM 42.21

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 68.10 - Afro/Black Paris: Past, Present, and Future

Instructor: Keaton

What is “Afro/Black Paris?” This study away course is designed to take students on a journey not to a destination called “Black Paris,” but rather *through* the lived experiences of African descended people—from racial enslavement until today—who have been racialized-as-black in a “raceblind” France. What are the myths and realities associated with life in Paris and France, past, present, and future? What accounts for African American immigration to the City of Light? What does belonging look like in this extraordinary city that Ernest Hemingway refers to as “a moveable feast?” Or, as James Baldwin writes, “[i]n America, the color of my skin had stood between myself and me; in Europe, that barrier was down.” Was it? – one of many pertinent questions examined in this course.

Degree Requirement Attributes: Dist:INT, SOC; WCult:CI

AAAS 68.20 - French Museums and the African Diaspora

This course delves into the intersections of art, race, and representation within French museum collections, with a particular focus on Africans and African descended peoples in France and beyond. Key debates and questions addressed in this course include: How have museums in France “acquired” their African and diasporic art collections? What is the value of uncovering and/or amplifying the backstories or narratives of black figures depicted in European art? What are the implications of the presence—or absence—of art objects by people of African descent in national museums, and what do omissions and silences reveal about museum curatorial practices in France? By engaging these issues in relation to broader themes and concepts of de/coloniality, modernity, and race, students will gain a deeper understanding of the evolving role of museums not only as heritage sites but

also sites vested with cultural, historical, and memory that gesture to futures yet untold.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 69 - The Politics of Beauty and the Black Female Body

Instructor: Keaton

Feminine attractiveness is racialized in societies across the globe. This course examines the politics of beauty and its ramifications in the lives of B/black women and those identified as such in the U.S. and beyond. Drawing from scholarly and popular reading and visual material, and framed by feminist thought, the course will explore the historical and contemporary relevance of this diasporic issue. Students will interrogate beauty politics at the level of theory and lived experience.

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 80.05 - 10 Weeks, 10 Professors: #BlackLivesMatter

Instructor: varies

This collaboratively taught course seeks to answer the call of activists around the country to examine racialization, state violence, and inequality in the context of the #BlackLivesMatter movement. To begin, it offers a context for the events in Ferguson, Missouri in 2014. Then, it situates those events in a broader history of race and racism in the United States. Finally, the course highlights black feminist and queer approaches to questions of trauma, community, politics, and survival.

Cross-Listed as: WGSS 40.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 80.06 - Civil Rights in the United States in the 20th Century

Instructor: Rabig

This course examines movements for civil rights, broadly defined, in the 20th-century US. Students explore concepts of American citizenship, considering struggles for political inclusion and efforts to participate fully in the nation's social and cultural life. We focus on women's and gay rights and the struggles of African Americans, Latinos, Native Americans and Asians, examining how these and other groups have envisioned and pursued full American citizenship.

Cross-Listed as: HIST 22

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 80.07 - Race, Media, Celebrity

How is fame understood through racial difference? This course explores the dynamic terrain of contemporary

celebrity culture as it intersects with race. Looking across a range of media formats (music, television, and digital media) we will examine the construction of black celebrity from Barack Obama to Beyoncé. We will engage with the aesthetics and politics of black celebrity visibility, paying close attention to issues of gender, sexuality, and class. Topics considered include celebrity performance, scandal, and fandom in US public and popular culture.

Cross-Listed as: FILM 50.02

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 80.10 - The Historical Philosophy of W.E.B. DuBois

This course will examine the historical philosophy of the towering Black scholar and great freedom fighter of the 20th century. We shall engage in close readings of DuBois' classic work, *The Souls of Black Folk* (1903) as well as subsequent essays in his magisterial corpus, especially his classic autobiography, *Dusk of Dawn* (1940).

Cross-Listed as: ENGL 53.40 PHIL 01.13

AAAS 81.01 - The Black Arts Movement

This course explores the literature, art, and criticism of the Black Arts Movement. The artistic corollary to the Black Power movement, the Black Arts Movement flourished in the 1960s and 1970s as artists/activists sought to put a revolutionary cultural politics into practice around the country. The Black Arts Movement had far-reaching implications for the way artists and writers think about race, history, authorship, and the relationship between artistic production and political liberation. We'll explore these issues in work by Amiri Baraka, Sonia Sanchez, Larry Neal, and others who forged the traditionally-defined Black Arts Movement in Harlem. We'll also trace the movement's flowering around country, where local political struggles and artistic traditions in Chicago, Newark, Los Angeles, and Detroit shaped distinctive regional variations of the Black Arts Movement. We'll consider how the literature of the Black Arts Movement intersected with other cultural currents of the time, its critics, and the persistence of its themes in contemporary culture.

Cross-Listed as: ENGL 53.01

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 81.04 - The Black Church and Black Bodies: Race, Sexuality and Class in Religious Culture

Black churches are challenged to better understand and respond to subjects that are often considered taboo. This course will focus on ideas and approaches that have informed the historic and current Black Church around race, sexuality, and class (and their nexus). Informed by Cultural Theory, it will consider how such churches have endeavored to understand, socialize, and in some instances,

control Black bodies as well as some of the broader implications for critically assessing inequality, diversity, and social justice. Barnes.

Cross-Listed as: REL 74.04 SOCY 49.21 WGSS 43.07

Degree Requirement Attributes: Dist:TMV; WCult:CI

AAAS 81.05 - Telling Stories for Social Change

Our social structure is full of unseen, unspoken, and unheard dynamics that create visible and invisible social walls. Students in this course have the unique opportunity to collaborate with a group of people from behind those social walls from two different perspectives: theoretical and practical. Students study the causes of this invisibility and social isolation (mainly pertaining to incarceration and addiction) by participating in an interdisciplinary arts program with local community members from these invisible populations while at the same time attending discussion-based seminars. This combination of practice and theory asks for students to go beyond a critical reflection on our society by contributing to constructive social actions towards change.

Cross-Listed as: WGSS 66.05

Degree Requirement Attributes: Dist:ART; WCult:CI

AAAS 81.07 - Black Noir

In this course, we will study black American literature that focuses the noir genre on black people themselves. We will read gritty, urban crime novels that attempt to expose inequities in black American lives and dispel the notion that a descent from whiteness results in blackness. Rather, the black people in these texts exist in darkness because they are living in alienated communities. We shall investigate how the noir genre is altered when “noirs” are the subjects and the authors. In addition to primary texts, the course will engage critical responses to these works.

Cross-Listed as: ENGL 53.07 FILM 47.25

Degree Requirement Attributes: Dist:LIT; WCult:W

AAAS 81.08 - A Legacy of Tenderness:" Black Women's Creative Archive

This class studies the aesthetic/creative workings of 20th and 21st centuries Black women, who identify as/with feminism and womanism. We will prioritize the beauty of the often-understudied intersections of disability/crip, and trans and nonbinary, and intersex lived experiences and political praxis. Through visual art, poetry and prose, film, and music we will converse over Black ways of knowing and being beyond the normative. By the end of the quarter, we will be better able to articulate the general terrain of Black feminist and womanist creative works, with the hope of expanding (and deconstructing) the archive of Black Women's Studies.

Cross-Listed as: WGSS 66.23

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 81.10 - James Baldwin: From the Civil Rights Movement to Black Lives Matter

The 2016 film *I Am Not Your Negro* encourages a new generation to explore the life and work of James Baldwin (1924–1987). Directed by Haitian-born filmmaker Raoul Peck, *I Am Not Your Negro* is a provocative documentary that envisions a book Baldwin never finished by providing insight into Baldwin’s relationship with three men who were assassinated before their fortieth birthdays—Medgar Evers, Malcolm X, and Martin Luther King, Jr.

In this course we will interrogate questions of race, sexuality, violence, and migration. Our current political moment encourages the examination of these issues while Baldwin’s life and work provides the ideal vantage point for their investigation. Using *I Am Not Your Negro* as our starting point, Baldwin’s life and work will allow us the opportunity to explore transatlantic discourses on nationality, sexuality, race, gender, and religion. We will also explore the work of other writers including Richard Wright, Frantz Fanon, Audre Lorde, and Ta-Nehisi Coates.

Cross-Listed as: ENGL 53.28

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

AAAS 81.11 - Sensing Race, Gender, and Sexuality: Exploring Megan Thee Stallion

In this moment, characterized by the prominence of Black Southern women and femmes in hip-hop, conversations regarding race, gender, and sexuality have shaped Black popular culture’s landscape in both fruitful and reductive ways. One could argue that since 2020, Black femme hip-hop – in its music, aesthetics, performance, and celebrity culture – has created avenues through which to explore topics such as misogynoir, femme embodiment, political critique, violence, and hip-hop’s evolving legacy, on a collective scale. Beginning with Black popular culture as a framework, this course examines knowledge production as it manifests across Black women and femme hip-hop. And with a focus on Houston rapper, Megan Thee Stallion, we will attend to the conversations initiated through lyrics, tone, body parts, beefs and adlibs.

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 82.05 - Dave the Potter: Slavery Between Pots and Poems

Instructor: Chaney

This course examines the work of David Drake, a South Carolinian slave who made some of the largest ceramic storage vessels in America during the 1850s, signing them and etching sayings and poems onto them as well. This seminar engages with Drake’s poetry-pottery through critical and historical research, interpretive writing, and our

own creative adventures in ceramic handicrafts. In addition to writing your own updated imitations of Dave Drake's poetry and attempting ceramic facsimiles of his earthenware, students will also spend time in the letterpress studio as a means of acquiring a deeper historical and aesthetic appreciation of Dave's life and work; it was while working as a typesetter for a regional newspaper that Dave acquired literacy. As a culminating assignment, students will contribute chapters to a scholarly book on Drake, which the instructor will edit.

Cross-Listed as: COCO 03.01 ENGL 52.03

Degree Requirement Attributes: Dist:ART

AAAS 82.10 - Queer Literatures of Slavery

This junior colloquium asks how and why we might bring the perspectives and methods of queer studies to bear upon the history of slavery—and vice versa. We will examine questions of gender and sexuality, kinship and belonging, desire and the erotic, and history and futurity through readings in fiction, poetry, and drama alongside key works in the history of gender and sexuality, queer theory, and queer of color critique. Students will also develop critical skills and strategies for producing scholarship in literary and cultural studies, culminating in an original research paper.

Cross-Listed as: ENGL 63.09

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 82.11 - Reading Between the Color Lines in 19th-Century American Literature

How are persons racialized as both Black and White portrayed in nineteenth-century American literature? What cultural or political meanings do interracial experiences convey? And what hopes and fears are aroused by stories of people whose lives straddle a color line defined by slavery, racial capitalism, anti-blackness, border war, indigenous dispossession and genocide? Informed by Black Studies approaches to literary representations, this course examines life writing, short stories, poems, and novels about mixed-race, interracial, and biracial subjects of the nineteenth century, a period of tumultuous change for those misnamed by the racializing logics of the time as mulatto/mulatta, metis, mestiza/mestizo, quadroon, or octoroon. Assignments and readings in the course are designed to inspire students to question how these identities were central in shaping American racial imaginaries, cultural ideologies, material realities, and political possibilities.

Cross-Listed as: ENGL 52.20

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 83.05 - African Religions of the Americas

This class introduces the history and practices of African-derived religious traditions as they have developed in the

Caribbean, Latin America, and Black American communities in the United States. These religious systems will be discussed with reference to their mainstream representation (as "voodoo") and analyzed according to the more complex realities of their practitioners' everyday lives. Three themes to be explored in each tradition include 1) gender identity; 2) racial identity and resistance; and 3) aesthetics. Open to all classes.

Cross-Listed as: REL 17

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

AAAS 83.06 - Caribbean Lyric and Literature

Instructor: Moodie

This course will look at several issues that reappear throughout the work of a variety of Caribbean writers from former British colonies. These concerns include (but are not limited to) notions of exile, the importance of language and music, the articulation of identity in varying post-colonial states, and representations of gender, race and ethnicity. The class will also analyze the socio-political events in particular nations and the ways in which these events influence writing in the archipelago. We will also examine the ways in which a strong tradition of music as protest influences the production of particular poetic forms in Trinidad and Jamaica. The class will move from early twentieth century writers like Claude McKay to the important contributions of later writers such as Kamau Brathwaite, Jamaica Kincaid, George Lamming, V.S. Naipaul, Sam Selvon, Olive Senior and Derek Walcott. We will examine the more recent innovations in form, as musical elements are introduced by writers such as Mikey Smith and Kwame Dawes. Each week's readings will be supplemented with seminal critical writings including excerpts from the text *The Empire Writes Back*.

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 83.07 - Cuba in the Black Atlantic: Slavery and Its Legacies

Among the first territories colonized by the Spanish Empire, Cuba was a main hub of the Atlantic slave trade from the sixteenth through the nineteenth century. Over one million African slaves were trafficked to this Caribbean island. With Cuba as our main port of entry, this course introduces students to the history of African diasporic societies and politics in Latin America and the Caribbean from the late colonial period to the twentieth century. Often treated as figures with no political vision or power, black people were long relegated to the margins of our understandings of history.

Cross-Listed as: LACS 50.15

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 83.08 - The Global Caribbean

Instructor: Kivland

Paradise or plantation? Cultural destination or economic periphery? Capitalist birthplace or IMF delinquent? From the Columbian conquest to contemporary tourism, the Caribbean has borne the burdens and opportunities of being an intercontinental crossroads. Colonial governments, enslaved Africans, indentured servants, and foreign settlers have all made the Caribbean an exemplar of modernity and globalization—for better or worse. Drawing on social scientific, literary, and policy texts, this course offers an historically deep and geographically broad anthropology of the Caribbean.

Cross-Listed as: ANTH 033 LACS 25.08

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 83.09 - Consuming Culture?: Food & Identity Across the Afro-Americas

This interdisciplinary course intends to examine an array of socio-cultural questions about Afro-Latin America and the role that food has had in constructing and imagining Afro-Latin American communities and subjectivities. By placing Afro-Latin America at the center as subjects and knowledge producers, this course commits to an intentional practice of learning from and of the Global South and decentering the United States, and the west more broadly, within the arena of political, intellectual, and cultural production. Beginning with Brazil, the country that has the largest Afro-descendent population outside of Africa and once heralded internationally as a “racial democracy,” we will examine the ways that food has served to both reinforce and disrupt socio-cultural assumptions and stereotypes related to race, gender, and class. We will examine food’s relationship to questions of gender norms, sexuality and labor and place these conceptualizations in dialogue with other countries and Afro-descendent populations across the Americas. We will end the course placing Afro-Latin America in dialogue with the Afro-Latinx diaspora and African Americans.

Cross-Listed as: LACS 30.19

Degree Requirement Attributes: Dist:SOC

AAAS 83.10 - Childhood, Memory, and the Caribbean

Have you ever wondered what it's like to grow up in Haiti, Surinam, Guadeloupe, Cuba, or the Dominican Republic? In this course, students will embark on a literary journey through the Caribbean, examining coming-of-age stories that unravel the complex tapestry of postcolonial experiences.

The course will introduce students to a diverse array of literary works from the Caribbean, offering insights into the nuanced perspectives of postcolonial authors. Engaging with critical theories from key thinkers such as Frantz

Fanon, Edouard Glissant, Carole Boyce Davies, and Antonio Benitez-Rojo, students will analyze the intellectual frameworks that shape Caribbean literature.

Cross-Listed as: COLT 52.09 LACS 25.13

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

AAAS 85.01 - South African Literature in English

This course will examine works by South African men and women of various ethnicities who have chosen to write in English since the publication of Olive Schreiner's *Story of an African Farm* in 1883. This richly diverse literature will be tracked through the cultural and political history of South Africa with primary emphasis on the twentieth and twenty-first centuries before and after the fall of Apartheid. Confrontation between black militancy and white oppression characterizes much writing and social interaction in South Africa before the fall of Apartheid, but complex forms of multi-ethnic coexistence and interchange have also been evident since the first white settlement of the country in 1652. Recent work by J.M. Coetzee and Zakes Mda among others explores the difficult, unmapped terrain of post-Apartheid South Africa. Works by the following writers may be included in the course: Olive Schreiner, Solomon Plaatje, Bessie Head, Nadine Gordimer, Zoe Wicomb, Alan Paton, J.M Coetzee, Njabulo Ndebele, Athol Fugard, Nelson Mandela.

Cross-Listed as: ENGL 55.13

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 86.04 - Social, Political, and Cultural Trends in Contemporary Brazil

Instructor: Minchillo

This class will be taught in English and will explore social, political, and economic issues in contemporary Brazil. Since 2013, the climate in Brazilian society has become more and more tense due to a series of street protests and polarized public debates on race, class, political representation, democracy, religion, gender, sexuality, environmental protection and economic justice. The present scenario in Brazil will be discussed in relation to historical and cultural contexts. Materials for the course will include films, documentaries, music, and a wide variety of readings (mainstream media, blogs, academic essays, official documents, fiction). Invited guests (scholars, activists, journalists, artists) will deliver lectures, in presentational or remote way.

Cross-Listed as: LACS 35.02 PORT 35.01

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 87.05 - Politics of Africa

Instructor: Horowitz

This course examines post-colonial politics in sub-Saharan Africa, with particular focus on the events of the last decade. The course will be structured around three main themes: (1) patterns of economic growth and decline; (2) the transition to democratic political systems; and (3) political violence and civil conflict. While the course covers broad trends across the continent, it will also draw on case studies from particular countries.

Cross-Listed as: GOVT 42

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

AAAS 87.06 - 20th Century African Art

This course is designed to introduce undergraduate students to African art in the twentieth century. It charts the development and dimensions of artistic expressions and cultural production in Africa from the colonial period to the contemporary. By looking at various case studies comparatively, the course explores the intersection of developments in artistic practice and identity, and cultural production, and sweeping changes in the political, social and economic spheres in Africa. It considers the effects of colonialism, postcolonial conditions, neocolonialism, economic liberalism, and globalization on cultural production and artistic practice. Following a chronological format, it will attempt to cover the different sub-regions of the continent but draws substantial amount of examples from sub-Saharan Africa.

AAAS 87.07 - Globalization and the African Continent

This course on globalization seeks to ultimately provide students with a conceptually grounded understanding of the four aspects of globalization: the economic, the political, the social and the cultural. Four objectives guide this course. The first is to introduce students to the main topics and debates related to the issue of globalization. A second goal is to provide students with an array of conceptual and empirical tools that are useful in framing discussions of globalization. Third, we will explore the multifaceted ways in which globalization manifests itself and its complex impacts on individuals and societies. Finally, we will discuss the multiple ways in which individuals and collectives are challenging and shaping globalization in the contemporary world. In all of this, our emphasis will be on the developing world in general and Africa in particular.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

AAAS 87.08 - Indigenous Slavery in Ghana and Africa

Using the Atlantic slave trade as a backdrop the course provides an introduction to slavery in Ghana and Africa and the Atlantic slave trade out of West Africa. Instead of presenting a comprehensive survey, covering every aspect of this vast subject, this course takes a topical approach by focusing on a selection of themes and issues that are

crucial to developing an understanding of slavery in Ghana and Africa and the slave trade across the Atlantic. Themes to be covered include African and European agency in slavery and slave trade; slavery and slave trade in framing the social structure of Ghana; the legacies of slavery in Ghana and Africa and the ways in which slavery is remembered in Ghana. Throughout the course, we will pay attention to the debilitating effects of slavery and the slave trade on Africa and on its development.

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 87.09 - African Popular Culture

Instructor: Shipley

This course introduces a global socio-historical framework within which to examine African popular cultures across the continent and as they circulate globally. Considering the historical contexts of contact between Africa, Europe, and--- the Americas, we will explore cultural, economic, and philosophic aspects of African expressive cultures. Focusing on Ghana, Nigeria, and South Africa, we will study music, film, dance, social media, theater, and literature, and consider how ideas of what it means to be African are produced and contested through these media. No prerequisites required.

Cross-Listed as: ANTH 12.14

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 87.11 - Language in Africa

Instructor: McPherson

Africa: home to around 2000 of the world's 7000 languages, yet ask an average person on the street to name five African languages and they may be hard-pressed to do so. This course explores the languages of Africa from a historical, linguistic, and cultural standpoint, including the migration and diffusion of different language groups across the continent, similarities and differences in linguistic structure between African languages, the amazing complexity of the Khoisan languages (best known for their use of clicks), the effects of colonialism on language, writing systems, and many other topics.

Cross-Listed as: LING 11.10

Degree Requirement Attributes: Dist:SOC; WCult:NW;
Lang:LRP

AAAS 87.12 - Africa's Time? An Interdisciplinary Survey of Temporality and Power

Centered in Africa, this course explores the theme of temporality through attention to history, anthropology, philosophy, and popular theoretical physics. There will be no mathematical calculation required. However, we will consider difficult formulas of another type. Is time a constant across cultures and reference frames both physical and ontological? How do past, present, and future

intersect? How has the perception of time influenced historical encounters on the African continent and within the African diaspora? How does time relate to ancestry and power?

Cross-Listed as: ANTH 12.24

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 88.07 - Afro-Diasporic Dialogues: Latin America and the U.S.

This course investigates how people of African ancestry have forged cultural and political ties across national boundaries in the Americas. Drawing on primary sources, film, and literature, we will examine the transnational dialogue among US African Americans, Afro-Latinos, and Afro-Caribbeans from the 19th century to the present. We will also consider why efforts to mobilize Afro-descendants across the Americas have often been undermined by mutual misunderstandings, conflicting agendas, and differing conceptions of "race" and "nation."

Cross-Listed as: LACS 50.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

AAAS 88.08 - Ethnography of Violence

Instructor: Kivland

Violence is widely recognized as a problem in modern society, with policies and interventions to combat violence, or employ it, dominating local and global politics. Yet the meaning of violence is seldom analyzed. Using an ethnographic lens, this course explores violence as both an embodied experience and a culturally and politically mediated event. We examine spectacular and everyday violence forms of violence in terms of manifestations of power, structures of inequality, perceptions of difference, and politics of representation. Ethnographic studies are drawn from, among others, Mozambique, Haiti, and Harlem. An introduction to the cultural anthropology of violence, this course raises key questions about violence in a globalized world and explores how to study it anthropologically. This course is not open to students who have received credit for ANTH 12.03.

Cross-Listed as: ANTH 28; WGSS 42.05

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 88.11 - Atlantic Slavery/Atlantic Freedom

When does slavery find itself chiasmatically mirrored in freedom? From the recent Hollywood blockbuster *12 Years a Slave* (2013) to the streets of Ferguson and Baltimore, the legacies of slavery and racial violence continue to cast their shadow over horizons of emancipationist history even as America commemorates the sesquicentennial of the U.S. Civil War. In this course we will revisit the literatures of

slavery and antislavery in the Atlantic world from the eighteenth century to the present. Our novels and stories imagine episodes of slavery, slave rebellion, and fugitive flights to freedom across two centuries: from early transatlantic crossings of slaves and servants to the New World; to Tacky's Revolt and its place in what Vincent Brown has recently called the "Coromantee Archipelago" in eighteenth century slave rebellion; to the spectacular soundings of the Haiti Revolution in the Age of Revolutions; to the messianic prophecies of Nat Turner in the early nineteenth century; to slave rebellions at sea; and finally to fugitive slave fictions in the abolitionist decade leading up to the Civil War.

Cross-Listed as: ENGL 62.22

Degree Requirement Attributes: Dist:LIT; WCult:NW

AAAS 88.12 - From Diaspora Practices to Theory

What is an epic and how do its imaginary, cultural, and rhetorical impulses of displacement, unknown cartographies, madness, new identities, conceptual crossroads and translation lead to an eventual theorization of diaspora? The course has three inter-related goals: to study six examples of epic in the Black Diaspora moving from West Africa to the Anglo-Franco-Hispano-phone Caribbean; 2. to relate these texts to diaspora pathogen and food-ways, spiritual practices and converging African and New World histories; and 3. to consider diaspora and *chaos theory*.

Cross-Listed as: ENGL 53.35

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 88.13 - Women Writing Memoir

Instructor: Moodie

This course examines the autobiographical writing of a variety of women from across the globe. Paying attention to the socio-political contexts within which these women write, we will discuss the ways in which these authors negotiate different worlds while being marginalized along vectors such as race, class, and gender. For this reason, the class is inherently interdisciplinary. Most of the works we will examine have achieved significant critical acclaim, and we will also examine the artistic innovations in these narratives. Texts will include works such as Staceyann Chinn's *The Other Side of Paradise*, Jackie Kay's *Red Dust Road*, Jeanette Winterson's *Why Be Happy When You Could Be Normal?*, Malala Yousafzai's *I am Malala*, Janet Mock's *Redefining Realness* and Marjane Satrapi's *Persepolis*.

Cross-Listed as: ENGL 53.30

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

AAAS 88.14 - Cities, Subjects & Sonic Africa

This course poses the questions: What has been the role of musical expression in shaping the experiences of Africans throughout the world? How does sound function as a site of socio-political contestation that reflects and shapes ideas about race, identity, place and belonging? To answer these questions, we situate specific ethnographic case studies within an interdisciplinary framework. Texts, performances, media, and experiential workshops all form an integral part of this course.

Cross-Listed as: MUS 45.08

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 88.15 - Black Women's Activism, 1970-present

In this course we will explore several genres of writing, grounded in an intellectual engagement with the creative, scholarly, and activist writing of Black women of all genders from 1970 to the present. How does Black women's activism constitute a political intellectual tradition that impacts how we do research and pose questions? How does black women's activism refigure the categories and categorization of knowledge and knowledge production? What does it mean to write oneself into existence if and when knowledge is premised on their epistemic and actual disappearance? This course approaches Black women's intellectual and cultural production as one entry point into the project of creating from nothing, writing to become, writing as an act of survival, and writing to envision and practice new worlds. These are all vital skills in a rapidly transforming social, economic, political and climatic landscapes.

Cross-Listed as: GEOG 062 WGSS 40.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 88.16 - Sovereignty, Race, and Rights

Instructor: Shipley

This course examines the colonial legacies of rights, race, gender, and difference and their significance for contemporary global politics and development. By taking an socio-historical approach to the idea of rights we will make connections between sovereignty, the rule of law, representational practices, economy, and citizenship. We will use a critical eye to explore the conditions of possibility that allow states, development organizations, donor agencies, and individuals to unwittingly reproduce centuries-old tropes of poverty, degradation, and helplessness of non-Western peoples. Examining various institutionally structured encounters between Europeans and non-Western peoples we unpack assumptions about the naturalness of power. In postcolonial societies the tensions between ideas of tradition and modernity structure many conflicts over rights, citizenship, and the role of the individual in society.

Cross-Listed as: ANTH 50.22

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 88.17 - Filmmaking and Visual Culture

Instructor: Shipley

In this course we both learn to make films and to examine theories of visual art, sound, film, and digital media. We will learn how to think about and make sounds and images in historically and ethnographically rich ways. In the process we examine notions of power, difference, history, culture, race, class, gender. Twentieth-century politics were intimately linked to the rapid development of radio, television, film, video, and digital media. These media have creatively engaged with local cultural practices around the world in reshaping the nature of artistic expression, national, gendered, and racial difference, and political power. We examine notions of visibility from the perspective of African and African diasporic political configurations and aesthetic responses. This course explores the politics and pragmatics of art, photography, and film in order to delineate visual, sonic, and embodied ways of presenting and experiencing the world particularly in relation to race and gender.

Cross-Listed as: ANTH 50.21

Degree Requirement Attributes: Dist:SOC; WCult:NW

AAAS 88.18 - Black Feminisms in the French Atlantic

French colonialism and particularly French transatlantic slavery between the 17th and 19th centuries produced a shared linguistic and cultural legacy as well as a sustained political struggle carried by Black populations in France, sub-Saharan Africa, the Caribbean, and Québec. Although combatting racial inequality and white supremacy is generally understood through the lens of movements in the US, or the example of South African apartheid, this course invites students to consider such undertakings from a fundamentally transnational point of view by focusing on Black Feminisms in the French-speaking African diaspora. Open to all students. Text, lectures and discussion in English.

Cross-Listed as: FRIT 37.03

Degree Requirement Attributes: Dist:INT; WCult:CI

AAAS 88.19 - Contemporary African American Visual Artists

Instructor: Chaney

This course provides an overview of contemporary African American visual artists and their cultural impact. Attention will be given to significant artists and movements (Kara Walker, Kyle Baker, Kehinde Wiley, Afro-Futurism, etc.) and to the new conceptualizations in art history brought about by them. Students will gain critical skills of visual

literacy as they analyze drawings, paintings, and other visual media, while also learning to ground such observations within aesthetic, cultural, historical, and larger theoretical contexts. Student work will consist of presentations, short papers, and a gallery project, in which students present their own independent research in a collaborative student show. Open to all.

Degree Requirement Attributes: Dist:ART; WCult:W

AAAS 88.20 - Music and the Racial Imagination

This course investigates how the construction, imagination, and lived experience of race has influenced musical production, reception, and analysis. We begin by addressing the history of the concept of race, then turn to a series of musical case studies that variously articulate music's relationship to the construction and negotiation of racial categories. Topics are primarily drawn from the U.S. and include: Asian American hip hop; the "race record" industry; country music and "whiteness," amongst others.

Cross-Listed as: MUS 45.09

Degree Requirement Attributes: Dist:ART; WCult:NW

AAAS 88.22 - Black Womanhood and The Meaning of Freedom

This course centers gender in its inquiry into the social traditions and political strategies that defined Black women's lives in the western hemisphere between the 17th and early 20th centuries. By examining the conditions of Black women's unfreedom and their shifting survival strategies, we discover how Black women have imagined, pursued, and experienced freedom. The beginning of the course focuses on Black women's labors during slavery, highlighting important interventions made by feminist scholars about gendered division of labor, reproduction, and precarity. The latter part of the course investigates women's life-sustaining community formations and resistance to statesanctioned domination, including the construction of rival geographies, women's inspired use of eroticism, and their persistent efforts to exercise discursive resistance. Harnessing critical scholarship across disciplines, this course offers a broad perspective on Black women's subjectivity, theories of freedom, and their importance to the history of the modern world. This discussion-based seminar is organized thematically and spans a wide range of temporalities and terrains; we explore the gendered and racialized histories of the United States, Cuba, Barbados, Haiti, Brazil, Jamaica, and the Dominican Republic. While different countries have distinct histories, this course encourages a comparative, cross-cultural, and transnational analytic approach to examining how race, gender, and class have circumscribed women's lives in the western hemisphere and shaped their understanding of freedom.

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 88.23 - The Black Atlantic: Africans and African Descendants in the Colonial Era

This course examines the history of the Black diaspora in the Atlantic World during the early modern/colonial era (c. 1400s-1700s). It will follow a flexible chronological pathway and a thematic methodology to analyze the Atlantic slave trade, in addition to how people of African descent navigated racial ideologies, colonial violence, and imperial expansion. Students will develop a notion of the Black Atlantic that includes Africa, Europe, the Caribbean, North America, and South America.

Cross-Listed as: HIST 85.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

AAAS 89 - Independent Study in African and African American Studies

Available to students who wish to independently explore aspects of African and African American Studies which are not included in courses currently offered at Dartmouth. Open to qualified students with permission of the course instructor and the Chair. (Obtain Proposal Form in the program office.) No student may take more than two such courses without the approval of the program. Open to sophomores, juniors, and seniors. The AAAS faculty.

AAAS 90 - Senior Seminar

Senior Seminar

AAAS 90.01 - Identity and Power in the Americas

Instructor: Baldez

This course examines how different forms of collective identity—including class, race, ethnicity, indigeneity and gender—have shaped Latin American and Latino politics in the 20th and 21st centuries. We will focus on a range of cases in Latin America and the U.S. to address the following questions: In what ways does the state create and sustain certain categories of identity as the basis for political inclusion and exclusion? What explains changes in the political salience of certain categories of collective identity? Why do some identities become politically salient and others do not? How have forms of political representation changed over the past century? How does state policy affect the ability of groups to mobilize and press for demands? How do organized groups affect state policy? What are the possibilities and limitations of identity-based mobilization?

Cross-Listed as: LACS 80.02; GOVT 84.06

Degree Requirement Attributes: Dist:INT; WCult:W

AAAS 90.02 - Prophetism in the Black World

Instructor: Baum

This seminar utilizes historical, anthropological, and comparative religions perspectives to examine the relatively widespread phenomena of prophetism in the black world. We will explore the lives and prophetic careers of people who claimed direct revelation from a supreme being or lesser spirits in indigenous African religions, Islam, and African and African-American Christianity. We will examine such movements before European occupation as well as the colonial and post-colonial eras. We will also examine African-American movements from the period of slavery and the twentieth century. Topics will include women's prophetic movements, religious critiques of underdevelopment, the process of inculturation of Islam and Christianity, and the role of religion in resistance to foreign or domestic domination.

Cross-Listed as: REL 80

Degree Requirement Attributes: Dist:TMV; WCult:CI

AAAS 90.07 - From Africans to African Americans: Perspectives on the Creation of African Diasporas

Instructor: Baum

This seminar will explore the diversity of African cultures in early modern Africa and the impact of the Atlantic slave trade, the experience of the Middle Passage, and the creation of diasporic cultures in the Americas. Using a variety of sources, including ethnographies, films, and literature, students will consider the richness of African cultures from the sixteenth to the eighteenth centuries and their influence in the creation of new cultural traditions in the Americas. Open to students who have taken one course in AAAS or who have permission from the instructor.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

AAAS 90.09 - Carceral Geographies: Explaining Mass Incarceration in the US

Why are there so many people incarcerated in the United States and why are so many people in the US and beyond calling for an end to police violence, some even for the abolition of policing? Is mass incarceration an inevitable product of slavery and Jim Crow? Why did prisons expand in the United States as crime rates were going down? Was it the War on Drugs, or the long term effects of housing discrimination? This course is designed to explore and explain these questions by unpacking the roles of surveillance, criminalization, policing and incarceration to historical and contemporary US state formation and global capitalism. Proceeding from the idea that carceral geographies such as prison towns, policing, and surveillance are spatial fixes for social, economic, and political crises, we will engage scholarship from a variety of fields including: critical prison studies, geography, cultural studies, gender and sexuality studies, and critical ethnic studies. Students will have an opportunity to

understand the historical and contemporary organization of people, places, ideas, and infrastructure that makes up US carceral geographies of the United States. This course requires dedicated and rigorous reading. Each week we will read an entire book and analyze it in depth to create shared language and understandings about carceral geographies. \\\f

Cross-Listed as: AAAS 80.09 GEOG 027 WGSS 37.04

Degree Requirement Attributes: Dist:SOC

AAAS 90.10 - Modern Black Spiritualities

Instructor: Booker

This advanced seminar places contemporary black religions at the center of the study of African-descended peoples. Through recent books in the ethnography of Africana religions, spiritual communities in Africa, the Caribbean, and North America that have established communities in the United States will constitute the focus of our course readings and anchor our weekly discussions. As an advanced seminar, our meetings will allow participants to interrogate the authors of these ethnographies. We will assess how these accounts have conceptualized the African diaspora and the vantages ("insiders" and "outsiders") from which they describe religious beliefs, practices, and institutions. Beyond considering the commonalities and distinctions in form and practice that characterize various African diasporic religious practices, participants will also work to understand the constructions of race and belonging, ethnic identity, gender, sexuality, class, and geographic location that affect the lives of black religious adherents.

Cross-Listed as: REL 80.11

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

AAAS 90.12 - Aesthetics and Power

This course explores the relationship of aesthetics to power across artistic media, public spectacles, and in daily life. European modernity has tended to posit images, sounds, and performances as signs of a world "out there" that recreated in ritual contexts facilitate individual transcendence through an almost spiritual experience. We will examine how West African and African diasporic notions of modern aesthetics tend to offer a counterpoint by enacting theories of representation that are more explicitly performative and socially dialogic. In the 1950s and 1960s people across Africa and African peoples in the Americas and the Caribbean fought for political rights and sovereignty. Aesthetic forms were crucial to these projects. Political power was contested in economic and institutional ways, but people experienced it through their bodies and senses. The power to control political and economic order is enacted in the realms of signs, desires, and value. Moral dichotomies between beautiful or ugly, expensive or cheap, important or illegible, appear to be about aesthetics alone

but are in fact ways that power is produced, naturalized, and contested. We examine art media as well as political and social forms as a way to understand how broad forms of power shape both everyday and spectacular experiences and how individuals and collectives use expression as a way to contest the terms of power. In political terms, we explore rituals of state as events through which power is produced and contested in embodied ways. Producing loyal citizens requires a nation-state to create rituals that orient people to feel like they are part of a shared collective experience. This course will draw upon transdisciplinary approaches to understanding aesthetics including ethnographic, literary and theatre studies, political analysis, performance analysis, musicology.

Cross-Listed as: ANTH 50.51

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

AAAS 90.13 - Black Medicine: Racist Legacies and Critical Interventions

As a phrase, “Black Medicine” marks the numerous ways that medicine (as a field, practice, and knowledge base) and Blackness (as a race of people, an aesthetic, a symbol) have always been interconnected in American society. Black Medicine, on the one hand, notes the abuse of Black people’s bodies in pursuit of medical knowledge and technological advancement. In this regard, all medicine is Black, as all medicine exists alongside race and power. On the other hand, Black Medicine also expresses forward-looking interventions in medicine that are necessarily antiracist and anti-ableist. The history of medicine in the United States deserves to be studied for its missteps and breakthroughs, but the future of medicine deserves to be written differently.

Degree Requirement Attributes: Dist:SOC; WCult:CI

AAAS 91.02 - 20th Century Protest Poetry

In light of recent protest movements that target issues of race and gender, the prescient words of numerous artists continue to be evoked and volleyed about in contemporary media outlets. Yet the contexts of many of these utterances are largely ignored. Delving into some of these contexts and engaging many of these artists’ larger oeuvre, this course is a multidisciplinary investigation of major protest poets of the twentieth century. It explores the ways in which poets living in the United States, and particularly members of historically marginalized communities, not only pushed back at the powers-that-be, but continuously saw and articulated themselves as simultaneously a part *of* and a part *from* larger “American” society. The course wrestles with the well-known and often contentious topics: race, class, and gender. Starting with turn-of-the-century writers like Claude McKay—whose words have become synonymous with outspoken critiques of World War I and the “Red Scare”—and ending with contemporary writers like Balakian and Chin, the course moves chronologically.

Some of the writers it examines include, Peter Balakian, Amiri Baraka, Staceyann Chin, Lucille Clifton, Mayda Del Valle, Karen Garabrant, Allen Ginsberg, Zbigniew Herbert, Robert Lowell, Juan Felipe Herrera, Langston Hughes, Etheridge Knight, Denise Levertov, Haki Madhubuti, Jill McDonough, Claude McKay, Alice Notley, Emmy Perez, Adrienne Rich, Sylvia Plath, Sonia Sanchez, and Dorothy Tse.

Cross-Listed as: ENGL 73.30

Degree Requirement Attributes: Dist:LIT; WCult:CI

AAAS 91.03 - African Religions, Health, and Healing Traditions

Instructor: Baum

This seminar examines the complex interaction of African, Christian, Muslim, and Western medical traditions in the understanding of, diagnosis of, and healing of illnesses within African societies. This is a capstone course for the AAAS major and minor and will include a major term paper. Cases will be drawn from anthropological, comparative religious, historical, literary, and artistic perspectives.

Cross-Listed as: REL 74.15

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

AAAS 91.05 - Maroons to Marley: Jamaica's Role in Worldwide Revolutions from Slavery to the Present Day

In 1738, a hundred years before legal emancipation came to England’s New World slave colonies, Jamaica’s Maroons forced the colonial power to sign a treaty granting sovereignty to Maroon communities across the Caribbean island. As the first Africans in the New World to achieve this feat, Maroon warriors directly and indirectly influenced abolitionist and revolutionary movements throughout the Americas—including, of course, revolts in Haiti and the United States. These warriors continued to inspire the revolutionary actions of other oppressed and/or enslaved individuals for generations, and indeed, a revolutionary ethos pervades Jamaican culture and artistic production from the colonial period to the present moment. This course traces the impact of “Jamaican” revolutionary figures on other revolutionary figures and events worldwide. Moving chronologically, from colonialism to the present day, the course examines influences such as African/Jamaican Maroon *leaders* direct impact on other revolutions throughout the Americas; Mary Seacole’s exchanges with and impact on Florence Nightingale during the Crimean War; Marcus Garvey’s impact on the Harlem Renaissance and the Rastafari religion; Claude McKay’s revolutionary impact on vernacular poetics and on the “Red Scare;” Louise Bennett’s mid-twentieth century revolutionary, feminist, vernacular poetics and her impact

on female performers in the Americas, Europe, and Africa; Bob Marley and Damian Marley's impact on politics and revolutionary movements in Liberia and Ghana; and finally, the impact of Staceyann Chin's outspoken poetics on LGBTQ rights in the Caribbean and in other marginalized African diasporic communities. Not open to students who have received credit for AAAS 62.50.

Cross-Listed as: AAAS 62.50 ENGL 55.19

Degree Requirement Attributes: Dist:SOC

AAAS 97 - Senior Independent Research in African and African American Studies

For senior African and African American Studies majors toward the culminating experience, with permission of selected instructor and the Chair. (Obtain Proposal Form in the program office.)

AAAS 98 - Honors Thesis in African and African American Studies

The honors student will pursue the project under guidance of a selected faculty member and with permission of the Chair. See "A Guide to Honors in African and African American Studies" in the program office.

Students are awarded one course credit for successful completion of this course upon completion of AAAS-099. Students register for AAAS-098 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for AAAS-099 the subsequent term to complete the coursework. A final grade will replace the "ON" in AAAS-098 upon completion of AAAS-099.

AAAS 99 - Honors Thesis in African and African American Studies

The honors student will pursue the project under guidance of a selected faculty member and with permission of the Chair. See "A Guide to Honors in African and African American Studies" in the program office.

Students are awarded one course credit for successful completion of this course. Students who have registered for AAAS-098 register for AAAS-099 to complete the coursework. A final grade will replace the "ON" for AAAS-098 upon completion of this course for a total of 2 credits for AAAS-098 and AAAS-099.

Associated Courses

Associated courses are those with a central focus on aspects of Africa and/or the African diaspora. These courses may be offered by various departments and programs. Associated courses, including those not on this list, may count toward a major or minor in AAAS. To obtain credit, students must petition the AAAS Steering Committee, outlining how their work in a particular course forms part of a coherent course of study in AAAS.

Environmental Studies 40, Foreign Study in Environment Problems I
 Environmental Studies 42, Foreign Study in Environment Problems II
 French 21: Introduction to Francophone Literature and Culture
 French 70: Francophone Literature
 Geography 16: The Political Economy of Development
 Geography 27: Race, Identity and Rights
 Geography 28: Immigration, Race, and Ethnicity
 Geography 25: Social Justice and the City
 Geography 43: Geographies of Latin America
 Government 25: Problems of Political Development: India, South Africa, and China
 Government 86: Race, Law and Identity
 History 96: Race, Ethnicity and Immigration in U.S. History
 History 96.22: Topics in West African History
 Music 4: Global Sounds
 Music 51: Oral Tradition Musicianship
 Psychological and Brain Sciences 53: Stereotypes, Prejudice and Discrimination
 Sociology 47: Race and Ethnicity in the U.S.
 Theater 10: Special Topics in Theater

Anthropology

Chair: Nathaniel Dominy

Professors: J. Casana, S. Craig, J. DeSilva, N. Dominy, S. Kan, L. Ogden; Associate Professors: C. Kivland, Z. Thayer; Assistant Professors: M. Greenleaf, M. McLeester, R. Fleskes, J. Wang; Research Professor: E. Carpenter-Song; Senior Lecturer: S. J. Billings; Mellon Faculty Fellow: M. Pena; The Robert A. 1925 and Catherine L. McKennan Postdoctoral Fellow: T. Slobe; Postdoctoral Fellows: N. Kitchel, K. Komza, N. Pandhi, P. Paulsen, W. Tomczyk; Emerit Professors: H. Alverson, D. Eickelman, K. Endicott; Emerit Associate Professor: K. Korey, J. Watanabe

Contact the Department Administrator, Julie Gilman, for further information.

Requirements for the Major

The *Major in Anthropology* comprises ten courses, to be selected as follows:

1. Two introductory courses from the following six courses: ANTH 01, 03, 05, 06, 08, or 09
2. Seven other Anthropology courses. Courses must include at least one from each sub-field: ARCH, CULT, and BIOL.
3. A Culminating Experience Seminar which is designated by course numbers in the 70s above ANTH 70, (e.g. 72, 73, 74, 75, 76, 77, 78). One seminar is usually offered in each fall, winter, and spring term.

NOTE: Every course counted as an actual part of the major must be passed with a recorded letter grade.

NOTE: In designing the multiple major program, it is not possible to use any individual course as part of more than a single major (although a course may be part of one major and prerequisite to the other, or prerequisite to each major).

Statistics: All anthropology majors are encouraged to take a course in statistics. Students who plan to undertake independent research, especially in archaeology or biological anthropology, and any student considering attending graduate school in anthropology or related fields should take at least one statistics course: e.g., GOVT 10, MATH 10, QSS 15, PSYC 10, SOCY 10.

Concentrations: Anthropology majors may choose to concentrate in a sub-field of anthropology by taking at least four courses in: archaeology, biological anthropology, or cultural anthropology.

Archaeology is the scientific study of past human behavior and societies from material remains of the earliest human ancestors to recent times. Students concentrating in archaeology should take at least one topical course and one regional course in archaeology. Students interested in graduate studies in archaeology should take a statistics course and have fieldwork experience that can be gained by enrolling in an archaeological field school through Dartmouth or another institution.

Biological anthropology is the study of human biological variation and evolution. Biological anthropologists seek to document and explain the patterning of biological variation among contemporary human populations, trace the evolution of our lineage through time in the fossil record, and provide a comparative perspective on human uniqueness by placing our species in the context of other living primates. Students concentrating in biological anthropology are advised to take a course in statistics, as well as one or more advanced courses in biological sciences.

Cultural anthropology addresses broad questions about what it means to be human in contemporary societies and cultures, as well as those of the recent past. Cultural anthropologists systematically explore topics such as technology and material culture, social organization, economies, political and legal systems, language, ideologies and religions, health and illness, and social change. Students concentrating in cultural anthropology are strongly advised to take the course in ethnographic research methods, ANTH 18. Students planning on graduate studies in cultural anthropology or related fields are advised to take Main Currents in Anthropology, ANTH 73.

Under special circumstances, students may petition the Anthropology faculty to substitute a course from another department or program to count for the Anthropology

major. The petition should be submitted to the Chair, along with a copy of the syllabus for the substitute course and a list of the student's major courses. The petition must be approved by a vote of the Anthropology Department faculty.

Modified Major

The Modified Major consists of seven courses in anthropology plus four courses above the prerequisite level in one or more other department(s) or program(s). Of the anthropology courses, one must be ANTH 03, 05, 06, 08, or 09 and another must be a culminating experience— ANTH 72, 73, 74, 75, 76, 77, or 78. The seven major courses must include at least one course from TWO of the three sub-fields (ARCH, BIOL, CULT). Students wishing to modify their Anthropology major **must submit a written rationale that makes clear the coherence and purpose of their modified major**. This rationale must be reviewed by and approved by any faculty in the Anthropology department, and must also be submitted to the Registrar.

If you are interested in pursuing the Honors Program and the faculty approves your thesis proposal, you must enroll in ANTH 88. ***This course would be counted as the twelfth course beyond the eleven required to complete the modified major.***

Minors in Anthropology

The *Minor in Anthropology* comprises six courses, as follows:

1. One introductory course *from the following courses: ANTH 03, 05, 06, 08, or 09.*
2. One course from each of the following three subject areas: Archaeology (ARCH), Biological Anthropology (BIOL), and Cultural Anthropology (CULT); the introductory course may count toward the subject area courses.
3. Any three additional courses from the department's offerings.

NOTE: As with Dual Majors, no course may count toward both a major and a minor or toward both of two minors.

The ***Anthropology Minor in Global Health*** consists of six courses, as follows:

1. An introductory course: *ANTH 03, 05, 06, 08, or 09.*
2. At least one course from each of the following five core approaches to the study of global health:
 - Biological Approaches - ANTH 06 (if not used for the intro course), 12.18, 20, 40, 41, 43, 62, 64, 70 or courses outside of ANTH such as the infectious disease section of BIOL 11
 - Cultural Approaches - ANTH 04, 09 (if not used for the intro course); 12.01, 14, 27, 31, 32, 36, 37, 47, 48, 51, 58, 65

- **Interdisciplinary Approaches** - any ANTH course that exposes you to more than one subfield (biological, archaeological, linguistic, cultural) or otherwise stretches your exposure to the discipline and aligns with your interest in global health, or a course outside of ANTH such as SOCY 34, 35, 65; GEOG 21.01, 8.01, 56; HIST 08.01, 36; ENGS 06, 12; PBPL 26
- **Methodological Approaches** - ANTH 18 or another qualitative methods course such as SOCY 11, GEOG 11; a statistics course such as PSYC 10 or SOCY 10 (provided this is not counting toward your major); or a course that explores research methods applicable to global health problems such as GEOG 56, ENGS 12, MATH 04
- **Social Studies of Medicine, Health and Disease** - ANTH 17, 45, 55, 60 or courses outside of ANTH such as SOCY 34, 35, 65; GEOG 21.01; HIST 08.01, 36.

Students should submit with their declaration a brief rationale indicating which courses satisfy each of the various sections of the minor (Introductory, Biological, Cultural, Interdisciplinary, Methodological, Social Studies of Medicine, Health and Disease).

Four of the six courses for the minor must be taken within the Anthropology department. Students cannot use the same course to satisfy more than one requirement. NOTE: As with dual majors, no course may count toward both a major and a minor or toward both of two minors. Students wishing to substitute courses not listed above should petition the Anthropology Department in writing in consultation with a department faculty member.

Honors Program

Students applying to the honors program must meet the minimum College requirements of a 3.0 grade point average and a 3.3 grade point average in the major. By the end of the third term preceding their graduation, applicants will ordinarily have completed, with a minimum grade of A-, a preparatory reading course (ANTH 85) and will have submitted an Honors thesis proposal for work to be supervised by a primary faculty advisor. Admission to the program is by vote of the Department faculty, which may appoint one or more secondary advisors. Applicants will ordinarily have completed, with a minimum grade of A-, an independent research course (ANTH 87) during the Fall term of their senior year with their faculty advisor for the project.

Students admitted to the honors program must enroll in ANTH 88, Anthropology Honors, *in addition to the ten courses ordinarily required in the standard major or eleven courses in the case of a modified major*. ANTH 88 may be taken only once; most thesis students will enroll in ANTH 88 in the Winter term of their senior year and take an "Ongoing" for this course, completing it in Spring term of their senior year. Honors students should consult with

their advisor about taking ANTH 87, Research Course, and the appropriate sequence of courses for their thesis preparation and writing. The honors project, which culminates in a substantial independent thesis, will be submitted to the primary advisor at least four weeks prior to graduation. Those students completing the program with a grade of A- or higher in their honors course will receive honors recognition in the major. High honors may be awarded by faculty vote for truly exceptional work.

Please note that this does not count as your Senior Seminar/Culminating Experience.

For more detailed information on expectations and requirements for submitting an honors thesis proposal, please see the Anthropology website.

SUMMARY OF ANTHROPOLOGY CURRICULUM

The subject areas within the curriculum are outlined in the following list.

Introductory Anthropology: 3, 4, 5, 6, 8, 9, 11, 13, 14, 17, 20

Archaeology: 5, 8, 11, 13, 21, 22, 29, 39, 50.03, 50.05, 50.37, 50.39, 50.45, 50.47, 50.50, 50.60, 50.62, 75, 77

Biological Anthropology: 6, 20, 25, 38, 40, 41, 42, 43, 50.30, 50.43, 50.44, 50.46, 50.55, 50.61, 62, 64, 66, 70, 74, 76

Cultural Anthropology: 1, 3, 4, 7, 9, 12.01, 12.14, 12.19, 12.23, 12.24, 12.26, 14, 15, 17, 18, 19, 26, 27, 28, 31, 32, 33, 35, 36, 37, 44, 45, 48, 49, 50.17, 50.21, 50.22, 50.25, 50.31, 50.34, 50.36, 50.38, 50.40, 50.41, 50.42, 50.43, 50.48, 50.49, 50.56, 50.58, 51, 52, 54, 55, 58, 60, 65, 72, 73

Culminating Seminars: 72, 73, 74, 75, 76, 77, 78

Independent Study: 85, 87, 88

ANTH - Anthropology Courses

To view Anthropology requirements, click here.

ANTH 1 - Introduction to Anthropology

Instructor: TBD

This course explores the unity and diversity of humankind by examining our evolution as a single biological species that nonetheless depends for its survival on learned-and therefore varied as well as variable-patterns of cultural adaptation. Lectures and readings address the relationship between the material conditions of our existence, our

unique human capacity for creative thought and action, and changes in the size and scale of human societies.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ANTH 3 - Introduction to Cultural Anthropology

Instructor: Boke or Novacich

Cultural anthropology is the study of human ways of life in the broadest possible comparative perspective. Cultural anthropologists are interested in all types of societies, from hunting and gathering bands to modern industrial states. The aim of cultural anthropology is to document the full range of human cultural adaptations and achievements and to discern in this great diversity the underlying covariations among and changes in human ecology, institutions and ideologies.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 4 - Peoples and Cultures of Native North America

The course provides an introduction to the peoples and cultures of Native North America. A single indigenous group (nation) from different "culture areas" is highlighted to emphasize particular forms of economy, social organization, and spirituality. The course focuses on the more traditional American Indian cultures that existed before the establishment of Western domination, as well as on the more recent native culture history and modern-day economic, sociopolitical and cultural continuity, change, and revitalization. Open to all classes.

Cross-Listed as: NAIS 010

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 5 - Reconstructing the Past: Introduction to Archaeology

Instructor: McLeester

Anthropological archaeology makes a unique contribution to understanding the human past. This course introduces the key concepts, methods and techniques used by modern archaeologists to interpret the past. Students will become better acquainted with archaeological methods through small projects and the discussion of case studies.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ANTH 6 - Introduction to Biological Anthropology

Instructor: DeSilva / Dominy

The major themes of biological anthropology will be introduced; these include the evolution of the primates, the

evolution of the human species, and the diversification and adaptation of modern human populations. Emphasis will be given to (1) the underlying evolutionary framework, and (2) the complex interaction between human biological and cultural existences and the environment.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SCI

ANTH 7 - First-Year Seminars in Anthropology

Instructor: TBD

Offered: Winter.

ANTH 8 - The Rise and Fall of Prehistoric Civilizations

One of the most intriguing questions in the study of human societies is the origins of cities and states or the transformation from small kinship-based societies to large societies that are internally differentiated on the basis of wealth, political power, and economic specialization. This course examines the explanations proposed by archaeologists for the development of the first cities and state societies through a comparative study of early civilizations in the Old World and the Americas.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 9 - Language and Culture

Instructor: Billings

This course introduces major themes and thinkers in the development of the study of language and culture in Anthropology and Linguistics. The course begins with theories of the linguistic sign and then explores how these have been applied to the study of sound and meaning. We ask questions about the connections between grammar and cognition, language diversity and cultural variation, and the role of language use in the production of social life and cultural worlds.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; Lang:LRP

ANTH 11 - Ancient Native Americans

Instructor: McLeester

This course provides an introduction to the ancient societies of North America. The course examines the populating of the Americas and related controversies. We then concentrate on the subsequent development of diverse pre-Columbian societies that included hunter-gatherer bands in the Great Basin, the Arctic, and the sub-Arctic; Northwest Coast chiefdoms; farmers of the Southwest, such as Chaco Canyon and the desert Hohokam; and the mound-builders of the Eastern Woodlands.

Cross-Listed as: NAIS 011

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 12 - Anthro Gateway Courses

The courses under this rubric ANTH 12.XX will vary by subfield. As such, distributives may incorporate any of the following: INT, SCI, SOC, TLA, SLA, TMV.

ANTH 12.10 - Jews and Arabs: Entangled Histories

This course looks at the interaction between Jews and Arabs throughout history. We examine Jewish history, culture, and social life in Middle Eastern and Islamic lands from the advent of Islam to the emergence of modern nation-states in the Middle East. Along the way, we will make stops in medieval Islamic Egypt, Andalusia, the Ottoman Balkans, the Arabian Peninsula, and other places in which Jewish communities thrived and left records. We pay special attention to the influence of the broader forces that shaped Jewish history and social life throughout the Middle East, and the ways in which Jews and Arabs interacted at the social, cultural, economic, and political levels in diverse contexts and time periods.

Cross-Listed as: JWST 66.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 12.11 - Arctic Crossroads

Once considered a remote frontier with a shallow history and marginalized peoples, "the big thaw" is transforming the Arctic into an international melting pot with a surprisingly deep and complex history. This course presents the 40,000 year history of the circumpolar Arctic through the latest discoveries in environmental science, archaeology, ethnology, history, and art. We will also explore how Europeans 'discovered' the Arctic, beginning with the voyages of Pythias, the sagas of Norse Vikings, Frobisher's Northwest Passage quest, and Dezhnev's discovery of the Bering Strait. The third strand of our Arctic odyssey will be seen through the eyes, art, mythology, and beliefs of the northern peoples themselves.

Degree Requirement Attributes: Dist:INT; WCult:NW

ANTH 12.14 - African Popular Culture

This course introduces a global socio-historical framework within which to examine African popular cultures across the continent and as they circulate globally. Considering the historical contexts of contact between Africa, Europe, and--- the Americas, we will explore cultural, economic, and philosophic aspects of African expressive cultures. Focusing on Ghana, Nigeria, and South Africa, we will study music, film, dance, social media, theater, and literature, and consider how ideas of what it means to be African are produced and contested through these media. No prerequisites required.

Cross-Listed as: AAAS 87.09

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 12.15 - Religion And Imperialism

An examination of the impact of imperial expansion on the religious systems of the conquered. The course will focus primarily on the religious consequences of European expansion in North America and Africa but will also examine Jewish responses to Roman imperialism at the time of Jesus. We shall examine the attempts of traditional religious leaders to explain and control the imperial presence as well as the development of new religious movements that grew out of spiritual crises of conquest. This course will examine various types of prophetic movements and revitalization movements that developed in response to conquest as people sought to preserve their cultural identities in the face of their forced integration into imperial systems. Issues of conversion to religions associated with the conquerors as well as the challenges of secular culture will be discussed. Open to all.

Cross-Listed as: REL 067

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ANTH 12.18 - Anthropology and the Forensic Sciences

Forensic anthropology is the application of the science of anthropology and its subfields, including Biological (physical) Anthropology, Cultural Anthropology (Ethnology), and Archaeology, in a legal setting. Traditionally the forensic anthropologist will assist law enforcement agencies in the retrieval and identification of unidentified human remains. This course will introduce the student to various anthropological sub-disciplines used in the fields of forensics, including: (1) search for clandestine burials; (2) excavation and retrieval of human remains; (3) identification of human remains (sex, age, race, cause of death, and pathology); (4) handling of evidence; (5) interaction with law enforcement agencies; (6) presentation of data, results and evidence; (7) review of forensic and anthropological case studies; and (8) guest lectures.

Degree Requirement Attributes: SCI

ANTH 12.19 - Crossing Over: Latino Roots and Transitions

This course focuses on the histories and experiences of Latinx transnational migrants—from Mexico, Central America, Puerto Rico, the Dominican Republic, and Cuba—living in the United States. You will study the historical, political, and economic processes that have led to these migrations, as well as the varying ways in which race/ethnicity, class, gender/sexuality, and citizenship affect Latinx migrant lived experience. Given our focus on "crossing," readings will foreground subjects that capture this theme, from the literal movement of people, to the constant back and forth that shapes Latinx lives, to the

adjustments Latinx people make given their language, their proximity to other immigrants and communities of color, and their varying acceptance within the United States.

Cross-Listed as: LATS 044 SOCY 043

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 12.23 - Introduction to African Studies

This course introduces a global socio-historical framework within which to examine Africa in relation to multiple African Diasporas and notions of mobility. Considering the historical contexts of contact between Africa, Europe, and the Americas, we examine cultural, economic, and philosophic aspects of Africa. We will examine how ideas of what it means to be African culturally, racially, and politically are continually produced and contested. The moment of independence of many African nation-states from European colonial rule in the mid 20th century operates as a centering point from which we will examine economics, race, politics, and artistic expressions. We will consider ideas of “tradition” and “modernity,” representations of Africa, more recent processes of commodification, as well as various cultural and political responses to them.

Cross-Listed as: AAAS 011

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 12.24 - Africa's Time? An Interdisciplinary Survey of Temporality and Power

Centered in Africa, this course explores the theme of temporality through attention to history, anthropology, philosophy, and popular theoretical physics. There will be no mathematical calculation required. However, we will consider difficult formulas of another type. Is time a constant across cultures and reference frames both physical and ontological? How do past, present, and future intersect? How has the perception of time influenced historical encounters on the African continent and within the African diaspora? How does time relate to ancestry and power?

Cross-Listed as: AAAS 87.12

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 12.26 - Environmental Justice

Instructor: Greenleaf

Around the world, people suffer because of environmental degradation, from sickening industrial pollution to unnatural disasters to disruptive climate change. This course examines how environmental harms are unequally experienced, as well as how communities organize to protect themselves. We will discuss the concept of “environmental justice” as it has developed through social movements in the United States and elsewhere. We will also explore it as an analytical category that (a) explains

how inequality manifests environmentally and (b) enables critical thinking about concepts like the “environment” and mainstream environmentalism and environmental policy. Drawing from Anthropology, Geography, History, Sociology, and other disciplines, we will focus on the lived experiences of environment justice and injustice around the world. Not open to students who have received credit for GEOG 068.

Cross-Listed as: GEOG 068 GEOG 39.01

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ANTH 13 - Who Owns the Past?

Modern archaeology grew out of antiquarianism, imperialism, and the attempts of early collectors and scholars to look to the past for aesthetics, to construct identities, and to satisfy their curiosities. This course examines how these legacies influence contemporary archaeology, museum practices, and policies to manage cultural heritage. The central question will be explored utilizing the perspectives of the relevant actors: archaeologists, collectors, museums, developers, descendant communities, national and local governments, and the tourism industry.

Cross-Listed as: CLST 12.03

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 14 - Death and Dying

Instructor: Kan

Using anthropological and historical works, novels and films, the course explores the meaning of death in a variety of cultures. Particular attention is paid to understanding native ideas about the person, emotions, life cycle, and the afterlife, as well as the analysis of mortuary rituals and the experience of the dying and the survivors. The course also offers an anthropological perspective on the development of the modern American ways of dealing with death and dying.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 15 - Political Anthropology

The political anthropology of non-Western societies raises basic questions concerning the nature of authority, coercion, persuasion, and communication in both small-scale and complex societies. Classical approaches to problems of freedom and order are challenged through examples drawn from various societies. Topics including the ideologies and language of political domination, revolution, wealth, and the transition to post-modern societies are assessed, as are factions, knowledge and control, state secrecy, state and non-state violence, and religious fundamentalism.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 17 - The Anthropology of Health and Illness

Instructor: Carpenter-Song

This introduction to medical anthropology focuses on the cross-cultural study of health and illness. Medical anthropology also speaks to issues of global health equity, human rights, and social suffering. This class examines the role of the healer/physician in a variety of societies, explores the boundaries between 'religion' and 'science' as they relate to healing, considers 'traditional medicine' and examines processes and practices of 'medical pluralism' by investigating how individuals and communities make health care-related decisions.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 18 - Research Methods in Cultural Anthropology

Instructor: Carpenter-Song / Novacich

This course will introduce students to the premier method of empirical research in cultural anthropology: participant observation, and associated informal dialogue and interviewing. We will study techniques for planning and carrying out such research, and for recording, checking validity and reliability, storing, coding, analyzing and writing up of ethnographic data. Students will undertake "mini" research projects, and become familiar with basic ethical issues, informed consent, writing of research proposals, formulating research contracts, and sharing results with cooperating individuals and groups.

Offered: Fall, Spring.

Degree Requirement Attributes: SOC

ANTH 19 - Ethnographic Discourse Analysis

This course approaches Discourse Analysis as a research method that allows the analyst to pay systematic attention to diverse elements of communication. While this method can be used across disciplines to address a wide variety of research questions, this course grounds investigations in an exploration of discourse in ethnographic contexts, to examine how language, culture and the social order are inter-related and co-constructed in communication. Our task involves attending to multiple scales, including the technical contours of spoken and written communication, the immediate interpersonal moment, as well as the broader sociopolitical context. We will learn to read and develop ethnographically-grounded transcriptions to make arguments and will consider how day-to-day language enables individuals and communities to navigate

contemporary issues of power, morality, cultural continuity, inequality, and more.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ANTH 20 - Primate Evolution and Ecology

Instructor: Boucher

Humans are primates. The biology of our species cannot be fully understood outside of this context. This course offers a broad survey of living nonhuman primate diversity. The physical, behavioral, and ecological attributes of each of the major groups of primates will be discussed. Emphasis will be placed on traits relating to diet, locomotion, growth, mating, and social systems. Students will gain a comparative perspective on humankind.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

ANTH 21 - The Aztecs

Mexico City once the capital of New Spain overlies the remains of Tenochtitlan, capital of the Aztec empire. This course examines the development of the Aztec empire, the organization of Aztec society and religion, and the Spanish conquest of the Aztec. It ends with an introduction to Nahua society in the first century after conquest. We will also consider the varied perspectives of Aztec history offered by Nahua texts, archaeology, history, and art history.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 22 - Olmecs, Maya, and Toltecs: Ancient Civilizations of Mesoamerica

The course begins by discussing how people first occupied Mesoamerica during the Ice Age and then examines the development of agriculture and early villages that laid the foundations for Mesoamerica's earliest complex societies, including the Olmecs. We then explore the Classic period civilizations of Teotihuacan, Monte Albán, and the Maya and the Postclassic city-states of the Toltecs, Mixtecs, and Maya and the Aztec empire at the time of the Spanish Conquest. (ARCH)

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 25 - Primate Biomechanics

This course is an introduction to the physical principles and musculoskeletal anatomies that underlie primate behavior, including especially primate locomotion and diet. We will study basic mechanics, bone biology, soft tissue and skeletal anatomy, primate behavioral diversity, and the primate fossil record in order to address why bones are shaped the way they are, and how scientists reconstruct behavior from fossils. Emphasis will be on primate

locomotion, including the origins and evolution of human bipedalism.

Degree Requirement Attributes: Dist:SCI

ANTH 26 - Gender and Global Health

This course will examine the intersection of gender and health. Readings will be from medicine, history, journalism, and the social sciences. We will interrogate the relationship between biology, science, and culture, focusing our attention on the cultural construction of healing and embodied experience of illness. We will examine how cultural institutions, ideologies, and practices contribute to health disparities along lines of race, class, and gender, paying attention to medicine's role in gendering the body.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 27 - Economic Anthropology in a Changing World

Instructor: Greenleaf

The idea of “the economy” is powerful. Government policies try to make it grow and politicians are voted out if it doesn't. Fortunes rise and fall with economic indicators and market values. But what *is* the economy? In this economic anthropology course, we will address this question differently than an Economics course would. Rather than approaching the economy as an abstraction that exists apart from human societies, we will critically explore how it is created and experienced through activities and relationships that are part of everyday life.

Our focus will be on how markets, commodities, labor, property, and money shape people's identities and relationships. We will pay particular attention to the ways that power works, often invisibly, through economic forms, and how this can make inequality and governmental power appear acceptable and even natural. Finally, we will examine relations between “the economy” and “the environment” in the context of climate change and environmental degradation. Through engagement with ethnographic and other scholarship, students will learn to critically understand key contemporary economic issues in the United States, as well as in countries like Brazil, Egypt, and Italy.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 28 - Ethnography of Violence

Violence is widely recognized as a problem in modern society, with policies and interventions to combat violence, or employ it, dominating local and global politics. Yet the meaning of violence is seldom analyzed. Using an ethnographic lens, this course explores violence as both an embodied experience and a culturally and politically mediated event. We examine spectacular and everyday

violence forms of violence in terms of manifestations of power, structures of inequality, perceptions of difference, and politics of representation. Ethnographic studies are drawn from, among others, Mozambique, Haiti, and Harlem. An introduction to the cultural anthropology of violence, this course raises key questions about violence in a globalized world and explores how to study it anthropologically. This course is not open to students who have received credit for ANTH 12.03.

Cross-Listed as: WGSS 42.05; AAAS 88.08

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ANTH 29 - Landscape Archaeology

Landscape archaeology seeks to better understand human history through the systematic exploration of large regions, documenting the age and distribution of ancient settlements and other features such as roads, canals, and field systems that are visible on the ground surface. As opposed to focusing on individual sites, landscape archaeology provides a regional perspective on the ancient world and is therefore uniquely capable of revealing past trends in population, the density and distribution of settlement over time, and the ways that ancient peoples interacted with and understood their environments.

Degree Requirement Attributes: Dist:SOC

ANTH 31 - Gender in Cross-Cultural Perspective

Instructor: Billings

Sex (biological differences between men and women) and gender (social constructions of those differences) are not straightforward or natural. Gender inequalities are also not straightforward and natural. This course thus pays close attention to issues of power and inequality, including the ways in which Western gender ideals have been imposed on people in other parts of the world. We will also engage with perceptions, images, stories, encounters, games, connections, disconnections, practice and resistance.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ANTH 32 - Anthropology of Tibet and the Himalayas

This course introduces students to the peoples and cultures of Tibet and the greater Himalayan region (Nepal, northern India, Bhutan). We examine the cultural, ecological, political, religious, and economic interfaces that define life on the northern and southern slopes of Earth's greatest mountain range. In addition to learning about Himalayan and Tibetan lifeways, we will also learn about how these mountainous parts of Asia have figured into occidental imaginings, from the earliest adventurers to contemporary travelers.

Cross-Listed as: ASCL 55.01

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 33 - The Global Caribbean

Paradise or plantation? Cultural destination or economic periphery? Capitalist birthplace or IMF delinquent? From the Columbian conquest to contemporary tourism, the Caribbean has borne the burdens and opportunities of being an intercontinental crossroads. Colonial governments, enslaved Africans, indentured servants, and foreign settlers have all made the Caribbean an exemplar of modernity and globalization—for better or worse. Drawing on social scientific, literary, and policy texts, this course offers an historically deep and geographically broad anthropology of the Caribbean.

Cross-Listed as: AAAS 83.08 LACS 25.08

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 34 - Comparative Perspectives on the US-Mexican Borderlands

“U.S.-Mexico Borderlands” explores the histories, policies, economies, structures, and cultures of the southern divide from the early nineteenth century to the present day. The U.S.-Mexico border is often understood as a periphery, an edge to the nation, a marginal region of little importance. However, the border is also an interface; a region that facilitates connections, crossings, and junctures. Its importance, this class argues, cannot be overstated. Taking an interdisciplinary approach to borderlands studies will allow us to seek the “who,” “what,” “when,” “where,” “why,” and “how” the border comes into being. This class will emphasize the lived experiences of peoples and communities living along the border by engaging with secondary and primary sources. Further, this class will utilize art, poetry, music, podcasts, and performance as a way to understand how the border was and continues to be contested. While the class moniker identifies only two nations, the plight of indigenous nations’ claim to land, sovereignty, and resources is also studied. Further, by taking a relational ethnic studies approach, the histories of Asian & Asian American, Black, and other racialized peoples on the border are highlighted. Each of these histories is important to understand the origins of the southern divide and how these origins manifested forms of exclusionary nation-building and its shifts over time.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 35 - Maya Indians Under Mexican and Guatemalan Rule

This course explores the contemporary Maya cultures of Mexico and Guatemala against the backdrop of nearly five hundred years of conquest, colonialism, revolution, and nation-building. Given the contrasting, at times deeply antagonistic, cultures and identities that have resulted, this course focuses on issues of Maya ethnicity, inequality, and

nationalism in these two closely related yet historically distinct countries.

Prerequisite: One course in Anthropology or Latin American, Latino and Caribbean Studies.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 36 - Contemporary Africa: Exploring Myths, Engaging Realities

This course focuses on processes, relationships, and experiences that have shaped, and continue to shape, the lives of Africans in many different contexts. These include issues of ecology and food production, age, gender, ethnicity, exchange, colonialism, apartheid, and development. We will then embark on in depth readings of ethnographies that engage these issues and themes. In the processes we will move beyond prevailing stereotypes about Africa, to engage the full complexity of its contemporary realities.

Cross-Listed as: AAAS 44

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ANTH 37 - Legacies of Conquest: Latin America

Despite nearly five hundred years of conquest, colonialism, and change, native peoples still survive in culturally distinct enclaves within the dominant Iberian traditions of Latin America. This course examines the roots as well as the endemic social inequalities and prejudices that resulted. Selected case studies will relate to such contemporary problems as international drug trafficking, deforestation of the Amazon basin, and ongoing political repression and revolution in Central America. The course draws on the insights of local ethnographic studies to shed light on global problems, while anthropologically situating native cultures of Latin America in their larger historical and geopolitical context.

Prerequisite: One course in Anthropology or Latin American and Caribbean Studies.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 38 - Human Behavioral Ecology

The human condition is characterized by immense biological and behavioral variation. The extent to which such variation is adaptive is topic a great importance and controversy. Current research in the field of human behavioral ecology reflects a growing interaction between the social and biological sciences. The objectives of this course are to critically examine the origin and development of this discipline and to survey the physiological and behavioral ways that humans interact with their environment.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

ANTH 39 - Archaeology of the Middle East

This course provides an introduction to the civilizations of the ancient Middle East and to the history of archaeological research in this important region.

Encompassing the modern nations of Iraq, Iran, Syria, Turkey, Jordan, Lebanon and Israel/Palestine, the Near East saw the emergence of the world's first villages, cities, and empires, and is therefore central to our understanding of human history. Following an overview of its geography, this course offers a survey of Middle Eastern cultural development, art, and archaeology from the earliest evidence of human settlement around 13,000 BC to the conquest of the region by Alexander the Great. This course is not open to students who have received credit for ANTH 12.02 - Archaeology of the Ancient Near East

Cross-Listed as: MES 03.02

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 40 - Human Functional Anatomy

Instructor: Dominy

Anatomy is a science of nomenclature; it provides a universal language for understanding how and why form supports function. Such a biomechanical conceptual framework can inform our understanding of human biology. Yet the anatomical novelties that characterize modern humans are best appreciated when contextualized against living nonhuman primates and the hominin fossil record. Student grades will be based on a mastery of concepts from lectures and labs featuring cadavers, skeletal materials, models, and casts.

Degree Requirement Attributes: Dist:SLA

ANTH 41 - Human Evolution

The fossil record demonstrates that humans evolved from an extinct ape that lived in Africa more than 5 million years ago. Paleoanthropology is the branch of biological anthropology that seeks to document and explain the evolution of our lineage using paleontological and archaeological data. This course provides a survey of human evolution in light of current scientific debates. Emphasis will be placed on reconstructing the biology and behavior of prehistoric species.

Degree Requirement Attributes: Dist:SCI

ANTH 42 - Medical Gross Anatomy: Scars of Human Evolution

Human anatomy is important for medical professionals, artists, and anthropologists. This dissection-based course will explore the human body and its many imperfections. The deficiencies of our bodies—clumsy compromises in our teeth, feet, backs, bottoms, and birthings—are chronic

clinical concerns that reflect our evolutionary history. Taking a cue from Wilton Krogman's 1951 classic, *Scars of Human Evolution*, this course will demonstrate how and how far the human body fails by the standards of intelligent design.

Degree Requirement Attributes: Dist:SLA

ANTH 43 - Human Osteology

Human osteology is an important component of biological anthropology, with applications in archaeology, paleontology, forensics, and medicine. This course is designed to acquaint students with the normal anatomy of the human skeleton. Our focus is the identification of isolated and fragmentary skeletal remains. Students are introduced to principles of bone growth and remodeling, biomechanics, morphological variation within and between populations, pathology, ancient DNA, taphonomy, and forensics. Practical techniques are developed in regular laboratory sessions.

Prerequisite: ANTH 6 or permission of the instructor.

Degree Requirement Attributes: Dist:SLA

ANTH 44 - Language, Gender & Sexuality

Instructor: Billings

This course will introduce students to foundational and current thinking about the connections among language, gender, and sexuality, from readings in linguistics, sociolinguistics, linguistic anthropology, and feminist theory. A cross-cultural approach will characterize the class, and units will link language, gender and sexuality to themes such as power, (in)equality, and identity. Students will also be encouraged to consider the significance of gender and sexuality in the context of quotidian language use.

Cross-Listed as: WGSS 53.07

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ANTH 45 - Asian Medical Systems

Instructor: Boke

This course investigates systems of healing practiced in, and derived from, Asia. We will focus primarily on three Asian medical systems: Ayurveda, Chinese medicine, and Tibetan medicine. We will strive to understand how these medical systems are based on coherent logics that are not only biologically but also culturally determined. We will also analyze the deployment of these medical systems in non-Asian contexts, and examine the relationship between Asian systems and "western" biomedicine.

Cross-Listed as: ASCL 63.01

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 48 - From the Sacred to Salvation: The Place of Religion in Human Societies

Instructor: Kan

This course examines religions as cultural systems that give shape and meaning to people's lives and provide them a means, in the form of rituals, to affect their worlds and themselves. The emphasis is on understanding non-Western religions, especially local traditions, through the interpretation of myth, ritual, and symbolism. The relationship of religion to political power and ideology is also explored.

Prerequisite: One course in Anthropology or Religion or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

ANTH 49 - Environment, Culture, and Sustainability

Environmental problems cannot be understood without reference to cultural values that shape the way people perceive and interact with their environment. In this course we will engage with cultural difference with special attention to how the American experience has shaped the ways in which Americans imagine and interact with the environment. We will pay close attention to issues of consumption and conservation and how they have impacted ecologies and human livelihoods around the world.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

ANTH 50.03 - Digital Archaeology

Instructor: Casana

This course will examine how digital technologies, particularly in the geospatial realm, are transforming the ways in which we discover, explore, and interpret the human past. Students will investigate archaeological questions while learning both the art and science of rapidly developing software, instruments, and techniques. The first unit of the course explores regional-scale archaeological problems and the use of aerial and satellite imaging, and GIS-based spatial analysis. We then turn to site-based investigations using archaeological geophysics, photogrammetry, and drones. The final weeks turn to 3D modeling, visualization, and immersive archaeological realities.

Degree Requirement Attributes: Dist:TAS

ANTH 50.04 - Digital Heritage: Global Politics and Practices

This course explores the idea of heritage as less of a “thing” and more of a cultural and social process—one that harnesses the act of remembering to create ways to

understand and engage with the world. In recent decades, fostered not least through international organizations such as UNESCO World Heritage or the World Monuments Fund, heritage preservation has become a global political movement. Following both a historical and a comparative approach, this course seeks to transcend the Euro-American understanding of heritage, which is still very much the standard in international advisory bodies and address the various unrepresented perspectives, value systems, and frameworks of memory that play a role in heritage as a global phenomenon. As such, this course is designed to be a tool to both study and question heritage preservation and conservation.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.05 - Environmental Archaeology

Instructor: Ward / McLeester

Archaeological sites preserve not just architectural and artifactual remains, but important clues to how people lived in and acted on their environment. In this course we will explore the types of data used to reconstruct ancient environments and examine theoretical approaches to human-environment relationships. Through case studies, we will confront contentious issues in environmental archaeology and learn how archaeologists integrate the archaeological record with data from history, biology, and geosciences.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

ANTH 50.17 - Rites of Passage: The Biology and Culture of Life's Transitions

This course explores the “rites of passage” concept across time and space, and with close attention to the ways that our bodies shape and are shaped by our social selves. A response to avid student desire to learn more about the intersections of biology and culture within the context of anthropology, this course promotes learning about human biology and the medical humanities.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.18 - Anthropocene Imaginaries

The world warms, and global environmental imaginaries transform. Evolving representations of culture and environment have compelling implications for human rights and indigenous sovereignties over land, water and natural resources. Human security will be shaped not only by the unfolding impacts of climate change, but also by how we frame the understandings and ethical commitments we articulate in response to them. This course will explore the anthropology of climate change, and consider how visions and aesthetics of place in the twenty-first century are interconnected with transforming global discourses

about environmental security, governance and power. Blending environmental humanities and social science perspectives, we will also reflect upon critical approaches to political ecology and the idea of “the Anthropocene” itself.

ANTH 50.21 - Filmmaking and Visual Culture

This course is a course where we both learn to make films and examine theories of visual art, sound, film, and digital media. We will learn how to think about and make sounds and images in historically and ethnographically rich ways. In the process we examine notions of power, difference, history, culture, race, class, gender. Twentieth-century politics were intimately linked to the rapid development of radio, television, film, video, and digital media. These media have creatively engaged with local cultural practices around the world in reshaping the nature of artistic expression, national, gendered, and racial difference, and political power. We examine notions of visuality from the perspective of African and African diasporic political configurations and aesthetic responses. This course explores the politics and pragmatics of art, photography, and film in order to delineate visual, sonic, and embodied ways of presenting and experiencing the world particularly in relation to race and gender.

Cross-Listed as: AAAS 88.17

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 50.22 - Sovereignty, Race, and Rights

This course examines the colonial legacies of rights, race, gender, and difference and their significance for contemporary global politics and development. By taking an socio-historical approach to the idea of rights we will make connections between sovereignty, the rule of law, representational practices, economy, and citizenship. We will use a critical eye to explore the conditions of possibility that allow states, development organizations, donor agencies, and individuals to unwittingly reproduce centuries-old tropes of poverty, degradation, and helplessness of non-Western peoples. Examining various institutionally structured encounters between Europeans and non-Western peoples we unpack assumptions about the naturalness of power. In postcolonial societies the tensions between ideas of tradition and modernity structure many conflicts over rights, citizenship, and the role of the individual in society.

Cross-Listed as: AAAS 88.16

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ANTH 50.25 - Law, Power & Society

What is law? In this course, we will explore this seemingly simple question, and look at how scholars from anthropology and other disciplines have addressed it. We will look at law as a means of ordering societies, as an

exercise of power, and as a cultural phenomenon that helps us better understand the world around us. We will survey foundational and philosophical thought, delve into law’s role in the United States, and study its manifestations in colonial and postcolonial societies, such as South Africa and Brazil. We will explore the law as both a means of social control and of social change.

Cross-Listed as: GOVT 60.22

Degree Requirement Attributes: Dist:SOC

ANTH 50.28 - Racial Geographies: Race and the Politics of Place

This course will explore various themes surrounding the ways in which race shapes the way we understand ideas of place. With a focus on Africa and its diaspora, the course looks at the movement of people and ideas inherent in the concept of diaspora and reflects on how people also reshape social worlds that challenge the way we commonly understand the world to be divided (i.e. by political territories like “countries” or by physical geographies like “continents”). The goal of the course is to start with the concept of “Blackness” and unpack the complexity of various other racial and spatial categories like “Sub-Saharan Africa” “Arab North Africa” “the West” and “diaspora.” The three general themes of territory, flows, and space/futurisms, will be explored in relation to the way they are experienced by people in everyday life, therefore the readings will primarily be ethnographic, following African descendant communities in Africa, Europe and the Americas. However, we will tackle these issues through history and fiction writings as well. Not open to students who have received credit for GEOG 063.

Cross-Listed as: AAAS 60.50 GEOG 071

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.30 - Human and Comparative Gross Anatomy

Human and Comparative Gross Anatomy is a laboratory class that offers undergraduate students the rare opportunity to learn anatomy through anatomical dissection. Students will work in small teams to dissect human body donors, with various other vertebrate animals also available for dissection and study. Cadaver dissection is the best method by which to learn about the structures of the human body, their integration, and, most importantly, variation among humans. This is an intensive course, requiring hours of study both in the lab and from texts, but it rewards you for those hours with a strong understanding of anatomy.

Degree Requirement Attributes: Dist:SLA

ANTH 50.31 - Humanistic Medicine: Cultivating Compassion in Healers, Patients, and Cultures of Care

This course uses experiences of illness and efforts to heal as windows into what it means to be human. Grounded in an interdisciplinary, holistic approach, this course aims to build connections between humanistic inquiry, medicine, and diverse forms of care. The course is organized around three main themes: (1) Becoming a Doctor and the Culture of Biomedicine, (2) Exploring Disease and Illness, and (3) Building a Future of Compassionate Care. This course is relevant for students in a wide range of disciplines, including students pursuing clinical careers; students engaging with medicine and illness as writers or advocates; and students in the humanities and social sciences who are interested in exploring health, illness, and medicine.

ANTH 50.34 - Peoples of Oceania

The “Peoples of Oceania” course is an intentionally post-colonial and anti-racist approach to studying the vast and varied cultures of Oceania. We will focus on relationships between the religious, social, political, and economic systems in Oceania, rather than dividing weeks into the four geographic regions: Polynesia, Micronesia, Melanesia, and Australia, which have historically made up the foundation of many Pacific survey courses. Using the work of indigenous Tongan and Fijian scholar Epeli Hau’ofa (1939-2009) and his seminal text “We are the Ocean” as a guiding force, we will crisscross the atolls and islands that make up Oceania, creating a navigator’s chart of discussions and debates. Major themes discussed in class include: race/gender/class politics surrounding the ownership and control of cultural heritage, indigenous data sovereignty and intellectual property rights, and climate justice as social justice.

Cross-Listed as: NAIS 30.28

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 50.35 - The World Turned Upside Down: An Indigenous History of the Andes after the Spanish Invasion

This course will explore the tension between insiders and outsiders, colonizers and the colonized, Westerners and Natives. Students will examine not only what these tensions meant for the people of the Andes – in the countries of Peru, Bolivia, and Ecuador (and to a lesser extent Chile and Colombia) - but also in what ways similar phenomena occurred in North America and other parts of the world. Among other things, students will investigate differences between insider and outsider accounts, primary and secondary sources, history and archaeology, etc. - while acknowledging the strengths and limitations of these different sources and approaches.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 50.36 - Anthropology and Narrative: Life History, Oral History, and the Ethnographer’s Story

This seminar aims to expand students’ understanding of the power of storytelling in anthropology and to guide them in reading such stories with a critical eye. Students will have the opportunity to conduct their own life history projects as well as to produce a critical analysis of course readings or of texts of their own choosing.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.37 - Archaeologies of Religion

Most of humanity’s religious history is only accessible using archaeological evidence. Moreover, even where texts are available, they tend to reflect the perspective of elites. This course therefore explores how archaeological methods can help us better understand religious phenomena in past societies. Topics will include the religion (or lack thereof) of our hominid ancestors (e.g. Neanderthals), the state religions of ancient civilizations, and the complementary perspective that archaeology provides on the World Religions.

Cross-Listed as: REL 20.07

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ANTH 50.38 - Social Lives of Energy: Energy Systems and their Social Contexts

In this course, we will analyze the cultures of energy systems, focusing on clean energy sources. Using a global case study approach, we will examine how energy systems impact historical, cultural, and political dimensions of life. Overall, students will integrate how energy systems relate to social equity and climate change politics. One main theme in the course will be energy conflicts involving Indigenous peoples. Studying these conflicts allows us to investigate the multiple ways of being at stake in defining energy futures.

Degree Requirement Attributes: Dist:SOC

ANTH 50.39 - Alcohol in the Ancient World

Instructor: Wang

This lecture and discussion-based course provides an introduction to the production and consumption of beer, wine, and other fermented beverages across the ancient world. We will explore the full range of available source material – written evidence, physical remains, artistic representations, ethnographic accounts, and experimental archaeology – to develop an account of alcohol as a uniquely potent form of material culture that was embedded within complex webs of social, political, economic, and ritual activity.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ANTH 50.40 - Anthropology of Disaster

Disasters are often conceptualized as an event that disrupts the normalcy of the everyday. In contrast, anthropology of disaster has long analyzed disasters and their effects as amplifications of the normal functioning of a society. This course examines the temporal and spatial scales, categories and concepts, as well as modes of attention we deploy to understand and respond to disasters. By drawing on texts from anthropology, history, science and technology studies, and environmental justice, we will develop analytical tools to elucidate how social norms and power relations are reorganized and reproduced through disasters, often in unequal ways.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 50.41 - Homelands and Diasporas: Russian Jews on Three Continents

Instructor: Kan

Drawing on a variety of disciplines, such as anthropology, history, sociology, political science, and cultural studies, and sources ranging from academic works to works of fiction and films, the course first explores the history and culture of Russian (pre-1917) and especially Soviet Jews (1917-1991)—a major and significant segment of the world Jewry—prior to the massive immigration of the 1970s-1990s. The rest of the course involves a comparison of the experience of Russian-speaking Jews in the three major countries they have immigrated to—Israel, US, and Germany—as well as those remaining in Russia today.

Cross-Listed as: COCO 033 EEER 38.15 JWST 05.01

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ANTH 50.42 - Indigenous Responses to Colonialism: Maya and Maori

This course compares how Maori in New Zealand and Maya in Mexico and Guatemala survived European colonialism to become distinct peoples in a world of postcolonial nation states. Comparison addresses both the diversity of indigenous worlds and changes in European colonialism between the sixteenth and nineteenth centuries through the study of cultures as emergent interactions of meaning and power within and between groups, and of racism as the rationalization of institutionalized inequalities across human differences.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ANTH 50.44 - Darwin and Human Evolution

This course explores what we have learned about human evolution, behavior, and biological diversity in the 150 years since Charles Darwin wrote *The Descent of Man*.

The course will coincide with a Winter symposium in which the contributing authors of *A Most Interesting Problem: What Darwin's Descent of Man Got Right and Wrong about Human Evolution* will visit campus, give talks, and engage with our students. ANTH 50.44 is designed for anthropology and biology majors.

Degree Requirement Attributes: Dist:SCI

ANTH 50.45 - Archaeology of Epidemics

In this course, we will study the effects of epidemics and pandemics on different cultures throughout history. Towards this end, we will examine how art and design have served to forge community bonds; how visual culture has changed in times of crisis; and how communities across the world, in different times and spaces, eventually find resilience in fundamentally altered worlds.

Degree Requirement Attributes: Dist:SOC

ANTH 50.46 - Macroevolution

Macroevolution focuses on the evolutionary process from the perspective of the species and through the lens of deep time. More specifically, it focuses on the issue of whether life is organized hierarchically, and if so, can selection occur at any/all of these other levels, in addition to the level of the organism. This course is especially well suited for discussion and question, as the definition of macroevolution, as well as its very existence, is under intense discussion by both microevolutionists and macroevolutionists alike. Topics covered include punctuated equilibrium, species-level selection, homology, and mass extinctions.

Cross-Listed as: BIOL 28, EARS 32

Degree Requirement Attributes: Dist:SCI

ANTH 50.47 - Archaeological Field Methods: Digging Dartmouth

Instructor: Casana

Through investigations on and around Dartmouth's campus, this class provides a hands-on introduction to archaeological field and lab methods, as well as to the archaeology of New England. Students will participate in survey and excavation of historic building sites on Dartmouth's campus, as well as on curation and analysis of artifacts.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

ANTH 50.48 - Energy Justice

Climate change and environmental degradation necessitate shifting energy systems away from fossil fuels. What issues of culture, power, and inequity are part of this energy "transition"? How can we make sure that it is socially just? These questions are the main focus of the

course. This course includes an Energy Justice Clinic, supported by Dartmouth's Irving Institute for Energy and Society, in which students will engage in community-driven service learning.

Cross-Listed as: GEOG 40.04

Degree Requirement Attributes: Dist:INT or SOC

ANTH 50.49 - Anthropology of Museums

This course offers a historical, theoretical, and critical perspective on the continuing vitality of museums as social institutions and the challenges they face today.

Degree Requirement Attributes: Dist:SOC

ANTH 50.50 - Archaeology of Food

Instructor: Wang

In this course, we will explore the theoretical and methodological approaches that archaeologists use to study food and eating in ancient societies from a global anthropological perspective. This course assumes no prior familiarity with archaeology; rather, it is designed to introduce you to the basic methods and theoretical structures employed to study the archaeological remains of food and drink.

Degree Requirement Attributes: Dist:INT or SCI

ANTH 50.51 - Aesthetics and Power

This course explores the relationship of aesthetics to power across artistic media, public spectacles, and in daily life. European modernity has tended to posit images, sounds, and performances as signs of a world "out there" that recreated in ritual contexts facilitate individual transcendence through an almost spiritual experience. We will examine how West African and African diasporic notions of modern aesthetics tend to offer a counterpoint by enacting theories of representation that are more explicitly performative and socially dialogic. In the 1950s and 1960s people across Africa and African peoples in the Americas and the Caribbean fought for political rights and sovereignty. Aesthetic forms were crucial to these projects. Political power was contested in economic and institutional ways, but people experienced it through their bodies and senses. The power to control political and economic order is enacted in the realms of signs, desires, and value. Moral dichotomies between beautiful or ugly, expensive or cheap, important or illegible, appear to be about aesthetics alone but are in fact ways that power is produced, naturalized, and contested. We examine art media as well as political and social forms as a way to understand how broad forms of power shape both everyday and spectacular experiences and how individuals and collectives use expression as a way to contest the terms of power. In political terms, we explore rituals of state as events through which power is produced and contested in embodied ways. Producing loyal citizens requires a nation-state to create rituals that

orient people to feel like they are part of a shared collective experience. This course will draw upon transdisciplinary approaches to understanding aesthetics including ethnographic, literary and theatre studies, political analysis, performance analysis, musicology.

Cross-Listed as: AAAS 90.12

Degree Requirement Attributes: DIST:INT, SOC; WCult:NWC

ANTH 50.52 - Anthropology of Innovations

Innovation – is everywhere. It is expected in our thinking, research, technologies, learning, and lifestyle. It is upheld as solutions to the world's big problems. But what exactly is innovation? Why is innovation so valued? What does this tell us about the society we live in and the futures we are creating? This course examines "innovation" as a social, historical, and political economic concept, discourse, and practice. We will draw from texts in anthropology, STS, disability studies, black studies, and performance studies to develop analytical tools to examine how social norms and power relations are challenged, reorganized, and reproduced through innovations, often in unequal ways.

Degree Requirement Attributes: DIST:SOC

ANTH 50.53 - The Ancient Silk Road: Art, Archaeology, and Cultural Transformation in Central Asia and Beyond

This course explores the cultural effects of globalization of the ancient through early Medieval Afro-Eurasian world through the lens of the Silk Road. Through seminar discussions and lectures, this course emphasizes the art, archaeology, and texts of Central Asia in long-distance interactions with the Near East, South Asia, and East Asia. The various ways in which cultural traditions were affected by the development of the Silk Road are a central theme.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ANTH 50.54 - Issues in Paleoanthropology

In this course we will examine current and historical issues in Paleoanthropology. Topics in the course will include biological variation, interpreting hominin behavior from fossilized evidence, ethics and bias, phylogenetic relationships in the hominin fossil record, and the quality and nature of evidence for hominin evolution.

Degree Requirement Attributes: Dist:SLA

ANTH 50.55 - Beyond the Binary: Sex, Gender and Biology

Instructor: Rivera

This course examines the biology of sexual dimorphism and variation in humans and its implications for health and social equity. This is a discussion-based

course recommended for upper level students with college level coursework in biology.

Degree Requirement Attributes: WCult:CI

ANTH 50.56 - Anthropology of Food

Instructor: Boke

In this course we engage with critical, scholarly, and public media that deepen our understanding of the role of food in human social, economic, political, and health worlds. We think about the local, national, and global dimensions of our current food systems. Relying primarily on cultural anthropology's lens, we examine how foodways shape, and are shaped by, economic, political, and cultural practices. We explore not just preparation, cultivation, and consumption of food, but also the symbolic processes through which foods, and our relationships with them, are made meaningful.

Degree Requirement Attributes: Dist:INT; WCult:CI

ANTH 50.57 - Cultural Diversity in the United States

Instructor: Novacich

Is the United States a melting pot or a salad? Is it an assimilation machine or a gestalt hodgepodge of culture that is, in other words, more than the sum of its distinct parts? Whether a melting pot, a salad, both or neither, most agree that the United States is a complex geopolitical space that brings together diverse cultural threads, each of which has a particular history. This course provides a critical introduction to American society in all of its diversity. We will explore historical and ethnographic materials revealing broad trends in the cultural and social trajectory of the United States. Through a comparative and critical review of a wide range of cases – ranging from the settling of European colonies in North America, to slavery and its abolition, to the institution of quotas on legal immigration – we will learn how the United States has been forged through histories of settlement and migration, displacement and slavery, and industrialization, inequality, and protest.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.58 - Anthropology of Rural Places and People

Instructor: Sosin

This course examines the shifting social, political, and cultural landscapes of rural America. Drawing on case studies that illuminate key patterns and processes, we trace the global and local dynamics shaping experiences and understanding of rurality. We engage critically with social scientific, literary, and public media texts to explore cultural narratives and representations of rural places and people. Using the lens of cultural anthropology, we

examine the changing terrain of rural lives, with particular attention to healthcare, housing, economic development, and political engagement. The role of anthropology and ethnographic methods in understanding rural experiences will be explored as part of this course. This class includes engagement with a range of guests, study of historical and contemporary literature, art, music and public media drawn from a range of rural settings.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.59 - Architecture in the Field: Observing, Recording, Knowing

This course examines the observation and documentation of architecture, landscape, and urbanism, a practice that historians, architects, artists, anthropologists, and field scientists commonly refer to as “fieldwork.” Students will learn about fieldwork histories, methods, and sites in tandem with their own firsthand observations: each week, students will conduct fieldwork in the Hanover area and learn about the ethical and political dilemmas posed by different fieldwork methods such as photography, descriptive writing, drawing, mapping, and ethnography.

Cross-Listed as: ARTH 63.75

Degree Requirement Attributes: Dist:ART

ANTH 50.60 - The Archaeology of Native American Sports and Games

Sports and games intersect with many other aspects of our lives and can play critical roles in training for war, social hierarchies, food production, rituals, burial rites, and so much more. In this class, you will learn about the archaeology of Native American sports and games in North America. We will explore a wide array of them alongside the social roles they played. We will also play some modern versions. By the end of the class, you will understand the critical nature of sports and gaming in the past as well as the ways ancestral Native American sports and games persist today.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 50.61 - Digital Methods in Paleoanthropology

This course is an introduction to the digital methods used in paleoanthropological research. It will combine principles of anthropology with digital technology to answer research questions about human, primate, and fossil hominid shape variation and evolution. Students will learn popular digital methods including 3D surface scanning, how to process computed tomographic (CT) scans, how to take digital measurements, and the statistical techniques used to analyse data. This course will then allow students to apply these digital methods to paleoanthropological

topics of their choice, and to conduct their own research projects.

Degree Requirement Attributes: Dist:TAS

ANTH 50.62 - The Archaeology of Work

Moving chronologically (roughly), students will learn about the diverse ways that people in the past organized themselves to meet basic needs, complete collective projects, and develop new technologies. We will also use the past to analyze some of the concepts that define modern life, including gendered divisions of labor, the relationship between class/caste/race and occupation, the separation of “work” and “home”, the predominance of wage labor, and alienation and burnout.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 50.63 - Stable Isotope Ecology

Atoms form all elements on Earth, which can be used to explore the ecology of species throughout time. We will learn the foundations in chemistry that dictate what a stable isotope is, and then we will explore traditional and non-traditional methods of stable isotope analysis, framed within examples of how these methods are applied in biological anthropology.

Degree Requirement Attributes: Dist:SCI

ANTH 51 - Colonialism and Its Legacies in Anthropological Perspective

Instructor: Thayer / Billings

Between the 16th and mid-20th centuries, European nations and Japan colonized much of the rest of the world. This course examines similarities and differences in the practices of these colonial powers in different regions at different times and the impact they had on indigenous peoples and societies. It traces the ways in which colonial processes and experiences have shaped the politics, economics, and identities of both developed and developing nations in the world today.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ANTH 52 - Introduction to Maori Society

Instructor: Thayer / Craig

This course is an introduction to the study of traditional and contemporary Maori society and culture. Topics for study include pre-European Maori history, origin and migration traditions, land ownership and use, religion, leadership, meeting ground (marae) protocols, the colonial experience, struggles of resistance and of cultural recovery.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ANTH 52.01 - Perspectives of Hawai'i: Past, Present and Future

The course is an immersive, hands-on experience into the culture, history, and practices of Hawai'i through various field-based, “living classroom” experiences as well as supplemental readings/viewings.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 54 - Foreign Study in Anthropology

Instructor: Thayer / Craig

Credit for this course is awarded to students who have successfully completed the designated course in the department of Anthropology at the University of Auckland during the Dartmouth foreign study program in Anthropology and Linguistics and Cognitive Science.

Prerequisite: Two courses in Anthropology.

Offered: Winter.

Degree Requirement Attributes: SOC

ANTH 54.01 - Tradition and Sustainability: Learning from the past in Hawai'i

Generations of accumulated wisdom have been passed down about how to live sustainably on these islands. This generational wisdom (u02BBike) remains a critical part of the dialogue about how to live more sustainably in light of the contemporary challenges to island sustainability. This course is an exploration of the challenges and opportunities we as an island society face while charting a course towards a sustainable future.

Degree Requirement Attributes: Dist:SOC

ANTH 55 - Anthropology of Global Health

Instructor: Sosin

This course explores human responses to disease and illness from the perspective of medical anthropology, with a particular focus on international health. In this context, 'global health' not only refers to health care systems, medical practices, and ideas about illness and the body in cross-cultural contexts, but also encompasses issues of health development paradigms, culture and epidemiology, global health equity and human rights issues.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 57 - Origins of Inequality

What led human societies to accept social inequality? This question is as old as the earliest political writings and a

central theoretical issue in anthropology. With the collection of detailed archaeological data from multiple world regions, anthropologists have developed case studies for working out the emergence of social inequality. This course will explore the theoretical expectations of multiple approaches to inequality, and then focus on current archaeological evidence from multiple world regions.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 58 - Sustainable Cities

Trends suggest that the human experience is increasingly an urban one, with urbanization transforming social and ecological worlds at a rapid pace. With these changes comes a growing urgency to enhance the sustainability of cities. In this course we compare past and present forms of urbanization, with an emphasis on understanding specific challenges and solutions to sustainability. In doing so, we think about how urbanization is embedded in broader socio-ecological processes that transform rural lands and livelihoods.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 60 - Psychological Anthropology

Instructor: Carpenter-Song

This course examines key concepts and core debates within the field of psychological anthropology. The course draws on the historical roots of the field as well as contemporary theoretical developments in psychological anthropology. Central questions addressed in the course include: What is the relationship of the individual to culture? How do categories of the person, self, thought, and emotions vary cross-culturally? What do extraordinary psychological experiences reveal about fundamental human processes?

Degree Requirement Attributes: Dist:SOC; WCult:CI

ANTH 62 - Health and Disease in Evolutionary Perspective

Instructor: Rivera

This course explores how principles from biological anthropology can provide insight into human health and disease. This course also asks students to critically analyze prevailing medical concepts of 'normal' physiology and illness. We adopt a comparative approach to consider the evolutionary, physiological, and cultural bases of human health and disease by examining case studies in the following areas: i) human diet and nutrition, ii) demography, life history, and reproduction, and iii) pathogens, parasites, and immunity.

Degree Requirement Attributes: Dist:SCI

ANTH 64 - Evolution of Birth, Pregnancy, and Babies

This course examines human universals and cross-cultural variation in pregnancy, birth, and infant development. In

the first section, principles of life history theory and human reproductive ecology are introduced, and students will learn how assisted birth evolved in humans. In the second section, students will analyze expectations and systems of pregnancy, birth, and infant care in a cross-cultural context. Throughout the course, students will evaluate current controversies surrounding medical models of childbirth, breastfeeding, and co-sleeping.

Degree Requirement Attributes: INT or SCI

ANTH 65 - Conservation and Development

The terms 'conservation' and 'development' are ubiquitous, but there is little agreement on their meanings or their efficacy. We study how these processes impact 'traditional' cultures and how indigenous peoples have responded. Development and conservation have cultures of their own so we will examine their worldviews, discourses, and practices. We explore how anthropological methods can be used to analyze resource conflicts, understand the limits of dominant approaches, and think constructively about alternatives.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ANTH 66 - Human Biological Variation

How do human populations adapt to their local environments? What is more important for influencing human variation—genes or the environment? In this course you will learn about patterns of modern human biological variation as well as research methods employed by biological anthropologists to study these patterns. You will also learn important skills for all anthropologists, including hypothesis generation, study design, how to write a grant, and how to be an effective reviewer.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

ANTH 70 - Experiencing Human Origins and Evolution

This course will examine current evidence for human origins and evolution, with a particular emphasis on South Africa. Students will learn and experience firsthand how fossils, archaeological sites, and living model systems are used collectively to reconstruct and interpret the path and circumstances by which we became human. A course extension in South Africa will be offered to enable direct experience with the sites, organisms, and challenges discussed in class.

Degree Requirement Attributes: SCI

ANTH 72 - Ethnicity and Nationalism

Instructor: Kan

Ethnic politics and nationalist movements dominated the 20th century and continue to play a major role in shaping the world today. This course explores these important subjects through an anthropological lens by examining such topics as the symbols, rituals and myths of ethnic and national identity; nationalism, ethnic minorities and the state; and homeland and diaspora nationalism. Ethnographic case studies range from indigenous nationalism to that of the newly independent states of Eastern and Central Europe.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ANTH 73 - Main Currents in Anthropology

Instructor: Craig / Greenleaf

This course examines the theoretical concerns that define anthropology as a discipline. Readings by major theorists past and present address the nature and extent of human social and cultural variation, the relationship of institutional arrangements in society to systems of meaning, the material and moral determinants of human social life, the dynamics of change within and between cultures, and the place of power in maintaining and transforming meaningfully constituted human orders.

Offered: Spring.

Degree Requirement Attributes: SOC

ANTH 74 - The Human Spectrum

Instructor: Dominy

Contemporary foraging peoples are often viewed as ecological relicts and therefore instructive models for understanding the selective pressures that gave rise to the human condition. The objective of this course is to critically evaluate this enduring concept by examining the spectrum of human interactions with tropical habitats. We will also evaluate the basis of recent popular trends - the paleo diet, raw foodism, barefoot running, parent-child co-sleeping - that emphasize the advantages of a "natural" pre-agricultural lifestyle.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ANTH 75 - Ecology, Culture, and Environmental Change

Anthropology's interest in the interactions of humans and their environments has been long-standing, especially in archaeology. In this seminar we will consider changing conceptual frameworks for understanding human-environmental interactions and long-standing debates about nature vs. culture, materialist vs. symbolic approaches, the development of cultural ecology, and the new "ecologies." We will draw on the research of archaeologists, biological and cultural anthropologists, geographers, and historians.

Degree Requirement Attributes: SOC

ANTH 76 - The Evolution of Upright Walking

This is an advanced course designed to explore in-depth both the historical and current understandings of human bipedalism. This course is reading-intensive, with an average of 5 primary journal papers assigned per meeting. We will investigate hypotheses for why bipedalism evolved, the form of locomotion bipedalism evolved from, and the fossil evidence for early hominin bipedality in the arthropithecines and australopithecines.

Degree Requirement Attributes: Dist:SCI

ANTH 77 - Origins of Inequality

Instructor: Casana

How did human societies develop such broad patterns of inequality, and what let us to accept the systems that create and reproduce inequity? Was there a time in human history when inequality did not exist or is it essential to the human condition? These questions are date back to the earliest writings on politics, history, and philosophy and remain central theoretical issues in anthropology today. This course will explore the theoretical expectations of multiple approaches to the origins of inequality, employing a comparative approach to investigations of archaeological evidence from difference societies around the world, and throughout our history as a species. Not open to students who have received credit for ANTH 057.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ANTH 78 - Senior Seminar: Ethics in Biological Anthropology

This upper-level course dives into the ethical issues facing biological anthropology today. This course is reading and writing intensive, and centers around respectful conversations in the classroom. Five early-career scholars will also visit the class to engage in conversation around these issues. Overall, this course explores the historical roots of contemporary ethical challenges, their current impacts, and the field's evolving visions of ethical futures.

Offered: Fall.

ANTH 85 - Reading Course

Students who would like to pursue intensive, supervised study in some particular aspect of anthropology may do so with the agreement of an appropriate advisor. The student and advisor will work out together a suitable topic, procedure, and product of the study.

At the discretion of the instructor, a student may opt to do additional work over two terms. In this arrangement, the student receives a grade of "ON" (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace the "ON" for ANTH-085 at the

end of the subsequent term at which time the coursework must be completed. Students are awarded one course credit for successful completion of this course, even in cases where the work extended across two terms.

Prerequisite: Written permission of the department faculty member who will be advising the student.

Offered: Fall, Spring, Summer, Winter.

ANTH 87 - Research Course

Students with an interest in research in anthropology and a particular problem they would like to investigate may do so with the agreement of an appropriate advisor. The student and advisor will work out together a suitable topic, procedure, and product of the study.

Prerequisite: Written permission of the department faculty member who will be advising the student.

Offered: Fall, Spring, Summer, Winter.

ANTH 88 - Anthropology Honors

Open only to honors seniors by arrangement with the Chair. Admission to the honors program shall be by formal written proposal only. Consult with Chair concerning the details.

Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for ANTH 088 and receive a grade of "ON" (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace the "ON" at the end of the subsequent term at which time the coursework must be completed.

Prerequisite: Written permission of the department faculty member who will be advising the student.

Offered: Fall, Spring, Summer, Winter.

Art History

Chair: Nicola (Nick) Camerlenghi

Professors: A. Cohen, M. K. Coffey, K. Hornstein;
Associate Professors: A. Hockley, N. M. Camerlenghi, S. L. Kim, C. Elias; Assistant Professors: E. A. Kassler-Taub, A. Teriba; Senior Lecturers: S. E. Kangas, K. O'Rourke;
Fellow: C. Gambetta,

Consult the Department Administrator for further information (art.history@dartmouth.edu)

To view Art History courses, click here.

Requirements for the Major

Twelve courses as follows:

Prerequisite: Two courses from ARTH 1, ARTH 2, ARTH 4 or ARTH 5

Requirements:

- One Studio Art course;
- Four Art History courses, each from a different area:
 - Pre-Modern (ancient and medieval art to 1400)
 - Early-Modern Europe (1400-1800)
 - Non-Western
 - Modern and Contemporary (1800 to the present);
- One advanced seminar in Art History (ARTH 80 through ARTH 83);
- Art History Culminating Experience (ARTH 89; fall term only);
- Three other Art History courses numbered 10 or higher except 89's, 91 or 92. (A Classical Studies course [CLST 20, CLST 21, CLST 22, CLST 24, CLST 25, or CLST 26] may be substituted for one of the three other Art History courses.)

N.B.: ARTH 1, ARTH 2, ARTH 4 and ARTH 5 may serve only as major prerequisite courses.

Students planning an Art History major must first complete a Major Worksheet (available outside the Department office or on our website), which needs to be completed and then signed by the Department Chair before it is submitted to the Department Administrator. Students formally elect the major by submitting a proposed plan of courses through DartWorks, which the Department Administrator will check against the submitted worksheet. The plan will be submitted to the Registrar once it is approved by the Department.

Requirements for the Modified Major

Students wishing to declare a modified major must submit a short description of the proposed modification and a completed Modified Major Worksheet (available outside the Department office) to the Chair. If the faculty approves the proposal, the worksheet, and rationale statement must be filed with the Department Administrator, and additionally you must email the rationale statement to the Registrar. The courses making up a modified major should constitute an intellectually coherent whole. The Department will consider proposals for modifying the Art History major only if they are presented before the end of the student's senior fall term. Students formally elect the modified major by submitting a proposed plan of courses through DartWorks, which the Department Administrator will check against the submitted worksheet. The plan will be submitted to the Registrar once it is approved by the Department.

Twelve courses as follows:

Prerequisite: Two courses from ARTH 1, ARTH 2, ARTH 4 or ARTH 5

Requirements:

- Three courses in three out of four categories:
 - Pre-Modern (ancient and medieval art to 1400)
 - Early-Modern Europe (1400-1800)
 - Non-Western
 - Modern and Contemporary (1800 to the present);
- One advanced seminar in Art History (ARTH 80 through ARTH 83);
- Art History Culminating Experience (ARTH 89; fall term only);
- One other Art History course numbered 10 or higher except 89's, 91 or 92.

N.B.: ARTH 1, ARTH 2, ARTH 4 and ARTH 5 may serve only as major prerequisite courses.

- Four courses, selected in consultation with the Art History advisor, will be taken in the secondary (modifying) department(s), with whatever prerequisites they require.

Another Major Modified with Art History

Prerequisite: One course: ARTH 1, ARTH 2, ARTH 4 or ARTH 5

Requirements: Four Art History courses selected in consultation with the advisor in the primary department.

Requirements for the Minor

Six courses as follows:

Prerequisite: One or two of ARTH 1, ARTH 2, ARTH 4 or ARTH 5

Requirements: Four courses, one in each of four categories:

- Pre-Modern (ancient and medieval art to 1400)
- Early-Modern Europe (1400-1800)
- Non-Western
- Modern and Contemporary (1800 to the present)

If only one prerequisite is taken, any additional Art History course may be taken as the sixth course. An Art History seminar (ARTH 80-ARTH 83) is not required, but is strongly encouraged. *N.B.: ARTH 1, ARTH 2, ARTH 4 and ARTH 5 may serve only as prerequisite courses.*

Students planning an Art History minor must complete a Minor Worksheet (available outside the Department office or on our website), which needs to be completed and then signed by the Chair and submitted to the Department Administrator. Students formally elect the minor by submitting a proposed plan of courses through DartWorks, which the Department Administrator will check against the submitted worksheet. The plan will be submitted to the Registrar once it is approved by the Department.

For more information about how to submit a plan through DartWorks, please consult the student guide located on the Registrar's website.

Minor track in East Asian Art History

This minor provides an introduction to the art, architecture, and visual cultures of East Asia.

Six courses as follows:

Requirements:

- One of the following pan-East Asian courses:
 - ARTH 38.01: Sacred Architecture of Asia
 - ARTH 38.03: East Meets West

Any five courses from the following list:

- ARTH 32.01: 2000 Years of Korean Painting
- ARTH 32.11: Korean Art
- ARTH 32.21: Sacred Art and Architecture of Japan
- ARTH 32.22: The Japanese Painting Tradition
- ARTH 38.02: Contemporary Art of Asia
- ARTH 62.20: Modern and Contemporary Korean Art
- ARTH 62.30: Japanese Prints
- ARTH 62.81: Women, Gender and Art in East Asia
- ARTH 82.01: Arts and Culture of Korea's Last Dynasty
- ARTH 82.02: The Camera in Nineteenth-Century Asia

Students are encouraged, but not required, to include one of two advanced seminars among the five courses they select to complete their minor:

- ARTH 82.01: Arts and Culture of Korea's Last Dynasty
- ARTH 82.02: The Camera in Nineteenth-Century Asia
- ARTH 82.03: Asian Art Herstory

Minor track in Architectural History and Urbanism

For students interested in the history and theory of architecture and urbanism across geographies and time periods.

Six courses as follows:

Requirements:

-
- Introductory survey
 - ARTH 4: Introduction to World Architecture
-
- Any five courses from the following list:
 - ARTH 17.01: Rome: The Eternal City
 - ARTH 17.02: Cities of the Biblical World, An Archaeological Approach
 - ARTH17.05: Castles, Cloisters, Cathedrals
 - ARTH 26.02: Foreign Study II
 - ARTH 27.01: The Ideal City
 - ARTH 28.09: Art on the Move: Renaissance Italy and the Islamic World
 - ARTH 38.01: Sacred Architecture of Asia
 - ARTH 47.02: Modern Architecture
 - ARTH 47.03: Contemporary Architecture
 - ARTH 47.04: Architecture and the Uncanny
 - ARTH 61.71: Italian Renaissance Architecture
 - ARTH 62.71: Islamic Architecture
 - ARTH 80.02: Advanced Seminar: Domes
- Students are encouraged, but not required, to take an advanced seminar focused on architecture such as: ARTH 80.02: Advanced Seminar: Domes
- Students are encouraged, but not required, to take SART 65: Architecture 1, though this course does not count toward the six courses for the ARTH minor.

Minor track in Global Modern Art History

This minor provides an introduction to the art, architecture, and visual cultures of global modernities in their historical, geographical, and theoretical dimensions.

Six courses as follows:

Requirements:

-
- One of the following survey courses:
 - ARTH 2: Introduction to the History of Art II
 - ARTH 5: Introduction to Contemporary Art
-

Four of the following courses, divided between at least three different geographic areas of focus (Europe, Americas, Asia):

- ARTH 28.05: Art & Society in the Age of the Rococo
- ARTH 28.06: European Art in the Age of Revolution (1750-1850)
- ARTH 31.02: Art and Industry: The Visual and Material Culture of South Asia, 1800 to present
- ARTH 40.01 American Art and Identity
- ARTH 40.02: The American Century: Modern Art in the United States
- ARTH 40.03: Twentieth Century Art from Latin America
- ARTH 40.04: Mexicanidad: Constructing and Dismantling Mexican National Identity
- ARTH 41.01: Modernism and Modernity: Art in late nineteenth-century France
- ARTH 41.02: Twentieth Century Art in Europe, 1900-1945
- ARTH 41.03: European Art 1750-1850
- ARTH 47.01: Building America: An Architectural and Social History
- ARTH 47.02: Modern Architecture
- ARTH 48.02: Histories of Photography
- ARTH 48.03: The Arts of War
- ARTH 48.04: Women in Art
- ARTH 48.05: Satire: Art, Politics & Critique
- ARTH 62.20: Modern and Contemporary Korean Art
- ARTH 62.30: Japanese Prints
- ARTH 62.81: Women, Gender and Art in East Asia
- ARTH 63.01: Mexican Muralism
- ARTH 63.12: When Media Were New
- ARTH 63.13: Bad Art!
- One advanced modern seminar in art history (in the range of ARTH 80 and higher) or ARTH 89 (Senior Seminar in Art Historical Theory and Method)

Students planning an Art History minor must complete the relevant Minor Worksheet (available outside the Department office or on our website), which needs to be completed and then signed by the Chair and submitted to the Department Administrator. Students formally elect the minor by submitting a proposed plan of courses through

DartWorks, which the Department Administrator will check against the submitted worksheet. The plan will be submitted to the Registrar once it is approved by the Department.

For more information about how to submit a plan through DartWorks, please consult the student guide located on the Registrar's website.

Advanced Placement

The Department does not award course credit to students who have taken the high school Advanced Placement course in Art History. However, an Art History major or minor who has achieved a grade of 5 in this course may substitute two appropriate mid-level Art History courses for the two introductory-level courses (ARTH 1, ARTH 2, ARTH 4 or ARTH 5) required as prerequisites for the major or minor. The substitute courses must be chosen in consultation with a faculty advisor.

Honors Program

To be eligible for the Honors Program, a student must have achieved by the end of the junior year a 3.2 general College average and a 3.4 average in all Art History courses. A candidate for admission to the Honors Program must, in either the spring preceding or in the fall of the senior year, consult with a potential faculty adviser and submit a written and in-person presentation to the whole Art History faculty of the proposed Honors project. Admission or non-admission to the Honors Program will subsequently be determined by a vote of the faculty. The Program will consist of an advanced project of study under ARTH 91-ARTH 92 (only one of which may be counted as part of the major, under "other"), taken during two consecutive terms in the senior year.

Students are strongly encouraged to initiate discussion with an appropriate faculty adviser as early as possible in the junior year.

The Art History Department oversees funds intended to underwrite research for honors projects in the Department. For information see the Department Administrator.

Foreign Study Program

In order that students may have an opportunity to study art history in direct contact with original works of art, the Department conducts a Foreign Study Program during the spring term of each academic year. Based in Rome, one of Europe's richest artistic centers, with a continuous evolution from antiquity to the present, the program examines the monuments of the city, their creators, their patrons, and their various audiences. This program is open to all students.

There are two prerequisites for the Art History FSP: Italian 1 (or its equivalent) and Art History 1. In addition, Art History 2 is highly recommended. While in Rome, students

are enrolled in ARTH 26.01 and ARTH 26.02 or ARTH 26.04 and ARTH 26.05 depending on the instructor (both of which may be counted toward the major and/or minor, but only one of which fulfills a departmental distributive), and ARTH 26.03, which is the equivalent of Italian 2. Interested students should contact Professors Hornstein or Camerlenghi as early as possible in their academic careers.

Transfer Credit

Transfer credits will be granted only to majors, modified majors, and minors in the Art History Department. Majors are limited to two transfer credits, only one of which can fulfill a departmental distributive requirement. Modified majors and minors are limited to one transfer credit, which cannot fulfill a departmental distributive requirement. The Art History Department does not grant transfer credit for courses on topics related to those we teach. Applications for transfer credits must meet all of the requirements stipulated by the Registrar. Before requesting transfer credit, students must submit a copy of the syllabus of the course they intend to take to the Chair of the Art History Department.

ARTH - Art History Courses

To view Art History requirements, click here.

ARTH 1 - Bodies and Buildings: Introduction to the History of Art in the Ancient World and the Middle Ages

Instructor: Camerlenghi, Kangas

A study of basic problems and new directions in the understanding of architecture, sculpture, and painting in Europe and the Middle East from the earliest times to the end of the Middle Ages. The course introduces the student to the language of art criticism and method, as well as the relationships of the arts to each other and to their historical contexts. Special attention is given to the human body and visual narrative.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 2 - Introduction to the History of Art II

A survey of art and architecture from 1500 to the present. The course introduces the student to the basic terminology of the arts, the language of stylistic criticism, and the relationship of the arts to each other and to their historical

background. ARTH 1 is not prerequisite to ARTH 2. Priority for enrollment is given to first- and second-year students.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 4 - Introduction to World Architecture

Instructor: Camerlenghi; Teriba

A comparative study of several architectural styles past and present, Western and Non-Western. Consideration will be given to a variety of building types ranging from the monumental to the residential.

Degree Requirement Attributes: ART

ARTH 5 - Introduction to Contemporary Art

Instructor: Coffey, Elias

This course introduces students to contemporary art practices from the late 1960s up to the present. It is focused thematically around key concepts such as: the body, identity, postmodernism, institutional critique, site-specificity, memory, ecology, and ethics, among others. Class periods will be organized around key-works/figures with attention paid to understanding not only different trends and currents in global contemporary art practice, but also the different kinds of scholarship we can use to unpack, situate, or contest its claims. Moving across a wide range of media and techniques/formats of display, this course will offer students critical tools for analyzing a range of visual media including: painting, video, film, photography, performance, and land art.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 7 - Art History First Year Seminars

Instructor: Cohen, O'Rourke

Consult Special Listings

Offered: Spring, Winter.

ARTH 10.01 - The Art of Ancient Egypt and the Ancient Near East

Instructor: Kangas

A study of architecture, sculpture, and painting in the Near East and Egypt from prehistory through approximately the first millennium B.C.E. The course aims at a parallel treatment of the Egyptian and various Near Eastern civilizations, especially those that developed in or around modern Turkey, Israel, and Iraq. Special attention will be paid to the cultural contacts among different ancient centers at key moments in history, as conjured up by individual monuments.

May be taken in partial fulfillment of the major in Classical Archaeology and the major in Classical Studies.

Cross-Listed as: MES 16.41

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 10.02 - Art and Archaeology of Israel

This course will examine the archeology of Israel from prehistory through the early Roman period, with emphasis on cultural interactions and their material manifestations. Ancient Israel was a crossroads where many different cultures met. Home to Canaanites and Israelites, Israel successively experienced the cultural and artistic impact of Egyptians, Assyrians, Greeks, and Romans, who either invaded this region or came into contact with it through a variety of more peaceful processes.

Cross-Listed as: JWST 41

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 10.03 - Art in Egypt

Instructor: Kangas

Mummies, pyramids, curses and death, these are some of the images and associations that one conjures up with the mention of ancient Egypt today. Ancient Egyptian civilization is an endlessly fascinating field for intellectual inquiry and debate, the subject of spectacular museum displays, as well as a source of inspiration for various reenactments in literature and film. The modern attraction for Egypt has its origins in Napoleon's invasion of the country in 1798, and later, and more profoundly, in the 1922 discovery of the tomb of king Tutankhamen in the Valley of the Kings. However, already in the ancient world, the Greeks and Romans expressed fascination for the monuments and the civilization of Egypt, primarily as they experienced its material culture through travel and other cultural exchanges. In this course we will study key works of art and architecture in ancient Egypt as well as explore some important instances in the subsequent reception of Egyptian monuments, history, and mythology.

Cross-Listed as: MES 16.42

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 11.01 - Art in Ancient Greece: Temples, Gods, Heroes

Instructor: Cohen

This course treats chronologically the history of Greek art from its beginnings in the Bronze Age to the end of the fifth century B.C.E. The principal monuments of architecture, sculpture, and painting will be examined in terms of style, theme, and context. We will explore how Greek art came to serve Greek society, while some attention will also be given to the ways in which the classical tradition has persistently served later cultures.

May be taken in partial fulfillment of the major in Classical Languages and Literatures, the major in Classical Archaeology, and the major in Classical Studies.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 11.02 - Alexander to Cleopatra: Art in an Unsettled World

Instructor: Cohen

This course examines the principal works of architecture, sculpture, and painting in the Greek world, from the fourth through the first centuries BCE., a period of significant political and art-historical change and innovation. In the reign of Alexander the Great, Greek culture expanded beyond its borders to encompass Egypt and Western Asia. Particular emphasis will be given to important discoveries associated with the court of Alexander, his father Philip II, and some of his best-known successors, including the last one: Cleopatra of Egypt.

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Open to all classes.

May be taken in partial fulfillment of the major in Classical Languages and Literatures, the major in Classical Archaeology, and the major in Classical Studies.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 12.01 - Roman Art

Instructor: Kangas

This course explores key works of architecture, sculpture, painting, and decorative arts in the Roman world from the sixth century B.C.E. through the third century C.E. Such issues as the influence of the Etruscan and Greek traditions, stylistic change and its determinants, and the role of art in Roman society will be considered in relation to both the great public monuments of Republican and Imperial Rome and works made for private individuals.

Gothic Art and Architecture"

Offered: Winter.

ARTH 12.02 - Roman Architecture

Architecture played a central role in ancient Rome's ascent to imperial world power. Buildings like bathhouses, aqueducts and villas built around the Mediterranean basin helped spread Roman culture across both time and space; temples and shrines assured that Romans everywhere could pray to a common roster of gods; likewise, roads connected the cosmopolitan cities of the empire. In this class, we will look at the variety of built types, construction materials and building techniques that the Romans adopted from about 500 BC to 400 AD.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 13 - Early Christian Art

A study of painting, sculpture, architecture, and the minor arts in the Mediterranean from the third through seventh centuries. Emphasis will be placed on the role of art in late antique society, especially in the process of transformation from the classical to the medieval world.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 13.01 - Early Medieval Art

Though the 8th-11th centuries are often erroneously known as the "Dark Ages," this course will explore the vibrant life in the emerging northern Europe of Charlemagne and William the Conqueror. Evolving methods of societal organization and identity through religion, nationhood and the cult of personality will be examined through the art and architecture of the period.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 14 - Byzantine Art

A study of painting, sculpture, architecture, and the minor arts of Byzantium from the period of Iconoclasm to the fall of Constantinople. Emphasis will be placed on the use of art during this period to express the beliefs and goals of the church and the state to satisfy private devotional needs.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 15.01 - Gothic Art and Architecture

Characterized by rising urbanism, a growing middle class and developed political states, the Gothic period combines elements of medieval and early modern worlds. This course will explore the influence of new patrons and institutions on the era's art, the art's reflection of the period's religious and political reality, and the popularity of new, more secular subject matter. The works covered will encompass both massive public projects, such as Chartres Cathedral, and the personal, private taste found on ivory mirror backs.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 17.01 - Rome: The Eternal City

Instructor: Camerlenghi

No city in the world has an urban fabric so rich in historical layers as Rome. This course surveys the topography and urbanism of Rome from its origins to the present. While the immediate goal will be to study the city of Rome, the larger goal will be to provide a conceptual framework with which to consider the power and function of cities.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 17.02 - Cities of the Biblical World, An Archaeological Approach

The city has always been the center for social and economic activity in all complex societies, as well as a locus for innovation and change. This is no less true for the ancient cities of the biblical world, whose rich, multi-cultural environments not only shaped but also often transformed the identities of their inhabitants. The subject of this course will be the investigation of those key places where Jewish and later Christian identity was formulated and where their early history unfolded. We'll explore and pay special attention to those cosmopolitan centers where Jews interacted with other ancient peoples of the Middle East and eastern Mediterranean.

Cross-Listed as: JWST 41.03

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 17.05 - Castles, Cloisters, Cathedrals

Instructor: Camerlenghi

This course explores the origins and development of architecture during the Middle Ages (roughly from the fourth to the fifteenth century). While generally arranged chronologically, some classes will focus on themes such as the role of architects and patrons, the influence of pilgrims and monks as well as the cross-cultural impact of Islamic and Byzantine architecture on the buildings of medieval Western Europe. Not only will we explore the people and institutions that commissioned the great buildings of the Middle Ages, but also we will explore how these structures were built. Finally, as an instance of experiential learning, we will take some initial steps toward reconstructing a medieval building on the Dartmouth campus in order to understand the fundamental principles informing medieval buildings.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 17.06 - The Arts of the Middle Ages

Instructor: Camerlenghi

This course explores the origins and development of medieval art and architecture across Western Europe. While arranged as a chronological survey, the lectures will focus on the role of artists, architects and patrons, the influence of pilgrimage and monasticism, and the cross-cultural impact of Islamic and Byzantine influences on the arts of medieval Europe.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 18.01 - Ancient Art and Myth

Instructor: Cohen

Rich and suspenseful, ancient mythology holds a central place in our imagination. One thinks of myths as a series of definitive plots, but art reveals all sorts of interpretive disagreements. Ancient art did not just illustrate mythology but participated in its construction. This course considers the notions of myth and visual story-telling from a theoretical perspective; briefly explores mythological narrative in the ancient Near East and Egypt; and focuses on myth-making in Greece and Rome.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 19.01 - Fragments of Medieval Art: The Dartmouth Rose Window

Instructor: Camerlenghi

This course capitalizes on the extraordinary presence of a medieval stone rose window at the Hood, which has been in storage since the 1970s. The course culminates in an exhibition about the rose window scheduled to open at the Hood during Winter 2025. Students will gain experience in the multi-faceted aspects of organizing an exhibition of architectural fragments, including object selection, research using primary and secondary sources, exhibition design, catalog writing, public-facing aspects like wall labels, and even hi-tech material analysis and digital scanning of the stone objects themselves. In terms of the rose window itself, students will learn about its meaning, materials, and its function in the Middle Ages, when many such features were added to buildings.

Degree Requirement Attributes: Dist:ART

ARTH 20.01 - Michelangelo

Michelangelo Buonarroti, called "Il Divino" in his own lifetime, was the dominant practitioner of painting, sculpture and architecture in sixteenth-century Italy. This course will focus on Michelangelo's most famous creations in the light of recent restorations and new scholarship. Finally, we will look at the intersection of his visual works with his biography: how these works relate to Michelangelo's creation of his own image, chiefly through the works of his biographers Vasari and Condivi.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 20.02 - Lifelikeness, and Artifice, the High Renaissance and Mannerism

A study of the major monuments of painting and sculpture in Italy during the sixteenth century. The course surveys the idealism of the High Renaissance (beginning with Leonardo da Vinci, Michelangelo, and Giorgione) and then traces the development of Mannerism and Maniera in the work of such artists as Pontormo, Bronzino, and Tintoretto. The art of the reformers at the end of the century is also considered, especially as it looks forward to the Baroque.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 20.03 - Southern Baroque Art

A survey of painting and sculpture from 1600 to 1700. This course focuses upon the art of Caravaggio and his followers in Italy and Spain; the Carracci and the development of seventeenth century classicism; Bernini and the High Baroque; and the art of French visitors to Italy. Special emphasis is given to the relation that the painting and sculpture of this time has to seventeenth century poetry, theatre, science and the aims of the reformed Catholic Church.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 20.04 - Faith and Empire: Art in the Early Modern World

When the Iberian mariner Ferdinand Magellan landed in the Philippines, he brought with him two Flemish sculptures. Presented to the recently converted governor of the island of Cebu, these sculptures both centered Christian worship in the South China Sea and staked a claim for Spanish colonization. This course examines the role of art and objects, like Magellan's gifts, that stand at the intersection of religion and colonial ambitions across the early modern world (ca. 1550-1750). Set against the social, political, and devotional contexts of the period, this course explores the transcultural development of the arts across media. In this discussion-based seminar, students will engage with readings that explore early modern art in Europe and its empires. Working directly with the collections of the Hood Museum and other campus resources, students will also learn object-based approaches to art history. Particular attention will be given to material culture, sculpture, decorative arts, and printmaking. Additionally, students will encounter theoretical discourses on exchange, hybridity, hierarchies, and collecting. This seminar will highlight the Dutch Republic, the Habsburg Empire, and their colonies in the Americas, Asia, and Africa. Each week of the seminar will examine themes including: the global circulation of images; the development of national identities; trade in materials; objects as agents of conversion; and conceptions of race. Finally, this course will examine the place of religion and imperialism in the development of collections and museums. As a final project, students will organize an exhibition at the Hood Museum of Art related to the course topic.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 21.01 - Northern Renaissance Art

A survey of the major monuments of painting, sculpture, and the graphic arts in the Low Countries, Germany, and France, from the late fourteenth century through the Reformation. Content as well as style is examined in the light of its relation to social transformation and the cultural evolution of the period. Emphasis is placed on the work of such significant personalities as the van Eycks, van der Weyden, Bosch, Bruegel, Grünewald, Dürer, and Holbein.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 21.02 - Northern Baroque Art

Painting in Flanders and Holland from 1600 to 1700. This course considers the naturalistic tradition from Caravaggio's northern followers to the Haarlem School of Hals; the art of Rembrandt; the classical genre of Vermeer and the Delft School; Rubens and the Flemish High Baroque. The growth of specialized genres of painting and the differing aesthetic aims of Dutch and Flemish painters are viewed against the background of the Protestant reformation and the rise of a mercantile society.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 21.03 - Rembrandt

Rembrandt van Rijn was Holland's preeminent artist in the seventeenth century. This course considers Rembrandt's extraordinary achievements as an etcher, focusing especially on the artist's highly imaginative and experimental use of the etching medium, the broad range of subjects and expressive power of the prints, as well as the functions the prints served in Rembrandt's time. All our classes will make use of the Hood Museum's superb collection of Rembrandt prints, thus allowing students to do first-hand study of the artist's original works.

ARTH 22.01 - Velazquez and the Spanish Baroque

Diego Velazquez, sometimes called the prince of painters, was Spain's preeminent artist in the seventeenth century. This course considers his achievements as a painter, his aspirations as a courtier and gentleman, and his remarkably privileged association with his patron, King Philip IV. The class will study in depth many of Velazquez's key works and examine how he challenged previous notions about the nature of representation, and simultaneously sought to demonstrate the "nobility" of painting.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 26.01 - FSP: The History of Art in Rome

Instructor: Hornstein

The History of Art in Rome. This course entails the on-site examination of mosaics, paintings and sculptures of particular art historical interest. The approach will be thematic, with emphasis falling on major issues within the History of Art. These may include narrative, iconography, social history, gender, perception, patronage, and formal analysis.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

ARTH 26.02 - FSP: Early Modern Architecture in Rome

Instructor: Hornstein

Architecture and Urbanism in Rome. Rome offers a broad array of building types, architectural styles and urban spaces. This course introduces students to the principles of architectural analysis, while simultaneously plotting out a history of Roman architecture and urbanism. The course will begin with the study of ancient architecture. It will, however, focus on the evolution of architectural practices and forms during the late Middle Ages, Renaissance, and Baroque.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 26.03 - FSP: The Language and Culture of Rome

Instructor: Hornstein

The Language and Culture of Rome. This course aims at expanding students' knowledge of Italian language and culture. It begins with a review of basic verb forms and moves on to explore new tenses and moods. Throughout, students engage in practical exercises geared to improve their oral and written expression, as well as enhance their vocabularies. All classes will be conducted in Italian. Note that this course may not be counted as part of the Art History major. Not open to students who have received credit for ITAL 002.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

ARTH 26.04 - FSP: The Architecture and Urbanism of Rome

No site offers the same enduring importance for Western history and culture as the city of Rome. As a secular and spiritual capital, it bears evidence to three millennia of human ambitions and evolving patterns of social and political organization. Its topography is a vast archive, which we will engage through lectures, discussions, group projects, movies and by immersing ourselves into the city itself. This course surveys the topography and urbanism of Rome from its origins to the present. While the immediate goal will be to study the city, the larger goal will be to provide a conceptual framework with which to consider the power and function of cities—one of humanity's most important inventions. We will ponder such essential questions as: why and how did cities like Rome arise and change over centuries? What social, cultural, topographic forces push and pull at a city's built fabric? How were individual structures, public spaces, and neighborhoods built to respond to such forces?

ARTH 26.05 - FSP: Early Modern Art in Rome

This course examines the visual arts of Rome in the Early Modern period, a period marked by a revived interest in

naturalism. This revival was inspired by Classical Antiquity and had wide-ranging implications. We shall address the social and historical context of artworks in an exciting time that also saw the invention of printing, a change in the status of the artist, and a shift in perception on the part of the beholder. Among the related themes to be studied are materials and techniques; style and influence; religious and mythological iconography; and patronage and collecting.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 27.01 - The Ideal City

Instructor: Kassler-Taub

This course explores the Renaissance phenomenon of the "ideal city" – its origins, successes, and spectacular failures. During the fifteenth and sixteenth centuries, major artists and architects like Leonardo da Vinci participated in a radical experiment that transformed how urban spaces were designed, represented, and built. The Renaissance city was reinvented as a utopia, featuring straight processional avenues, a rigid street plan, and monumental sculptures inserted into public squares like props on a stage. We will consider a wide range of case studies, from fictional cities imagined in the pages of sketchbooks to new cities and towns that were built from the ground up. Throughout, we will question how architects exploited the basic infrastructure of daily life – roads, gates, walls, squares, and even sewage systems – to perfect their environments. How were those principles used to promote civic virtue and good governance or to reinforce social hierarchies and absolutist rule? We will make frequent visits to the Rauner Special Collections Library to work directly with rare books. The course requires no prior knowledge of art history, architecture, or the Renaissance.

Degree Requirement Attributes: Dist:ART

ARTH 27.02 - Living Stone: Sculpture in Early Modern Italy

Instructor: Kassler-Taub

Early modern sculptors like Michelangelo and Bernini pushed the boundaries of their craft, blurring the line between illusion and reality. Through bold experiments, marble was transformed into flesh, bronze into fluid fabric, and stucco into weightless clouds. The labor of chiseling, casting, modeling, and carving became a testing ground for larger debates in the arts. What is the relationship between the 'dirty work' of sculpture and artistic inspiration? Can an artist truly imitate a living, breathing body? This course will consider major changes in how sculpture was designed, experienced, and understood between the years 1400 and 1800. Our focus will be on artists and workshops in Italy with comparisons to other geographies. Topics to be considered include: originality and the sculptural copy; urban sculpture and fountains; the monumental and the

miniature; gender, sexuality, and the sculpted body; materials and materiality; and theories of enlivenment.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 27.03 - Building Boom: Architecture and Urbanism in Early Modern Italy

Instructor: Kassler-Taub

Across early modern Italy, architects and engineers broke ground on construction projects that transformed cities like Rome, Florence, Venice, and Naples into bustling urban centers. New building technologies and design innovations yielded monumental palaces, soaring devotional spaces, and vast streets and squares. This building boom was fueled by the consolidation of political and economic power in the hands of ambitious patrons for whom architecture was a vehicle of self-fashioning. This course explores Italian architecture and urbanism between the fifteenth through eighteenth centuries, with a focus on the socio-political and cultural dynamics that shaped the theory and practice of building. Subjects to be considered include treatises and the architectural book, building as propaganda, villa culture, and designs for the stage. The course will include frequent visits to the Hood Museum of Art and the Rauner Special Collections Library.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.01 - The Global Renaissance

Instructor: Kassler-Taub

The movement to globalize the field of art history has dramatically changed how we understand the phenomenon traditionally called “the Renaissance.” This course gives students an opportunity to question how the European canon of Renaissance ‘masterworks’ was constructed, and what it overlooks. By expanding beyond the Italian centers of Florence, Rome, and Venice, we will take a global approach to the visual and architectural culture of the fifteenth and sixteenth centuries. Each week will consider a region typically marginalized in Renaissance studies – including the Americas, Africa, and Asia – to explore how trends in art making and architectural design evolved across distant geographies. How do the dominant narratives of exploration, discovery, and invention intersect with the histories of colonialism, slavery, and economic upheaval? How did diverse local practices, identities, and voices leave their mark on the period? Throughout, we will consider topics such as: the exchange of models, techniques, and materials between foreign workshops; theories of circulation and exchange; and the relationship between so-called artistic ‘centers’ and their peripheries.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

ARTH 28.03 - Vision and Reality: The Art of Northern Europe in the Fifteenth Century

The fifteenth century in northern Europe is an amalgam of influences that form our idea of the modern. The concerns and styles of the Late Gothic are present, mixing with new forms of technology, such as printing or the perfection of oil painting techniques. The weakened grip of the Church contributes to the emerging emphasis on the individual that characterizes Early Modern art. The fifteenth century sees the rise of secular art, the concept of objective realism, the development of panel painting, the commercialization of prints, and the beginnings of independent portraiture. My goal is to give you the knowledge and skills that will enable you to understand and appreciate the nuances and complexity in fifteenth-century artworks wherever you encounter them. In addition to the mastery of scholarly materials, you will work on reading visual culture, practicing your writing skills and perfecting your oral communication. Our focus will be on reception, context and invention.

Degree Requirement Attributes: Dist:ART

ARTH 28.04 - Reform and Response in Sixteenth-century Northern Europe

In 1517 Martin Luther nailed the 95 Theses to the door of the castle chapel in Wittenberg. That act was the culmination of decades of frustration with an established Church that, to many believers, had lost its way. What followed was a European debate for the very souls of men. The Reformation brought into question the assumptions by which most Europeans had lived—that the Church’s teachings, personal good actions, and Christ’s sacrifice could insure their salvation. Using the printing press and artworks, both sides presented their positions in propagandistic language that could be both bombastic and subtle. We will look at this central event in the shaping of free will, and how it played out in the art created in Northern Europe at that time.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.05 - Art & Society in the Age of the Rococo

Instructor: O'Rourke

This course explores the transformative period in European art and culture between 1700 and 1800, when the playful decadence of the Rococo gave way to the morally purified art of Neoclassicism. We will study the “high arts” of painting, sculpture & architecture in the context of an expanded realm of visual culture, including interior design and decorative objects, clothing and fashion, hairstyles and luxury goods, the art market and the print trade. We will investigate the political and social uses of art at the time paying special attention to alternative discourses of power spoken through fashion, gesture and influence. We will examine court culture, the new public sphere, the growth of the middle class, the Grand Tour, the expanded

role of women in the 18th century as patrons and artists, and the socio-political changes leading up to the French Revolution. Artists include Hogarth, Watteau, Boucher, Kauffman, Reynolds, Adam, Greuze, among others.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.06 - European Art in the Age of Revolution (1750-1850)

Instructor: Hornstein

Visual arts were transformed in the second half of the eighteenth and first half of the nineteenth century by dramatic upheavals in social, political and cultural life. In addition to taking account of stylistic movements such as Rococo, Neo-classicism and Romanticism, we will devote our attention to relationships between artistic and social change, political and institutional pressures upon artists, changing ideas of art's purpose and audience, and artists' shift to direct engagement with modern life.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.07 - Outsiders: Artists and Art in Text and Film

Instructor: O'Rourke

In our modern age, art and artists have been considered as different, outside of the mainstream, inspired by genius or madness. Was this always true and how did it come about? This course will explore writings and films on artists and the art world, looking at literature, biography, manifestos, criticism, and popular culture. We will study the genre of the exhibition (solo show and/or blockbuster) to identify how the museum or gallery is involved in this narrative of individual genius. From Pliny to Warhol and beyond, we will examine our continuing notions of what art is and has been and how art and artists have been written about for centuries.

Cross-Listed as: COLT 61.01

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.08 - Crisis and Invention: Early Modern Art in Italy

Instructor: Kassler-Taub

In workshops and studios across early modern Italy, artists confronted a rapidly changing world. With a focus on the years between 1400 and 1700, this introductory course explores the dynamics that gave the arts new urgency. Using a diversity of objects as a guide – from viral prints to colossal sculptures – we will consider the role of art in shaping and responding to political, cultural, and social crises. Throughout, we will question how figures like Leonardo da Vinci, Michelangelo, Titian, Caravaggio, and Bernini manipulated materials and theorized artistic

invention. The course includes frequent visits to the Hood Museum of Art.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.09 - Mobility in the Early Modern Mediterranean

Instructor: Kassler-Taub

In early modernity, innovations in art and architecture moved freely between the Italian and Islamic worlds, creating a shared language that crossed cultural and geographical boundaries in the Mediterranean. This introductory course will focus on exchanges between urban centers such as Venice, Florence, and Pisa and the Mamluk Sultanate, the Safavid Empire, and the Ottoman Empire in the fifteenth and sixteenth centuries. We will consider a wide range of case studies, from traveling artists and architects in foreign courts to the appropriation of objects, monuments, and histories. Throughout, we will question how transcultural mobility developed against a backdrop of military strife, political rivalry, and religious tension. The course includes frequent visits to the Hood Museum of Art.

Cross-Listed as: MES 18.02

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 28.10 - Fashion in Art: Dress, Identity and Power

Instructor: O'Rourke

This course will examine clothing and fashion in art over the centuries to explore overt and hidden messages regarding power, gender, and status contained within costume over time and still today. We will study the external, clothed body as represented in high and popular art in relation to a performance of the self and the unconscious categorizations of gendered, sexed, and classed positions. We will investigate how clothing and ornament can reinforce or challenge gender norms, ideologies of power, and insider/outsider status. The course will focus on a broad time frame and explore different media and modes of image distribution.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

ARTH 29.06 - Slow Looking Intensive in Paris Art Museums

Instructor: Hornstein

This innovative course immerses students in three weeks of "slow looking" at works of art in Paris museums, whose galleries of painting, sculpture, works on paper, and decorative arts will serve as our primary classrooms.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 31.01 - Arts of South Asia

This course introduces 2000 years of the art of the Indian subcontinent, from the Indus Valley in the 2nd century BCE, and moves chronologically to the present day. Topics cover the sculpture and architecture of Buddhism and Hinduism, painting and architecture of Islamic courts, colonial and national period visual culture, and post-partition Indian and Pakistani modern and contemporary art. In this course, you will be taught to look at, think about, and engage in critical discussions of the visual arts of South Asia. Our class lectures and discussions will focus on the formal and material aspects of architecture, epigraphy, sculpture, painting, calligraphy, photography, and print, as well as the historical contexts in which these works were made and understood.

Cross-Listed as: ASCL 52.03

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 31.02 - Art and Industry: The Visual and Material Culture of South Asia, 1800 to present

This course examines the relationship between art and industry through the visual and material culture of South Asia from 1800 to the present. The first third of the course will focus on the colonial discourse of art and economy, and the fear that industrial production would destroy indigenous craft and design. This instigated a colonial system of education, and the creation of museums, that taught both the European 'fine arts' of painting and sculpture, and the Indian 'applied arts' of craft and design in practice and in objects. The second third of the course will attend to specific media as physical and intellectual conduits in the economy. We will discuss the explosive effect of the technologies of print and photography in colonial control and nationalist agitation. We will also examine the materiality of textiles, clay, wood, metal, plastic, paper, and food in their production, exhibition display, and cultural and political context. The last third of the course will focus on modern artists' considerations of art and craft, the formation of national museums, and the contemporary art market. In parallel to the attention to visual and material objects, we will read selections from primary sources on art and industry, such as George C. Birdwood's *Industrial Arts of India* (1880), *The Journal of Indian Art and Industry*, Mahatma Gandhi's *Hind Swaraj* (1909), and K. G. Subrahmanyam's *Eclecticism* (1992).

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

ARTH 31.03 - Arts of Islam

This course is intended to introduce the arts of Islam during a period of dynamic cultural and political change in the Islamic world. It attempts to instill in the student a

broad awareness of the diversity and the main achievements of Islamic architecture from the beginnings of Islam to the present day. It begins with a basic outline of Islamic material culture in its early and 'Classical' periods, from ca. 650 through to the art of the nation-state in the twentieth century. This period saw the initial formation of an Arab empire stretching from the Atlantic to the Indian Ocean, a decline in centralized authority, and the rise to political prominence of various North African, Iberian, Iranian, Central Asian, and South Asian dynasties. These political developments are reflected in the increasingly diverse and dynamic nature of Islamic material culture over this period. The topics have been chosen to stress a dialectic between continuity with earlier artistic traditions and the dynamics of transformation and innovation that led to the creation of distinctive regional and transregional visual vocabularies.

Cross-Listed as: MES 18.04

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 31.04 - Collecting Islamic Art

Recent interest in the historiography of Islamic art has been on scholarship, museums, and collecting from the mid-nineteenth through the mid-twentieth century, the formative period for this field. Exploring a diverse range of collecting practices, this course aims to elaborate on key questions that inform our understanding of Islamic art and its peoples - How and why did these objects enter museums and private collections? What circumstances of this particular period engendered such an interest in Islamic art? What kind and quality of objects entered collections? Who were some of the individuals who played a role in the collecting, exhibiting, and framing Islamic art in the Western world? In short, what or who were these early tastemakers, and what taste did they mold? The approach to examining collections, collecting patterns, and special exhibitions will be comparative, drawing on collecting practices in both modern museums and precolonial collections in Europe and within the Muslim world.

Cross-Listed as: MES 18.05

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 31.05 - Art of the Book: Y1K-Y2K

This class is designed to introduce students to the book as an object and a technology. Some themes include the history of reading, the impact of printed books, increased literacy and censorship, encyclopedias, the transmission of books as fragments, collecting practices and libraries, and feminist book history. The class takes a comprehensive historical and global approach, exploring the artistic and cultural developments in Europe, the Americas, Africa, and Asia from the medieval period to the contemporary era. Throughout the course, you will examine religious and secular artifacts encompassing an extensive range of

imperial and market-produced manuscripts, intricately calligraphed and illustrated books, and other three-dimensional objects. Over the semester, you will have the advantage of working with many “real” examples of books, manuscript fragments, paintings, and objects from Dartmouth’s Rauner Special Collections Library. The course also consists of workshops on producing the book’s physical materials: paper making, quills, pigment and ink recipes, printing, and bookbinding. Studying the processes of book creation will provide you with a deeper understanding of how books have influenced culture and how cultural developments have shaped their evolution. Class meetings will be held in various formats, combining lectures and class discussions with hands-on workshops and studying rare books.

Degree Requirement Attributes: Dist:ART

ARTH 32.01 - Two Thousand Years of Korean Painting

Instructor: Kim

This course explores Korea’s long painting tradition from the earliest petroglyphs to the 21st century. We will look at Goguryeo mural paintings, Goryeo Buddhist Paintings, and Joseon landscapes, portraits, genre, and folk paintings, as well as Korea’s modern and contemporary art, including North Korean propaganda posters. We will ask questions like: How have Korean paintings reflected changes in religious beliefs, political ideology, and material culture? What quintessential aesthetic values (if any) are found in Korean painting? How much does contemporary “global” Korean painting contain the legacy of the Korean painting tradition?

No previous knowledge of Korean art is required.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 32.11 - Introduction to Korean Art

Instructor: Kim

This course will introduce the arts and culture of Korea from the prehistoric period through the twentieth century. Significant examples of painting, ceramics, sculpture, and architecture will be closely examined in their political, social, and cultural contexts. We will explore how East Asian motifs were incorporated into traditional Korean art. We will see how Korea struggled to find its artistic identity within the international context during the 20th century.

Cross-Listed as: ASCL 62.07

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 32.21 - Sacred Art and Architecture of Japan

Instructor: Hockley

This course examines Shinto and Buddhist architectural, sculptural, painting and print traditions from the prehistoric to the modern era. The primary emphasis will be on the relationship of these arts to their doctrinal sources and the

ritual, social, and political contexts in which they were created and utilized.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 32.22 - The Japanese Painting Tradition

Instructor: Hockley

This course provides a comprehensive introduction to the Japanese painting tradition. Surveying a broad range of themes, formats, and styles and exploring the relationship between indigenous sensibilities and the traditions Japanese artists borrowed from continental Asia and the West, it defines the unique aesthetic experience offered by Japanese sacred and secular painting. Its focus on patronage and studio practice emphasizes the social, political, and cultural processes that underscored important developments in the painting tradition.

ARTH 33.01 - African Art (Survey)

This course is designed to introduce undergraduate students to African art in the twentieth century. It charts the development and dimensions of artistic expressions and cultural production in Africa from the colonial period to the contemporary. By looking at various case studies comparatively, the course explores the intersection of developments in artistic practice and identity, and cultural production, and sweeping changes in the political, social and economic spheres in Africa. It considers the effects of colonialism, postcolonial conditions, neocolonialism, economic liberalism, and globalization on cultural production and artistic practice. Following a chronological format, it will attempt to cover the different sub-regions of the continent but draws substantial amount of examples from sub-Saharan Africa.

ARTH 34.01 - Arts of Tibet: Sacred Abode of the Himalayas

This course surveys the art and culture of Tibet from the time of the introduction of Buddhism in the seventh century to the modern period. Traditionally understood as the divine abode of Avalokitesvara, the bodhisattva who embodies the compassion of all buddha in Buddhist cosmology, Tibet was also fantasized as the immortal realm of “Shangri-la” by western interpreters. In this course, we will begin by examining the imagination and representation of Tibet and its culture in modern western discourses, and then shift the focus to the development of artistic forms of Tibet in the context of Tibet’s history and religious movements, from ancient times to the present.

Cross-Listed as: ASCL 52.02

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 34.02 - Chinese Painting

This course surveys the Chinese painting tradition, from the second half of the first millennium BCE to the present. Following a dynastic timeline, the course covers important painting genres including funerary, religious, figures and portraiture, landscape, ink, bird-and-flower, and oil painting and considers them in the context of the shifting historical and cultural context of China. Key themes of the course include the relationship between the art of painting and religious beliefs, political ideology, self-expression, premodern painting theories and criticism, and encounters between the East and the West.

Cross-Listed as: ASCL 62.03

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 38.01 - Sacred Architecture of Asia

Instructor: Hockley

This course provides an introduction to the sacred architecture of Asia and the Middle East through a series of case studies that include Buddhist monasteries, Hindu temples, Mosques, Daoist and Confucian temples, Shinto shrines, funerary architecture, and the sacred dimensions of political authority as manifested in palaces, city plans, and mausolea. The pan-Asiatic nature and long historical development of Buddhism, Hinduism, and Islam affords opportunities to examine national and sectarian adaptations of architectural practices. This course has no prerequisites and assumes no prior experience with Asian religions or architectural studies.

Cross-Listed as: ASCL 70.01

Offered: Spring.

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

ARTH 38.02 - Contemporary Arts of Asia

This course examines the contemporary art of Asia from a variety of historical, cultural, and critical perspectives. Lectures, readings and discussions range across broad themes such as identity, globalization, trans-nationalism, and feminism and include examination of both traditional and new media. Case studies examine the work of both well-established and emerging young artists. This course is designed to equip students with the critical skills necessary to appreciate, discuss, and analyze contemporary Asian art.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 38.03 - East Meets West

Instructor: Kim

This class explores the interaction between the cultures of East Asia and the West from as early as c. 200 BCE to the early 20th century. The course consists largely of four themes: the Silk Road and the Arts, the Pottery Stories, the

Jesuits and the Arts, and Asian Arts in Europe. The class starts with the Silk Road, the world's first great superhighway that from ancient times linked East Asia to the Mediterranean World across Central Asia, and examines how ideas, art, and religions traveled and were transformed through their journey. The second theme, the Porcelain stories, conveys how aesthetics, technology, designs and motifs were transmitted from East to West and vice versa. We will ask questions, such as: Why was porcelain so desirable? Where did porcelain rank in the hierarchy of art forms and materials in Asia and Europe? How much did a piece of porcelain cost at any moment in time? Why did Japan and Korea have "the Pottery War" and what was the significance of that war in East Asia (and Europe)? The third theme, the Jesuits and the Arts, looks at the hybrid blend of two or more traditions and the artistic productions that arose from those blends. We also will examine together the paintings of Asian and European artists, the paintings of European artists on Asian themes with a traditional Asian medium, and the work of Asian painters' on European subject matter with a European medium. The last theme, Asian art in Europe, scrutinizes the Western reception of Asian subjects, motifs, designs, and aesthetic values, and their appropriation for artistic productions. European interpretation (or imitation) of Chinese arts, so called *Chinoiserie*, and the Japanese influence on European art, known as *Japonism*, will be closely examined. Through lectures, readings, and films, we will explore the historical and artistic links between East and West and some selected art associated with those routes. This course requires no previous experience, but is intended for those who like interdisciplinary approaches to art and culture. No previous coursework is required.

Cross-Listed as: ASCL 70.02

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 38.04 - Food & Art: A Global History

Instructor: Camerlenghi

"This is a global history of food's relation to art. We will examine food and art across multiple geographies and times, and methodologies. Topics will include cookbooks and menus; utensils and ceramics; plastics and lunchboxes; migrations of plants, dishes, and cooks; religious fasts and feasts; gardens, still-lives, the appetite; Pop art of food; activist food art; food labels and ephemera; *terroir* and the taste of place."

Degree Requirement Attributes: Dist:INT or ART

ARTH 39.01 - Asian American Art and Architecture

Instructor: Eom

This course introduces students to the politics of Asian American identity and visual culture in the twentieth century. With an overview of social and legal contexts of

Asian America, from immigration policies and residential exclusion to Japanese American internment to struggles over citizenship rights, the course explores what it meant to be Asian American and how Asian American art and architecture have emerged at specific historical moments. By discussing case studies including Japanese American internment camps, Chinatowns, the Vietnam Veterans Memorial, and works of artists and architects such as David Hyun, Yong Soon Min, Maya Lin, Poy Gum Lee, Isamu Noguchi, Yun Gee, Yasuo Kuniyoshi, and Mine Okubo, students are expected to examine how Asian American and diasporic artists strove to define their identity and imagine their place in the material world.

Cross-Listed as: ASCL 70.24

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 40.01 - American Art and Identity

Instructor: Coffey

Where is America? What makes America distinct? How have images of America helped to define and challenge our ideas about who “we” are? In this course we study how paintings, photographs, monuments, and other forms of visual culture have shaped the America we know today. We will trace the emergence of U.S.-American art and identity from the point of Encounter, through Independence, and up to the Centennial Celebrations of Columbus’ “discovery of America” in 1893 through discreet comparisons with developments in Mexico, and Canada. The course is organized chronologically around a series of themes that foreground the intersection between class, race, gender, and nation-building. Students will learn how to identify and analyze the key genres and styles of 19th century American art, including portraiture, photography, ledger drawing, monuments, and landscape, history, and genre painting. They will consider how character and class are constructed through the portrait; how the claims of settler nationalism are naturalized through landscape; how anxieties about racial emancipation, immigration, and gender advancement are managed through images of the “people;” how war both consolidated and radically challenged prevailing conceptions of American identity; and how minoritized populations challenged the dominant construction of “America” throughout this period. There are no pre-requisites for this course. It has been designed as an introduction to the field of American art history as well as to the discipline of Art History more generally. First year students and non-majors are welcome.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 40.02 - The American Century: Modern Art in the United States

Instructor: Coffey

What made the 20th century the “American Century”? In this course we will examine how painting, sculpture, photography, public murals, and monuments contributed to the political and economic rise and cultural dominance of the United States in the 20th century. Find out: how artists from the US and Mexico contributed to the search for the “Americanness” of American art; how African-Americans, Native Americans, Latino/as, women, and queer Americans have contributed to and challenged the image of America they created; how artists participated in the Cold War; and in turn, how the Cultural Cold War spawned a radical counter-culture and a new “culture war” over identity in the 1990s. In this course, students will develop a basic understanding of the development of U.S. American art—the major figures, movements, and themes—over the course of the 20th century; learn how to visually analyze and write about works of art executed in different media and for different viewing contexts; learn how to locate a specific artist’s handling of a subject, theme, or motif within a particular socio-political context and be able to compare and contrast different artistic expressions of a subject, theme, or motif across time, develop a more nuanced understanding of social movements in the 20th century United States, develop a greater appreciation for the contributions of minoritized groups to American art, culture, and history; question received notions of “American” culture and identity; and engage in productive discussion about the strategic value, situated meaning, and intersectionality of nation, class, race, ethnicity, gender, sexuality, and identity. This course has no pre-requisites and requires no prior knowledge of Art History.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 40.03 - Art and Politics in Modern Latin America

Instructor: Coffey

This course offers beginning, intermediate, and advanced students an opportunity to explore works of art produced by artists living in Latin and Latin@ America during the 20th and 21st centuries. We will approach this topic through case studies of some of the major figures and movements in Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru, Puerto Rico, Uruguay, and the U. S. We will examine how national identity, racial formation, class difference, gender inequality, political struggle, and state violence have been addressed by artists from the region and in diaspora. And we will consider the ways that identity and culture are informed by and intervene in the political and economic conditions of these countries. Some themes we will consider are: modernization and class politics, Indigenism and racialization/racism, development/underdevelopment, authoritarianism and state-violence, diaspora and migration, transnationalism and the politics of museum exhibitions, contemporary human rights and social justice movements. Students will have opportunities to develop their own areas of research

and to expand the course content in ways that speak to their interests and experiences. This course adheres to the principles of student-centered course design. We will therefore ground our study in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through peer-to-peer learning collectives. No prior knowledge is required for this course. Not open to students who have received credit for LACS 078

Cross-Listed as: LACS 30.02

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 40.04 - Mexicanidad: Race/Raza, (trans)Nation, and Mexican(o/a/x) Cultural Identity

Instructor: Coffey

Since the Mexican Revolution (1910-17), artists, intellectuals, and state-actors have endeavored to define and re-define Mexican national identity, or what is known as *Mexicanidad*. From the 1920s and 30s, when an emphasis was placed on Mexico's rural and indigenous populations to the 1940s and 50s, when greater attention was given to Mexican modernization, through the years after 1968, when artists and intellectuals endeavored to reveal the repressive nature of *Mexicanidad* and its role in propagandizing an authoritarian state and ruling party, to the 1990s when any consensus about the nation dissolved under the pressures of neoliberalism, state and narco-violence, free trade and labor migrations, and the rise of new social movements from Zapatismo, queer, feminist, and environmental activism. In this course we will place artists like Jose Clemente Orozco and Frida Kahlo within a broader visual cultural context that includes not only mural art and painting, but also sculpture, architecture, printmaking, photography, installation, film, and performance. We will cover art produced in Mexico and "Greater Mexico" from the turn of the 20th century through the "boom" years of the 1990s, with a focus on issues of race, class, gender, and sexuality throughout. The course is organized around themes that brings the past into conversation with contemporary events. Students will learn about the history of Mexican art and develop an understanding of how visual culture participates in the construction of national identity and racial formation as well as how art can critique and queer those constructions. Through weekly discussions, activities and group work, they will enhance skills in the visual analysis of modern and contemporary art and refine their ability to write effectively. This course has no pre-requisites and requires no prior knowledge of Art History or Mexican art and history. Not open to students who have received credit for LACS 30.09

Cross-Listed as: LACS 20.03

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 40.05 - Print the Revolution: Latinx Art and Activism

Instructor: Coffey

This class offers beginning, intermediate, and advanced students an overview of activist print culture produced by Latinx artists from the mid-1960s to the present. We will focus on the political *and* aesthetic characteristics of Latinx print culture through object-based study of posters, zines, and prints associated with both community print collectives and fine art print ateliers. Class will meet frequently at the library and Hood Museum of Art to explore print materials in Dartmouth's collections and to take advantage of *Printing the Revolution! The Rise and Impact of Chicano Graphics, 1965 to Now*, an exhibition at the Hood Museum of Art. Students will engage in hands-on activities at the Book Arts Workshop to produce political posters and zines of their own. In addition to asking "what is Latinx art?" and critically exploring attempts to define, represent, and market the category, we will consider Mexican and Latin American Pop Art antecedents for the aesthetics of Chicano and Puerto Rican Graphic Arts of the 1970s, the role of Queer networks, feminist and punk zines, and prints made by print collectives, including Self-Help Graphics, the Dominican York Print Collective, Justseeds, and Dignidad Rebelde, among others. In addition to the communities and themes identified here, students will have opportunities to identify themes and/or Latinx communities/histories that they want to explore through their individual and group projects and to propose acquisitions of print materials to expand Dartmouth's collections accordingly. Finally, the class features scholarship by and opportunities to meet and learn from some of the leading Latinx scholars and artists working today. The course adheres to the principles of student-centered design. We will therefore ground our learning in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through peer-to-peer learning collectives. No prior knowledge is required for this course.

Cross-Listed as: LACS 20.17 LATS 012

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 41.01 - Modernism and Modernity: Art in late nineteenth-century France

Instructor: Hornstein

From 1848 to 1914, French art and the modern city of Paris dominated the international art scene. This course explores the radical visual culture of the period in painting, sculpture, prints and photography, from the realism of Courbet and Manet to the abstraction of Seurat and Cézanne. We will focus on how new technologies, political and social revolutions, and exhibition culture influenced

the work of Cassatt, Degas, Monet, Renoir, Van Gogh and Rodin, among others.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 41.02 - Twentieth Century Art in Europe, 1900-1945

Instructor: Hornstein

The rapid changes of the first half of the twentieth century inspired artistic avant-gardes in France, Germany, Italy and Russia. We will examine “avant-garde” artistic practice as a cultural phenomenon, studying individual artists and their associated movements (Cubism, Futurism, Constructivism, Dad, Surrealism) through themes such as artistic responses to mass culture; new forms of technology; representations of sexual, racial, and class identity; and the relationship between art, nationalism, war and revolution.

Cross-Listed as: Formerly ARTH 16.22

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 41.03 - European Art 1750-1850

European culture was transformed during the period 1750-1850. The absolutist monarchy established by Louis XIV would end with the traumatic rupture of the French Revolution. Napoleon redrew the map of Europe. The aristocracies that had ruled the West for a millennium, withered as the bourgeoisie and working classes struggled for control. The optimism of the Enlightenment slowly soured into the brooding inwardness of Romantic melancholia. The rise of mass industrial production and consumption would be accompanied by waves of technological and social change that irrevocably altered daily life. European powers pursued global dominance through colonial expansion with renewed vigor and brutality. This course examines these epochal changes through the lens of European cultural production, covering key artistic movements such as the Rococo, Neoclassicism, Romanticism, and Realism. We will closely analyze major works of art and visual culture alongside primary, historical texts of the period. These will be supplemented with recent scholarship that will help situate the works under investigation within the rich and complex social and intellectual milieu in which they were produced.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 41.04 - European Art: 1850-1900

This course will survey the history of European art the second half of the nineteenth century in a variety of media: painting, sculpture, print media, architecture and design. This is a rich and fascinating period of art-making as well as cultural and technological transformation \u2015a period during which political instability, industrialization, colonialism, and the growth of popular culture had an

enormous impact on the production, style, and presentation of art. Old systems of patronage and institutional control over artists dissolved, leaving them to experiment with how to give form to “modernity,” and how to address a widening public audience for their art. Lectures and readings will shift between broad themes in 19th-century art coupled with in-depth examination of singular works, the goal being to strike a balance between close attention to art’s formal means and an account of what its chosen subject matter may have meant, to the artists themselves and to their public.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 42.01 - Unmaking History: Contemporary Art in the Middle East

Instructor: Elias

This course focuses primarily on the work of contemporary artists who make work in or about the so-called Middle East. It includes recent works by artists from nations as diverse as Algeria, Iran, Israel, Lebanon, Morocco, Syria, Turkey and the UAE. One of the main objectives of the course is to look at art practices that attempt to deepen our understanding of the varied cultures, ethnicities and societies that are found in this part of the world. The geographic focus of the course—mostly the Muslim nations of the Arabian peninsula and North Africa—is not meant to perpetuate the assumptions about this region as a monolithic geopolitical entity, nor to blindly label its production according to existing ethnic, religious or national categories. Against media stereotypes of the region, the artists studied in this course have made work that function as a critical platform for rethinking traditional identity formations and extending the space of cultural encounter across borders (territorial, political, linguistic). In many cases these artists may not be living and working in their country of birth but their ethnicity, religion or citizenship continues to inform both their own sense of identity and the terms of their art practice. Some of the topics to be discussed include: artistic responses to the Arab-Israeli conflict, representations of everyday life in times of war, the movement and obstruction of people, goods and information across borders, the rise of new art markets in the Middle East, the politics of gender and sexuality in the Arab world, and the use of archival documents to rethink the meaning of evidence, truth and testimony.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 42.02 - Post-War Art from the Middle East: The Case of the Lebanese Civil War

What is the function of art after a long and devastating conflict like the Lebanese Civil War (1975-1990)? When cities are destroyed and people are displaced, radical ruptures occur at the physical level but also at the level of people’s understanding of their own history and identity. Much like Adorno’s questioning of the possibility of

poetry after Auschwitz, Lina Majdalani and Rabih Mroue have put in question what art could represent after the catastrophic event. These two artists investigate through their art the work of memory, the representation of the body, and the possibility of dialogue through image and performance.

Cross-Listed as: MES 12.16

Degree Requirement Attributes: Dist: ART, INT; WCult: NWC

ARTH 42.03 - Contemporary Design: Theory and Practice

Instructor: Elias

This course surveys theoretical frameworks, historical movements, and social currents that inform present-day design practices. Interdisciplinary in its approach, the class will examine case studies drawn from the visual arts, graphic design, architecture, industrial design, and fashion. Students will gain insights into the evolution of design principles that have guided design philosophy and practice since the late 19th century. At the same time, the course places emphasis on contemporary innovations in design that run parallel or counter to the dominant narratives that have shaped the field. While the course focuses on real world applications of design thinking it also looks to speculative and critical design methodologies that challenge the assumptions and preconceptions of the present. These methodologies look beyond a functional instrumentalism to consider design scenarios based on longer and shorter timescales than regular product lifecycles and geared toward “users” who may exist at the margins of the social order. Accordingly, the assigned readings will encompass a diverse array of disciplines, including design philosophy, futurology, political theory, the philosophy of technology, and science fiction. The course includes units on Modernism, Postmodernism, Deconstruction, Afrofuturism, Feminism, Biodesign and Social Justice.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

ARTH 43.01 - Feminist and Queer Video Art: "I'm asking – does it exist? What is it? Whom is it for?"

John Perreault, the first openly gay art critic at the Village Voice, published the phrase “I’m asking – does it exist? What is it? Whom is it for?” as the subtitle of an article on "Gay Art" for Artforum in 1980. Expanding upon Perreault’s nuanced consideration of how art works accumulate identities and address particular audiences, this undergraduate course will explore feminist and queer moving image-making practices in the United States between the 1950s-1990s. While eschewing a strictly chronological approach, we will consider art practices in relation to specific historical thresholds, from the

intensification of nonviolent direct action in the 1950s and 1960s, to the Stonewall rebellions of 1969, to the emergence of AIDS activism in the late 1980s and 1990s. We will consider the term video expansively, inclusive of TV art, installation, and video’s dialogue with film, holography, and print publications. This course leaves open what feminist and queer art practices look like and perform, and what methodologies might be most useful in writing about them. However, the course aims to challenge the ways in which art historical narratives, including alternative ones, have eclipsed the role of artists of color. Students will be required to reflect upon video footage and on readings in a series of short papers and assignments. Shorter videos will be screened in class, but some weeks require an extra screening during the X-hour session.

Cross-Listed as: FILM 41.22 WGSS 66.22

ARTH 47.01 - Building America: An Architectural and Social History

This course draws upon recent scholarship in anthropology, archaeology, material culture, social history and architectural history in its review of five centuries of American architecture. Course lectures not only emphasize America's principal architects and their designs, but also summarize the social and cultural forces that shaped the country's built landscape.

Cross-Listed as: HIST 034

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 47.02 - Modern Architecture

Architectural historians disagree about the origins of the modern era. For many, “modern” suggests principally the built works of the twentieth century. Others find the great projects of the nineteenth-century industrial revolution a more suitable place to begin. Still others—as will we—push the beginnings of “modern” architectural thought and practice back to the late eighteenth century. In this way we place architectural transformation in the context of the great changes taking place in the political, artistic, social and intellectual life of the period. This course approaches architecture as a cultural product and investigates the relationship between buildings, the ideas embodied in buildings and the cultures that designed them. We will chart the history of modern design from the Age of Enlightenment to the present.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 47.03 - Contemporary Architecture

A survey of the history of architecture, around the world, from 1970 to the present. Lectures track architectural movements from the end of Late Modernism in the 1970s to the computer-driven designs currently under construction. We will pay close attention to the changing technologies and cultural values that have shaped the last thirty years of architectural design.

Degree Requirement Attributes: Dist:ART

ARTH 47.04 - Architecture and the Uncanny

Instructor: Teriba

Cities all over the world and in different eras have become participants and arenas in creating urban spectacles. Often such activities consist of processions involving masquerades, mobile floats, musicians decked in elaborate attire and playing instruments – commemorating the dead, the living, royalties and politicians; to name a few examples. This course will study how certain case-studies — ranging from New Orleans to Lagos in Southwest Nigeria — demonstrate how architectural facades, urban spaces as well as certain ceremonies activate an uncanny experience, which may even echo Karl Trahdorff’s theory of the Gesamtkunstwerk (“total work of art”).

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 47.05 - A Mirror Image: Self, Place & Home in Contemporary Architecture

Instructor: Teriba

One could imagine that in the 1970s, the architectural movement known as the International Style looked back at the twentieth century with glee, surveying its spoils. It was after all, a style of architecture that held the century in thrall for almost 50 years; determining the built forms for much of the world in steel, glass and concrete. Le Corbusier for instance, likened architecture to a machine with parts that could be erected and function anywhere. Yet voices arose to articulate local architectural responses to such a paradigm, where the interrelationship between self, place, identity and home needed to be articulated in built form. The phrase that became the rallying cry for such a movement was “Critical Regionalism” and this course analyzes how many architectural projects in Asia, Africa, Europe and the Americas embodied an approach to a more humane architecture.

Degree Requirement Attributes: Dist:ART

ARTH 47.06 - Modernity’s Global Story of Architecture

Instructor: Teriba

While many of the ideas that gave rise to Modernity originated in the Enlightenment, accounts of Modernity took an acute turn at the end of the nineteenth century, following the Industrial Revolution. Architects such as Adolf Loos and theorists like F.T Marinetti rejected historical architectural forms in favor of those that spoke of the new technological age. Antonio Gaudi and others created an ornate architecture known as Modernista. In other parts of the world, Modernity involved former slaves recasting Classical, Renaissance and Baroque architecture in their own form of modern architecture. This class

explores how Modernity assumes many guises throughout the world when narrated through the architecture different peoples created.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 48.02 - Histories of Photography

This course introduces students to the history of photography from its beginnings in the 1830s to the present day. In addition to studying key photographers and pivotal moments within the medium’s development as an art form, we also examine the ways that photography’s status as a seemingly transparent form of documentary knowledge has shaped our lived experience. Seminal theoretical texts will introduce students to the complex and rewarding task of visually analyzing photographs.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 48.03 - The Arts of War

Walt Whitman said of the American Civil War: “the real war will never get in the books.” This course will raise core questions about how war is remembered and represented through text, performance, and visual culture. Our questions will be anchored in concrete case studies but will also raise far-ranging philosophical, ethical, and historical questions that examine instances of war in relation to the aesthetics of war.

Cross-Listed as: THEA 10.24

Degree Requirement Attributes: Dist:INT or ART

ARTH 48.04 - Women in Art

This course will explore the complex and varied roles of women in the arts: as artists, patrons, “muses,” and cultural critics. We will examine the structural conditions of art making in the academy and the studio, the market and the exhibition. We will investigate gendered notions of genius, creativity and originality, including the status of women artists as “exceptional.” Looking also at the female nude in Western art and feminist art in post-modernism, we will analyze the roles that femininity and masculinity play in modernism. With a focus mostly on the 18th-20th c., major figures include Artemisia Gentileschi and Judith Leyster, Mme de Pompadour, Elisabeth Vigée-LeBrun, Mary Cassatt, Berthe Morisot, Frida Kahlo, Barbara Kruger and Cindy Sherman, among others.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 48.05 - Satire: Art, Politics & Critique

Instructor: O’Rourke

Satire has been used since antiquity as a powerful form of political, social and cultural critique. With humor, sarcasm, and often biting criticism, satire goes beyond pure comedy to speak with a moral voice. The targets of satire range from the world of fashion and the everyday to that of politics and high culture. We will examine case studies of

satirical production, from the 18th century through the late 20th century, from the darkly comic prints of Hogarth and Daumier, to the overtly humorous and/or subversive gestures of Duchamp and Dada, Warhol and Pop Art, to the satire of gender roles and modern capitalism in Postmodernism. We will pay particular attention to the role of satire in modern art as it employed irony, parody, ridicule and exaggeration to attack social mores, political figures and the art world status quo. We will also explore the use of satire in film and TV, from the darkly comic (Charlie Chaplin) to the ridiculous (Stephen Colbert). This course hopes to come to terms with the broad range and appeal of satire in the visual arts.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 48.06 - Borderlands Art & Theory

Instructor:

This seminar traces the developments of contemporary art practice in the U.S.-Mexico borderlands, and subsequently expands beyond this physical location to include artworks that reflect on living in between cultures, races, and languages. Students will develop a toolkit for analyzing the way borders shape culture and identity (race, gender, sexuality, class, religion, and ethnicity) in transnational points of contact. With an emphasis on printmaking, performance, photography, and film, the course will dwell on borders that respond to paradigms of fear and desire, contagion and containment, utopia and dystopia. Students will enhance their skills in visual analysis and writing, and refine their ability to conduct original research. No pre-requisites or prior knowledge of Art History and Latinx Studies is required for the course.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 48.07 - Michelangelo's Modernism

In 1837 Eugène Delacroix named Michelangelo Buonarroti the “father of modern art.” What led the great 19th century Romantic painter and critic to identify the Florentine sculptor, painter, architect, and poet as the origin of the modern school? Declared “divine,” during his lifetime, he has been celebrated as the *non plus ultra* of artistic genius, or vilified as the very epitome of artistic excess ever since. Enthusiasts and detractors alike have viewed Michelangelo as the model of the self-conscious artist. This course will trace ‘*il divino*’s’ role in the formation of the cult of the modern artist through examining artworks and texts ranging from the artist’s lifetime and afterlife in art, literature, and film. Beginning with the construction of Michelangelo’s persona by early biographers, we will consider why he came to embody the tension between the demands of tradition and innovation like no other artist. Each week we will closely investigate artworks in dialogue with primary sources in English translation. Secondary texts selected from the superb scholarly literature on Michelangelo and his afterlife will be used to supplement primary materials. Throughout the course we will consider

the *idea* of Michelangelo and the Michelangesque functioned through five centuries of cultural production.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 48.08 - The Photographic Medium

The invention of the photograph radically changed the way we experience the world. The selfie and Instagram are but two of the most recent ways in which photographic technology has become ubiquitous in our everyday lives. This course traces the evolution of the photograph from pre-photographic forms, such as the diorama to its current digital apotheosis. We will focus on how the medium evolved in concert with changing social conditions that shaped, and were shaped in turn, by its evolution. A wide range of practices will be considered, from documentary photographs to fine art. Major figures in photo history will be discussed alongside developments in photographic technology and their impact on photographic imagery in both fine art and visual culture more broadly (advertising, science, journalism). Throughout we will explore photography as a ‘thick’ medium, one inextricably bound up with social and theoretical concerns. Students will exit having a broad knowledge of the historical benchmarks and aesthetic theories of photography, as well as the ability to describe and analyze images in light of photographic technique.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 61.71 - Italian Renaissance Architecture

Instructor: Camerlenghi

This course focuses on buildings constructed in Italy between 1420 and 1580. During this time, the Italian peninsula was a hotbed of revolutionary ideas about how architecture could shape and be shaped by the human will. The Renaissance saw the emergence of a new type of architecture, which took its cue from the needs, activities, and aspirations of people who defined themselves as “modern.” The chronologically presented material is interspersed with classes dedicated to the broad themes of the course (humanism, the inspirational role of ancient and medieval buildings, living conditions and styles, the rising profession of the architect, etc.). Lectures and readings will focus on the major thinkers, designers, and patrons of the period as well as on the economic, political, and religious forces that were at play in the formation of such ambitious and beautiful buildings.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 62.20 - Modern and Contemporary Korean Art

Instructor: Kim

This course examines the art and culture of Korea from the late nineteenth century through the twentieth century. During this period Korea experienced the fall of its 500-year-long dynasty, annexation to Japan, the Korean war,

division into two Koreas, and internationalization/globalization. The class will explore how visual art, including paintings, photographs, posters, ceramics, and film, reflected and expressed the political, socio-economic, and cultural changes and concerns of each period, in both South and North Korea.

Cross-Listed as: ASCL 62.08

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 62.30 - Japanese Prints

Instructor: Hockley

A survey of the Japanese print tradition from its inception in the seventeenth century through modern prints in the early twentieth century, this course emphasizes the relationship between prints and the political, social, and cultural milieu in which they circulated. The curriculum includes applications of recent critiques and theoretical approaches from fields as diverse as sexuality and gender studies, mass culture and media studies, aesthetics of popular arts, and the sociology of consumption.

Cross-Listed as: ASCL 62.12

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 62.71 - Islamic Architecture

Instructor: Camerlenghi

This course examines the architecture of Islamic cultures from the seventh-century rise of the Umayyad dynasty to the modern centers of Dubai and Doha. By studying the historical contexts within which Islamic architecture developed, we will consider major themes, chronological developments and regional variations in both religious and secular architecture. Additionally, by examining instances of cross-cultural influence, we will explore pivotal interactions between Islamic and non-Islamic architectural traditions.

Cross-Listed as: MES 18.03

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 62.81 - Women, Gender, and Art in East Asia

Instructor: Kim

This course will focus on women as the subjects, the creators, and the patrons of art in China, Korea, and Japan from the 16th century to the present. It will be organized chronologically, culturally, and thematically. This will involve an exploration of powerful matrons of art and their aspirations, a historical survey of women artists and their artistic contributions, and an examination of the religious and secular images of women and its limitations. The course will also look at contemporary artists and investigate their artistic discourses, messages, and experimentations. Extensive attention will be given to the

creation, modification, and persistence of these images throughout history, due to various social, economical, psychological, and intellectual conditions. This course will develop students' thinking skills in the history of art and improve their ability to conduct research and communicate both orally and in writing within the discipline.

This course requires no previous coursework or experience, but is intended for those who like interdisciplinary approaches to art and culture.

Cross-Listed as: ASCL 62.13

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 62.91 - Art, Business, and Soft Power in Asia

Instructor: Kim

This class examines the intersection of art, business, and soft power through two key areas of inquiries. First, we explore how Asian art acquires both symbolic and economic value across various institutional contexts, including art fairs, museums, and commercial galleries. Through an analysis of pricing, authentication, interpretation, and marketing strategies, we will investigate how artistic value is created, negotiated, and sustained in these spaces.

Second, we examine the role of corporate sponsorship in the Asian and Asian-American arts. This includes analyzing how corporate funding influences artistic production, curatorial decisions, and public accessibility to art. We will also explore how businesses and governments leverage the arts as tools of soft power—engaging in nation branding and cultural diplomacy to project national identity, shape global perceptions, and assert cultural influence. Additionally, we will critically assess the ethical and political implications of corporate involvement in the visual arts, considering how financial interests shape artistic trends and determine which artists, styles, and movements gain prominence.

The course includes guest speakers from diverse fields, such as artists, curators, museum and gallery directors, and corporate professionals. An optional two-day field trip to New York offers students the opportunity to visit auction houses and commercial galleries specializing in Asian art and attend lectures by art management experts. ASCL will cover accommodation and transportation for the trip.

Cross-Listed as: ASCL 70.31

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ARTH 63.01 - Mexican Muralism

Instructor: Coffey

This survey course introduces students to Mexican muralism. Students will learn about the fresco technique and how to visually analyze a mural. We will consider the following themes: cultural nationalism; art and class politics; the legacy of muralism in the US; the ethics of aesthetic indigenism; and the gender politics of public art. Student projects will concentrate on Jose Clemente Orozco's mural at Dartmouth College.

Cross-Listed as: LACS 20.04

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 63.02 - Why Are Museums...?

Instructor: Coffey

This course offers both beginning, intermediate, and advanced students the opportunity to explore their questions about museums of all kinds. If you love, fear, hate, or feel indifferent about museums, this course will allow you to reflect upon and determine why you feel that way. We will situate the modern museum within the historical circumstances of its emergence. We will critically interrogate its practices and norms. And we will exercise agency as critical visitors and practitioners by re-mixing collections, rewriting labels, and generating lessons for the next iteration of the course. Throughout the term we will use the Hood Museum of Art's collections and exhibitions to make concrete our discussions and to speak with staff about how they put into practice contemporary demands to democratize and decolonize the museum.

While the Hood Museum of Art will provide a home-base for our study, the course covers museums of all kinds from Natural History and Universal Survey Museums to Heritage Sites and Memorials. Some of the themes we will explore include: collecting and identity; memory and witnessing; repatriation, restitution, and repair; accessibility and care; "white walling" and protest; Empire and decolonization; and the ethics of display. This course adheres to the principles of student-centered course design. We will therefore ground our study in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through student-centered learning activities.

Degree Requirement Attributes: Dist:ART

ARTH 63.03 - Key Words for Art History: Race

Instructor: Coffey

In 1975, the literary critic Raymond Williams published *Keywords*, a cultural history of essential terms for the critical study of art and culture. That small book, as influential as it has been, did not include an entry for "race," a term that now seems unavoidable for any study of culture if it is to have contemporary resonance. Since then, all manner of "keywords" anthologies have been published, and nearly all of them have some discussion of

the term "race." However, when Robert S. Nelson and Richard Schiff compiled both editions (1996/2003) of *Critical Terms for Art History*, the keyword "race" was not included even though related terms like "primitivism," "ritual," "fetish," or "identity," were. In this class we will explore the term "race" as it is used in art history and visual cultural studies. We will consider not only how "race" has been constructed, naturalized, or challenged in and through visual culture, but also different ways of understanding how it has been operationalized or retheorized by contemporary scholars. We will not take for granted that we know what "race" is, how it appears in art historical practice, or when it is a relevant term. Rather, we will focus on the manifold ways that we "talk about race" in Art History even when the word or idea is not explicitly invoked. We will work collectively to produce a self-published "Keywords" anthology on *Race in Art History*. Each student will identify a term, write a critical genealogy of the term as it has been used in the writing of art history, and provide an example from the history of art that helps to concretize their argument. Additionally, students, working in teams, will draft an "Introduction" to our volume that helps to motivate the project and situate each entry for readers. Throughout the term, we will explore the genre of the "keywords" volume for insight and guidance. After the term, those students who are most dedicated to the project will be hired as editorial assistants to help me shepherd the draft through the final stages of publication. Not open to students who have received credit for ARTH 83.07.

Degree Requirement Attributes: Dist:ART

ARTH 63.12 - When Media Were New

Instructor: Hornstein

This survey of different forms of modern reproductive visual media provides a historical perspective on contemporary habits of media consumption. In addition to focusing visual technologies that emerged over the past two hundred years (lithography, photography, film and video) we will also consider earlier developments such as printing cultures in early modern Europe to historicize the relationship between reproducibility, visual culture, and society.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 63.13 - Bad Art!

Instructor: Hornstein

What are the criteria for judging art's merits? Who gets to decide? This course examines the problem of aesthetic hierarchies in terms of the histories of their making and unmaking. How do they get constructed, defended, and toppled? What are the stakes of categorizing some forms of art making as outside of "good taste"? What does "high" art really mean? This class will survey key moments in modern art history that reveal charged instances where particular forms of art were deemed

beyond the pale or simply not art. What are the value judgments that take place in order for art to be deemed “bad” or “good”? We will examine these questions through the historical lens of the eighteenth to twentieth centuries, since this was a period that witnessed the democratization of art as we know it today. At the end of the course, we will reflect on the situation of contemporary art in light of the historical and theoretical questions that we have posed over the course of the term.

Topics to be considered: the history of art criticism, the fledgling power of the abstract entity called “the public” in terms of art’s reception; modern art and anti-aesthetic tendencies, the mundane and ugly as terms that modern artists elevated in order to distance themselves from middlebrow, bourgeois taste, and the predicament of discerning art’s value today.

Offered: Summer.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 63.23 - Global Contemporary Art

Instructor: Elias

This course examines the geographic and cultural reach of contemporary art as a global phenomenon. The early 1990s saw the proliferation of biennials, large-scale art exhibitions that showcase the work of artists from disparate parts of the world. This trend has been heralded as a diversification of the art world beyond traditional centers in Europe and the United States. We will consider transnational and translocal currents in contemporary art in relation to larger processes associated with economic globalization (the formation of global labor markets, multilateral trade agreements, and financial operations) and cultural globalization (the largescale transmission of artifacts, images and ideas across national borders). Close attention will also be paid to the ways in which diverse artistic practices and identity formations are made legible but are also sometimes mistranslated as they enter into global art world institutions. This course will also consider how contemporary artists picture or allegorize the particular sense of disjuncture associated with globalization in the 21st century.

Degree Requirement Attributes: Dist:ART; WCult:CI

ARTH 63.71 - Art & Money

Instructor: Elias

This course will cast a critical eye on the commercial mechanisms of the contemporary art world encompassing auction houses, private galleries, museums, art schools, art fairs, biennales and magazines. How is commercial value produced in the art market, and what does it have to do with the critical or symbolic value assigned to artworks in the art world more generally? In addressing this question we will examine the changing function of artistic production within a knowledge or experience-based

economy. At the same time, this course will also offer students a critical framework for analyzing the display, marketing and consumption of artworks in a global economy.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

ARTH 63.72 - Aesthetics of the Digital

Instructor: Elias

This course confronts one of the most urgent and elusive problems of our day: the relationship of aesthetics to the rise of digital media. Drawing on a range of critical texts and artistic practices, we will consider how fundamental aesthetic categories such as materiality and form are transformed through the radical shift from a work-oriented to a medium-oriented conception of art and reality. In broader terms, this module explores the rapidly mutable audio-visual environments/interfaces of the digital age and their impact on social relations and cultural production. We will also examine the tensions between intimacy and distance, distraction and attention, and passivity and participation that characterize image consumption within the routines of contemporary technological culture. Finally, this module offers a historical and political framework for understanding contemporary art’s seeming disavowal of the digital and the expanding non-stop processes of twenty-first-century capitalism that underpin it. At the same time, we will assess some of emancipatory possibilities opened by the accessibility and affordability of digital cameras, editing software and mobile devices. As well as making use of the interpretive methods of art history, this module will introduce students to tools drawn from social semiotics, media studies, anthropology, visual culture, cybernetics and design philosophy.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or ART

ARTH 63.73 - Art in the Age of Climate Change

Instructor: Elias

Since the advent of industrial capitalism, humans have released 555 petagrams of carbon dioxide into the atmosphere, increasing CO₂ concentrations to a level not seen for at least 800,000 years. The long-term consequences of these atmospheric changes remain unknown, but there is already strong evidence that the Earth is rapidly moving into a less biologically diverse, less forested, much warmer, and probably wetter and stormier state. Research on climate change points to a particular irony: human actions have unprecedented impact on the environment, but this produces effects that are increasingly out of human control. Inside that conundrum lies another. Scientists have certain strategies to address urgent environmental challenges, but what of the arts and the humanities? What can practitioners in these fields, in

dialogue with the sciences, offer in this moment of climatic disruption and political inaction? To what new modes of visualization does global warming give rise, and how do these aesthetic innovations allow us to live with and through environmental change? What ontological status can be assigned to various biological, geological, and meteorological 'actors' if human agency is no longer privileged?

In taking up these questions, this course recognizes that the manifold effects of climate change demand new structures of cross-disciplinary thinking and critical engagement. Accordingly, it draws on concepts and methods drawn from art history and critical theory as well as science and anthropology. As we will see, the field of contemporary art does not simply project forward to predicted catastrophic future scenarios. Rather, it foregrounds the unique capacities of humans to imagine scenarios or worlds that have not yet come into existence. What, in essence, can art help us imagine that science alone cannot? Through this line of enquiry, this course asks what it means to think through the possibilities and limits of our planet beyond a pessimistic orientation towards foreclosed futures.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 63.74 - Art and AI: Human Creativity in the Age of Machine Intelligence

Instructor: Elias

This course explores what it means to be human in the era of artificial intelligence. The theoretical framework of the course takes inspiration from the "uncanny valley," a concept in robotics and human-robot interaction that describes the sense of unease or discomfort people feel when they encounter an artificial entity that looks and acts almost, but not quite, human. Accordingly, we set out to examine how AI unsettles the boundaries between human and machinic models of intelligence. The course draws on critical debates in computer science, contemporary art, film, philosophy and technology studies. Some of the key questions that we will address include: How does AI reshape human models of cognition, creativity and intelligence? In what ways does the field of artistic production serve as a crucial Turing test for AI? As images become increasingly operational and less perceptible, how should human visual literacy evolve? Should we be taught to "read" operational images differently from traditional images? What might artist-led experiments with AI have to teach us about the epistemological and ethical challenges opened up by the rapid and unpredictable development of machine learning systems?

Degree Requirement Attributes: Dist:ART

ARTH 63.75 - Architecture in the Field: Observing, Recording, Knowing

Instructor: Gambetta

This course examines the observation and documentation of architecture, landscape, and urbanism, a practice that historians, architects, artists, anthropologists, and field scientists commonly refer to as "fieldwork." Students will learn about fieldwork histories, methods, and sites in tandem with their own firsthand observations: each week, students will conduct fieldwork in the Hanover area and learn about the ethical and political dilemmas posed by different fieldwork methods such as photography, descriptive writing, drawing, mapping, and ethnography.

Cross-Listed as: ANTH 50.59

Degree Requirement Attributes: Dist:ART

ARTH 80.01 - Ideals of Physical Beauty: Gender and the Body in Ancient Art

Instructor: Cohen

Since the foundation of Art History as a discipline, Greek art has been admired for its emphasis on physical beauty. Greek culture articulated criteria of beauty for both sexes and created mythological personas exemplifying those ideals. This seminar studies Greek views on beauty and ugliness, as well as the links between beauty and (im)morality. It focuses on how artists went about depicting physicality and explores the connection between perceived beauty and pictorial style, often in comparison with other Mediterranean cultures. Contemporary critical frameworks and theoretical approaches to gender and representation will guide class discussions.

Open to sophomores, juniors, and seniors with instructor's permission.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 80.02 - Advanced Seminar: Domes

Instructor: Camerlenghi

Domes have graced the skyline of human settlements for over three millennia. The seminar commences with a traditional typological survey of domes, progresses to explore the theoretical foundations that informed their construction, and concludes by examining the social, cultural, and religious factors favoring (or discouraging) their development and proliferation. We will focus especially, but not uniquely, on ancient and medieval domes. Historically, domes have covered a range of buildings: from kilns to tombs, from bell-towers to latrines; however, they most famously crowned places of worship, burial or power. We will ponder: What is a dome? Which qualities define their identities? How and why has the knowledge of dome construction been transferred across time and cultures? What are important methodological considerations to consider as we approach the study of domes?

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 81.02 - Advanced Seminar: History of Museums and Collecting

This course offers a close look at the history of museums and collecting from 16th century cabinets of curiosity to today's large public museums. Attention will be given to the early history of museums and their theoretical and philosophical foundations, the emergence and guiding principles of public, academic, and donor museums, and recent developments in the museum world and the world of collecting. The course will include visits to museums and collections in Boston and other locations in the New England area.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 81.03 - The Viral Image: Early Modern Prints

The technology of print transformed the early modern world. Distant places, people, and things were suddenly thrust into view, allowing the armchair traveler to hold the world in their hands. New ideas, made material in paper and ink, ricocheted across the globe. But print posed an existential problem: it called into question some of the most basic assumptions around images and image making that had long governed visual culture. How does reproducibility challenge authenticity? How are authorship and ownership defined? This advanced study interrogates the rise of printed images between 1500 and 1800 and its enduring impact on artistic and architectural culture. Special attention will be paid to major figures in the history of European printmaking, including Albrecht Durer, Rembrandt, and Giovanni Battista Piranesi.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 82.01 - Arts and Culture of Korea's Last Dynasty

Instructor: Kim

This course provides an introduction to the arts and culture of the Joseon dynasty (1392-1910), which was founded on Confucianism. We will examine Confucian philosophy and how Confucian ideas shaped the social hierarchy, gender roles, and aesthetic values through exploration of the architecture of royal palaces and aristocratic houses, paintings both sacred and secular, ceramics, textiles and other crafts. Use of colors, symbolic motifs, and stories in the arts and cultures will be investigated. Understanding Korea's final 500-year dynasty will deepen students' comprehension of contemporary Korean culture as it manifests the legacy of Joseon Korea.

Cross-Listed as: ASCL 80.03

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

ARTH 82.02 - The Camera in Nineteenth-Century Asia

Instructor: Hockley

This course examines the use of photography by colonial governments, anthropologists, commercial photographers, and tourists in nineteenth-century Asia. It also takes into account indigenous uses of photography that both conform with and react against Western uses of the medium. Consideration is also given to the diffusion of photographic images into other media including news publications, government documents, academic studies, travelogues, guidebooks, and museum displays.

Offered: Winter.

ARTH 82.03 - Asian Art Herstory: Gender, Culture, and Politics

Instructor: Kim

This course looks closely at women as subjects and creators in the realm of art from the pre-modern period to contemporary times in Asia. The class will initially examine how Confucian ideology defined the social roles and values of women and how women and their activities were depicted visually and confined architecturally. Then, through study of the global women's rights and feminist art movements in the context of world economic and political history, the class will scrutinize the rise of Asian "New Women" and "Modern Girls" (the Asian counterparts of American "flappers" and French *garçonnnes*) in the 1920s and 1930s, and look at individual and groups of women artists who expressed their social and political agendas through their art. Extensive attention will be given to the creation, modification, and persistence of certain images throughout history, in relation to various social, political, psychological, and intellectual conditions. The class will also see how modern women artists have developed new and diverse media, including textiles, films and photography, installation and performance, and other hybrid materials, in reaction to a long patriarchy in fine art, male-gazed artistic rendering, and traditional cultural and social norms.

This course does not require prior knowledge or experience in Asian history or languages, but it is designed for students interested in interdisciplinary approaches to art and culture. As a senior advanced seminar, it involves extensive reading, class discussions, and research presentations. The course is primarily offered to ARTH majors, who are expected to have a strong foundation in art history, though no prior knowledge of Asian history is necessary. It is also available to ASCL majors, who are not required to have taken an ARTH course but should demonstrate some pan-Asian expertise.

Cross-Listed as: ASCL 80.10

Degree Requirement Attributes: Dist:ART; WCult:NW

ARTH 83.02 - Contemporary Art: Disaster, War and the Ethics of Witnessing

This seminar focuses on the relationship between lens-based media and moments of catastrophe in order to think creatively about how both operate pictorially. What constitutes the category of catastrophe—as opposed to crisis, war, etc.—and how does that category structure but also exceed photographic representation? We will look at photographs and films that bear witness to massacres, genocides and terrorist attacks. Some of the case studies include Auschwitz, Hiroshima, Apartheid South Africa, the Vietnam War, the Palestinian Nakba, the Cambodian Genocide and the Lebanese Civil War. We will also look at the role images play in documenting more recent events such as the Gulf War, the 9/11 terrorist attacks in New York, the 2011 earthquake in Fukushima, the Syrian Civil War and the European migrant crisis. Readings will take us through photographic history, critical theory, and art history. Our study will conclude in considering how artist themselves have theorized the place and purpose of photography and film in historical catastrophes. Underlying the arc of our study are three interrelated categories of questions. These concern: 1) the relationship of aesthetics to ethics and politics; 2) the relationship of those models of visibility and visibility to subaltern ways of understanding history 3) the ways in which art relates to questions of alterity and agency, which is to say how art might *speak to* without *speaking for* the victims of catastrophe.

Degree Requirement Attributes: Dist:ART

ARTH 83.03 - Modern Art, Spectacle, and Strategies of Resistance

Instructor: Hornstein

In this seminar, we will take a historical and theoretical approach to understanding the diverse sets of strategies that artists have employed to disrupt, contest, playfully oppose, and ironically challenge power, broadly construed. We will focus on nineteenth and twentieth-century (mostly European) artists who were committed to producing critical or counter-discursive art in moments of political tribulation.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 83.05 - Advanced Seminar: Art and the Law

This Advanced Seminar addresses legal issues that pertain to the sale, acquisition, display, ownership, and destruction of works of art. The topic is framed around two related questions: How does the special status of art, as a privileged sphere of creative expression, grant it different treatment under the law? What are some of the exemptions, protections, or obligations that are accorded to art that are not extended to other forms of personal property? The first part of the course will focus on case studies in which legal questions are entangled with ethical and political concerns:

illicit international trade in looted art, repatriation claims, high-profile forgeries, and new guidelines for authentication. The second half looks at the legal framework that governs artists' rights (including resale royalties, copyright, and freedom of expression) as well as the rules that structure transactions in the primary (e.g. artist-dealer contracts and handshake agreements) and secondary art markets. We will also analyze problems related to the representation of artists' estates, the acquisition and de-accessioning of artworks by museums, and the tax codes associated with charitable contributions of works of art. Finally, the class considers how artists strategically make use of the unique affordances of the law and test what it is that artworks can do outside the circumscribed domain of the art world.

Degree Requirement Attributes: Dist:ART

ARTH 83.06 - Art and Life! Avant-garde techniques, 1890-1970

Instructor: Hornstein

For many artists in the late nineteenth and early-twentieth centuries, the relationship between everyday lived experience and artistic practice required urgent rethinking and rearrangement. In addition to objecting to the modern systematization of life, work, and love, artists bristled against the notion that art had become just another thing to be admired, collected, bought and sold. This course examines the histories, interventions, and aspirations of this particular thread of avant-garde practice. We will pay special attention to the interventions and ideas of women artists and artist collectives as they sought to challenge standards of bourgeois respectability and the status of the hallowed singular art object. We will attend to the powerful critiques they offered against the standardization of life under capitalism and in the art world; we will consider the politics of avant-gardism, both in terms of its negativity, its occasional alignment with war and fascism, and some of its patriarchal and imperialist tendencies. We will also consider its positive utopian aspects, including its cultivation of liberatory politics and the clearing of space for new patterns of thought aligned with practices of equality, peace, and new possibilities for art. In addition to studying the techniques of historical avant-gardes in a classical academic/art historical sense, the course asks students to adopt and/or imagine what it would mean to stake out an avant-garde position relative to their own embodied experience as students in the space of Dartmouth's campus. Active learning activities will include the writing, printing, and distribution of manifestos, group derives, and other psychogeographic, surrealist and Fluxus-inspired collective experiments. The course will culminate with the "reinvention" of one of Allan Kaprow's happenings, *Fluids* (1967) (pending Leslie Center Humanities Lab funding) in order to allow students to test out some of the theories we studied in class and

perhaps make necessary adjustments for the needs to the present.

Degree Requirement Attributes: Dist:ART; WCult:W

ARTH 83.07 - Key Words for Art History: Race

Instructor: Coffey

In 1975, the literary critic Raymond Williams published *Keywords*, a cultural history of essential terms for the critical study of art and culture. That small book, as influential as it has been, did not include an entry for “race,” a term that now seems unavoidable for any study of culture if it is to have contemporary resonance. Since then, all manner of “keywords” anthologies have been published, and nearly all of them have some discussion of the term “race.” However, when Robert S. Nelson and Richard Schiff compiled both editions (1996/2003) of *Critical Terms for Art History*, the keyword “race” was not included even though related terms like “primitivism,” “ritual,” “fetish,” or “identity,” were. In this class we will explore the term “race” as it is used in art history and visual cultural studies. We will consider not only how “race” has been constructed, naturalized, or challenged in and through visual culture, but also different ways of understanding how it has been operationalized or retheorized by contemporary scholars. We will not take for granted that we know what “race” is, how it appears in art historical practice, or when it is a relevant term. Rather, we will focus on the manifold ways that we “talk about race” in Art History even when the word or idea is not explicitly invoked. We will work collectively to produce a self-published “Keywords” anthology on *Race in Art History*. Each student will identify a term, write a critical genealogy of the term as it has been used in the writing of art history, and provide an example from the history of art that helps to concretize their argument. Additionally, students, working in teams, will draft an “Introduction” to our volume that helps to motivate the project and situate each entry for readers. Throughout the term, we will explore the genre of the “keywords” volume for insight and guidance. After the term, those students who are most dedicated to the project will be hired as editorial assistants to help me shepherd the draft through the final stages of publication.

Degree Requirement Attributes: Dist:ART

ARTH 89 - Independent Study

Independent Study is intended for advanced students who have demonstrated their ability to do independent research in art history and who wish to study some topic in greater depth than is possible in a regularly scheduled course or seminar. The Independent Study project should be preceded by at least one Art History course in an area related to the topic under consideration, and may even develop out of that course. A student interested in undertaking Independent Study must first submit a proposal to the faculty member with whom he or she wishes to study. Assuming agreement by that faculty

member, the proposal will then be reviewed by the entire Art History faculty. Ordinarily, this must be done in the term immediately preceding the term in which the Independent Study course will be taken. The Independent Study course cannot be used to fulfill any of the requirements of the Art History major or minor.

Offered: Fall, Spring, Summer, Winter.

ARTH 89.01 - Senior Seminar in Art Historical Theory and Method

Instructor: Elias

This seminar, the Department of Art History’s “culminating experience,” helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

Degree Requirement Attributes: Dist:ART

ARTH 89.02 - Senior Seminar in Art Historical Theory and Method

Instructor: Hornstein

This seminar, the Department of Art History’s “culminating experience,” helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

ARTH 89.03 - Senior Seminar in Art Historical Theory and Method

Instructor: Coffey

This seminar, the Department of Art History’s “culminating experience,” helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

Degree Requirement Attributes: Dist:ART

ARTH 89.04 - Senior Seminar in Art Historical Theory and Method

Instructor: Cohen

This seminar, the Department of Art History's "culminating experience," helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

Degree Requirement Attributes: Dist:ART

ARTH 89.05 - Senior Seminar in Art Historical Theory and Method

Instructor: Kassler-Taub

This seminar, the Department of Art History's "culminating experience," helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

ARTH 89.06 - Senior Seminar in Art Historical Theory and Method

Instructor: Teriba

This seminar, the Department of Art History's "culminating experience," helps students to locate contemporary theories and methods for the analysis of art and visual culture within a critical historiography of the discipline. Rather than concentrating on objects, a period, or a nation/region, we instead focus on how scholars have approached writing about art. The goal is not to be comprehensive, but rather to touch on key issues and problems that continue to animate the practice of art history.

ARTH 91 - Honors

Instructor: Camerlenghi

The first in a sequence of two courses devoted to independent research and the writing of a thesis or execution of a project under direction of a departmental adviser. Students admitted to and participating in the departmental honors program must take these courses in consecutive terms of the senior year.

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Students are awarded one course credit for successful completion of this course upon completion of ARTH-092. Students register for ARTH-091 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for ARTH-092 the subsequent term to complete the coursework. A final grade will replace the "ON" in ARTH-091 upon completion of ARTH-092.

Prerequisite: Consult the statement of the Art History Honors Program. Only one of these courses may be counted as part of the major in Art History.

Offered: Fall, Winter.

ARTH 92 - Honors II

Instructor: Camerlenghi

The second in a sequence of two courses devoted to independent research and the writing of a thesis or execution of a project under direction of a departmental adviser. Students admitted to and participating in the departmental honors program must take these courses in consecutive terms of the senior year.

Students are awarded one course credit for successful completion of this course. Students who have registered for ARTH 091 register for ARTH 092 to complete the coursework. At the discretion of the instructor, a student may opt to do additional work over three terms. In this arrangement, students register for ARTH 092 and receive a grade of "ON" (ongoing) at the end of the second term. Students do not register for the subsequent term. A final grade will replace the "ON" for ARTH 091 and ARTH 092 at the end of the subsequent term at which time the coursework must be completed.

Offered: Spring, Winter.

Asian Societies, Cultures, and Languages

Chair: Edward Miller

Professors: S. R. Craig (Anthropology), R. Ohnuma (Religion), D. Washburn (ASCL, Film and Media Studies, and Comparative Literature); **Associate Professors:** J. Dorsey (ASCL), S. J. Ericson (History), L. Gibbs (ASCL), A. F. Hockley (Art History), S. L. Kim (ASCL and Art History), E. Miller (ASCL and History), G. Raz (Religion), S. Schmidt-Hori (ASCL), S. Suh (ASCL and History), A. Wang (ASCL), M. Xie (ASCL); **Assistant Professors:** S. Eom (ASCL), Y. Lu (History), S. Swenson (Religion), S. Upadhyay (Sociology); **Senior Lecturers:** M. Ishida (ASCL), A. Li (ASCL), I. W. Watanabe (ASCL), Lei Yan (ASCL); **Lecturers:** Q. Chen (ASCL), E. Hwang (ASCL), D. Rezvani (ASCL), S. Singh (ASCL), S. Zhang (ASCL)

To view Asian Societies, Cultures, and Languages Courses, scroll to bottom of this page.

See below for an explanation for ASCL's course number system.

- ASCL courses are numbered by category, not by their level of difficulty. Most of the courses in the 50s, 60s and 70s do not have prerequisites
- DS (*Discipline Specific*) courses for South and Southeast Asia are numbered in the 50s
- DS (*Discipline Specific*) courses for East Asia are numbered in the 60s
- IITD (*Interdisciplinary, Interregional, Transnational, Diaspora*) courses are numbered in the 70s
- ASCL 10.01 (p. 140), 10.02 (p. 140), 10.03 (p. 141), 10.04 (p. 141) and 11.04 (p. 141) may count as IITD courses
- *Advanced Seminars* are numbered in the 80s
- Courses related to independent study and the Senior Honors Program are numbered in the 90s

Asian Societies, Cultures, and Languages Requirements for Majors & Minors

Standard Major

- One introductory course chosen from *ASCL I: Thinking through Asia* offerings
- Two language courses beyond the first-year level (or the equivalent)
- Three *Interdisciplinary, Interregional, Transnational or Diaspora* courses
- Three *Discipline Specific* courses
- One *ASCL 80.XX: Advanced Seminar* (serves as the Culminating Experience)

Language Track Major

- One introductory course chosen from *ASCL I: Thinking through Asia* offerings
- Five language courses beyond the first-year level (or the equivalent)
- Three *Interdisciplinary, Interregional, Transnational or Diaspora* courses or *Discipline Specific* courses

- One *ASCL 80.XX: Advanced Seminar* (serves as the Culminating Experience)

Standard Minor

- One introductory course from among the *ASCL I: Thinking through Asia* offerings
- Two *Interdisciplinary, Interregional, Transnational or Diaspora* courses
- Three *Discipline Specific* (DS) courses

Language Minor

- Six language courses beyond the first-year level

Modified Major

ASCL Modified Majors require seven ASCL courses combined with four from another program or department. Students wishing to pursue a Modified Major must prepare a proposal that includes:

- Your list of the courses comprising your modified major. Your list must include
 - An *ASCL I: Thinking Through Asia* course
 - An *ASCL 80.XX: Advanced Seminar* (Culminating Experience)

A selection of five (5) ASCL courses that constitute a mix of DS (discipline specific) and IITD (interdisciplinary, interregional, transnational, and diaspora) courses. This selection of five courses may include one or two language courses beyond the first-year level.

- Four courses from the modifying department or program, accompanied by their ORC descriptions
- A rationale for the proposed major:

In keeping with the College's requirements for all modified majors, your rationale must show that the proposed major is "unified and coherent" by explaining the reasons for including the four modifying courses within your major plan of study. The reasons may be related to (1) particular geographic subfields of Asian Studies (i.e. China Studies, South Asian Studies); (2) particular academic disciplines (i.e. Literary Studies, Anthropology, History); and/or (3) specific topics or categories of study (i.e. development, political violence, borderlands, visual art). The rationale should argue for the unity and coherence of the major on intellectual grounds; it should not be based on your post-graduation career plans.

Students who are interested in proposing an ASCL modified major should contact the ASCL Vice Chair to discuss their plans and get feedback on their draft rationale. When the application is completed, the student should submit it to the ASCL Chair and Vice Chair for review and approval.

Honors Program

The ASCL Honors Program consists of a two-term, two-course sequence comprised of ASCL 90 (p. 162) and ASCL 91 (p. 163), during which the student completes an honors thesis. To qualify for the Honors Program the applicant must have a GPA of 3.0 overall and GPA of 3.4 in the major. Admission to the program is contingent upon acceptance of the applicant's thesis proposal. Students should develop a thesis proposal in consultation with a prospective advisor. The primary advisor for an honors thesis must be a faculty member appointed in ASCL or affiliated with ACSL. Secondary advisors drawn from ASCL or other departments and programs are encouraged when the student's project warrants additional expertise. Proposal guidelines can be found on the ASCL website.

As part of the Honors curriculum, ASCL 90 and 91 carry high expectations regarding student performance with regard to writing, deadlines, accountability, and critical reflection. The thesis advisor will assess the student's progress at the end of the first term of the Honors course sequence. If insufficient progress has been made on the thesis, students will be dropped from the program and given a grade for the work completed in the first term. The grade can count toward the ASCL major but not as a substitute for the ASCL Culminating Experience. A public presentation of the honors thesis at the end of the second term is a requirement of the Honors program. Completion of both ASCL 90 and 91 can be counted as the ASCL culminating experience. ASCL 91 is an addition to ASCL's ten-course major and cannot be counted toward the total number of courses needed to complete an ASCL major.

Students wishing to pursue a fall/winter thesis should submit their proposal to the ASCL Department Chair no later than the seventh week of their junior-year spring term. Proposals for winter/spring theses should be submitted to the chair no later than the seventh week of the applicant's senior year fall term.

Admission to the Honors Program is by vote of the ASCL Department faculty.

Study Abroad Programs

ASCL offers study abroad programs in China (LSA+), Japan (LSA+), a winterim program in Vietnam (Fall Term +), and exchange programs with Yonsei University (Seoul), Keio University (Tokyo), Kanda University (Chiba, Japan), and Waseda University (Tokyo). Information about these programs is available through the Frank J. Guarini Institute for International Education.

ASCL - Asian Societies, Cultures, and Languages

ASCL 1.01 - Urban Asia

Instructor: Eom

Asian cities, once considered to be recipients or followers of urban models imposed by Western cities, have become new models of urbanism themselves, thereby serving as the heart of the growing body of scholarship which focuses on such dynamic urban processes reshaping cities across the globe. For instance, over the last few decades, Singapore, Shanghai, and Seoul have distinguished themselves as points of reference for other aspiring cities in and beyond Asia. How have Asian cities transformed in an interconnected global economy? How does an interdisciplinary reading of Asian cities provide ways to think anew about Asia today?

With Asia at the center of our urban inquiries, this course proposes to read Asian cities from historical and comparative perspectives. The primary purpose of this course is to introduce students to multiple disciplinary approaches to Asia's urban environments and their dynamic relationships to other parts of the world. The course features instructors from several Dartmouth departments and programs presenting a diversity of theoretical perspectives and empirical studies drawn from cities across East, South, and Southeast Asia.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 1.02 - Asian Femininities

Instructor: Schmidt-Hori and Xie

What does it mean to be a woman, or be defined as a woman, in Asian cultures? How can we make sense of Asian women's lives and experiences in the past and the present within the cultural context of Asia instead of from a Western perspective? This course explores varied forms of Asian femininities through historical documents, religious texts, literary work, images and films, as well as scholarly sources. In the course, we will toggle back and forth between being impartial observers and imagining ourselves living in societies different from our own. Because gender/sex is a perspective everyone relies on to understand the world and navigate the complexities of human interaction, we believe a close look at "Asian

femininities” will be an excellent introduction to Asian studies!

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 7 - First-year Seminar in ASCL

Instructor: Gibbs

Topics vary. Consult special listings per term on the registrar's website.

Offered: Winter.

ASCL 9.01 - Urban Lives & Livelihoods in Contemporary China: Language, Culture and Narrative

Instructor: Li

This is the Director’s Course for the LSA program in Beijing. Having completed the prerequisites listed below, the program participants have established a foundational understanding of the language and culture of China.

In this course, students will learn about the lives of ordinary people in post-reform China. In keeping with the overall goals of this LSA program, we will be paying particular attention to “language”—a category that is broader than just the vocabulary and grammar which you will be learning in your Chinese language courses this summer. You will be learning how Chinese urban residents modulate their linguistic output (via accent, diction, or dialect) to navigate their world; you will also become familiar with common social discourses and narratives that people in China use to describe their experiences. In the course of conversations with people in Beijing and other cities, you will explore how “language” shapes everything from the names given to babies to decisions about studying a foreign language like English. In addition, you will discuss and contextualize the ways that book authors, filmmakers, poets, and everyday people use language to represent “lives in China,” whether their own or others’.

The final course project will involve conducting an interview with a local resident of Beijing. Early in the term, all students in the course will be placed into small teams, and each team will spend time with a local family that has volunteered to host our students a few times during the summer. Toward the end of the term, each team will arrange to interview one member of the family by asking them to respond to the essay the group composed and shared with the family member in advance (see the schedule for details).

Offered: Summer.

Degree Requirement Attributes: Lang:LRP; Dist:SOC;
WCult:NW

ASCL 9.31 - The Language-Culture Nexus in Contemporary Japan

Instructor: Schmidt-Hori

“The Language-Culture Nexus in Contemporary Japan” is the Director’s Course for the LSA in Japan. It has been developed to enhance your ten-week linguistic and cultural immersion in one of the major cities of Japan!

With the one-year of Japanese language training and ASCL 10.03 (Introduction to Japanese Culture) under your belt, you have already acquired so much knowledge about the language and culture of Japan. Now, you will be tasked to connect the dots between theory and practice as well as language and culture—*Do Japanese people speak like the textbook or anime? What’s the difference between a regional dialect and the “standard Japanese”? How do we sound kawaii or bro-ey in Japanese?* —You will find out the answers to these questions and more.

Unlike our regular Japan-related courses taught on campus, a significant amount of learning will depend on your own research, data collection, and analyses. Try to become an autonomous learner and actively engage with your locals. If you do so, you will be amazed at how much knowledge and experience you have absorbed at the end of the term.

Degree Requirement Attributes: Lang:LRP; Dist:SOC;
WCult:NW

ASCL 10.01 - Introduction to Chinese Culture

Instructor: A. Wang & Xie

The aim of this course is to provide students with a basic knowledge and appreciation of Chinese culture. We will examine the evolution of Chinese culture and identity from the earliest Chinese dynasties, dating back more than 3500 years, to the present day. Through readings of literary texts in translation, students will be introduced to topics in language, history, literature and art, philosophy and social and political institutions. The course is open to students of all classes. It is required for participation in the LSA and FSP, for the major, and the minor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ASCL 10.02 - Introduction to Korean Culture

Instructor: Kim and Suh

This course provides an introduction to Korean culture and history, examining Korea's visual and textual expressions from the pre-modern age to the twentieth century. What are the origins of Korean national and cultural identities? How have Korean claims of cultural distinctiveness been manifested and modified over time? Tracing answers to these questions simultaneously helps us to consider how and why Korea has entered America's consciousness. As Korea matters to the US not simply as a fact but as a

project, this course avoids portraying Korea through any generalized statements or uncritical categories. Rather, students are encouraged to explore novel perspectives on Korea and thereby unravel their own prejudices and agendas. No prior acquaintance with the Korean language is required.

Cross-Listed as: HIST 05.04

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ASCL 10.03 - Introduction to Japanese Culture

Instructor: Washburn

Japanese cultural history through a broad survey of literature, art, social and political institutions, and popular culture. Modern conceptions of Japan and formations of Japanese identity have evolved under the pressures created by radical swings between periods of wholesale appropriation of foreign cultural forms and periods of extreme isolation. The course will trace the evolution of Japanese culture by examining the ways in which cultural archetypes are distinguished in Japan. Taught in English. Open to all classes. Required for the LSA , major and minor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ASCL 10.04 - Introduction to Southeast Asia: Culture and Politics

Instructor: Singh

This course offers an introduction to the cultural and political diversity of Southeast Asia. Broadly focused on the nation-states that have emerged since the end of World War II (Brunei, Burma [Myanmar], Cambodia, Indonesia, East Timor, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam), the course explores the potentials and limits to a regional perspective. The course explores the various cultures of the region and thematically situates them within and outside the confines of the modern nation state – encouraging students to appreciate both plurality and cohesiveness of the SEA region. The course challenges cultural essentialisms and ethnocentrisms towards the region – encouraging students to question the colonial cultural stereotypes that dominate mainstream knowledge of the region. In addition to exploring the extant forms of cultures (religion, language, ritual, literature) in Southeast Asia, this course will also explore how local identity in SEA is negotiated amidst sweeping cultural forces of globalization, imperialism, and modernization.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 11.04 - Introduction to South Asia: Culture and Identity on the Indian Subcontinent

Instructor: Staff

This interdisciplinary course is an introduction to the cultures of South Asia—particularly the contemporary nations of India, Pakistan and Bangladesh—with a focus on the issue of identity. The course will examine the many identities of South Asia, including regional, religious, caste, national and gender identities and explore how these identities have been shaped in contexts of change from ancient times to the present. Topics covered will include the role of identity in food practices, Bollywood and sport as well as the role of identity in politics and the public sphere.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ASCL 51.01 - Hinduism

Instructor: Ohnuma

An introductory survey of the Hindu religious tradition of South Asia from 1500 B.C.E. down to the present day. Emphasis will be given to the historical development of elite, Sanskrit Hinduism and its constant interaction with popular and local traditions.

Cross-Listed as: REL 9

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.02 - Modern Hinduism

The names “Hinduism,” a religion, and “India,” a nation, come from the same word. What's at stake in mapping one onto the other? We will study the consolidation of Hindu traditions as a modern religion—how the “ism” got in the “Hinduism”—in historical context, examining the writings of thinkers like Gandhi, Radhakrishnan, and Vivekananda. One of the most compelling things about Hinduism's global image is its association with nonviolence. But a major focus will be the development of Hindutva ideology, which recasts the religion in a militant, masculinized mode. Who speaks—within the academy and outside it—for Hinduism?

Cross-Listed as: REL 19.06

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.03 - Indian Buddhism

Instructor: Ohnuma

An introductory survey of the Buddhism of South Asia from its beginnings in the 6th century B.C.E. to its eventual demise in the 12th century C.E. Emphasis will be given to the major beliefs, practices, and institutions characteristic of Indian Buddhism, the development of its different varieties (Hinayana, Mahayana, and Vajrayana), and its impact upon South Asian civilization at large. Open to all classes.

Cross-Listed as: REL 018

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.04 - Tibetan Buddhism

Instructor: Seton

An introductory survey of Buddhism in Tibet from its inception in the 8th century until the present day. Emphasis will be given to the central doctrines, practices, and institutions characteristic of Tibetan Buddhism, its development of various popular and elite religious ideals (householder, nun, monk, scholar, solitary hermit, crazy yogi, and female dakini), and its evolving identity in the West. Not open to students who have received credit for REL 19.21 or ASCL 61.02.

Cross-Listed as: REL 19.21 REL 41.05

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.05 - Religions of Southeast Asia

Instructor: Long

This introductory course surveys religion in Southeast Asian contexts. We begin by analyzing the terms “Religion” and “Southeast Asia” as products of global politics. Then, we examine contemporary case studies from seven Southeast Asian countries to explore how religions shape local communities and life experiences. Our course materials lead us to investigate how Spirit Religions, Buddhism, Daoism, Christianity, and Islam intersect and inform understandings of embodiment, health, power, nature, and death. Open to all.

Cross-Listed as: REL 02.01

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

ASCL 51.06 - Buddhism, Sexuality, & Gender in Southeast Asia

Instructor: Swenson

This intermediate-level course explores how Buddhist concepts of embodiment affect daily life and society in Southeast Asian contexts. We will also consider how cultural understandings of gender and sexuality influence local religious practices in the Buddhist-majority countries of Thailand, Vietnam, Cambodia, and Myanmar. Our materials will lead us to analyze how religion, sexuality, and gender intersect with one another, as well as how these intersections impact broader understandings of authority, wisdom, beauty, death, and loyalty.

Cross-Listed as: REL 41.07

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.07 - Gods, Demons, and Monkeys: The Ramayana Epic of India

Instructor: Ohnuma

The ancient Indian epic known as the Ramayana is a stirring, martial tale of gods, demons, and monkeys. Beginning with the classical Sanskrit version composed as early as 200 B.C.E., India has produced hundreds of different versions of the Ramayana, in different languages and media, with different agendas and for different audiences. We will examine this epic tradition in all of its complexity, making ample use of different forms of media.

Cross-Listed as: REL 40.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.08 - Buddhist Philosophy

Instructor: Seton

Buddhists see philosophy not just as a study of reality or the meaning of life, but as a useful step in overcoming all forms of suffering and realizing the existential happiness of a buddha. This course will survey the four main Buddhist philosophical schools; highlight the differences in their phenomenology, onto-epistemology, and ethics; and explore their views on the nature of consciousness, identity, perception, wisdom, and happiness. It will also touch upon Buddhist dialectical reasoning and analytical meditations aimed at developing insight into the nature of mind and its lifeworld.

Cross-Listed as: PHIL 01.20 REL 41.08

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.10 - Mahayana Buddhist Texts

An in-depth, discussion-based exploration of the rich, imaginative world of Mahayana Buddhist literature, including both philosophical treatises and religious scriptures (including the Heart, Diamond, Lotus, and Vimalakirti Sutras). Open to all classes.

Cross-Listed as: REL 41.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 51.11 - Religions of Vietnam

Instructor: Swenson

Come learn about religious practices in Vietnam and among Vietnamese communities globally. Religions have gained visibility and influence since Vietnam’s 1986 policy reforms. Today, religions affect experiences of gender, sexuality, ethnicity, migration, class, and belonging, both in and beyond Vietnam’s socialist context. Our course investigates case studies from Buddhist, Christian, Confucian, Cao Dai, and spirit traditions to

examine how people build communities, find purpose, and claim power through religion.

Cross-Listed as: REL 02.02

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

ASCL 52.01 - Music and Dance of North India

This experimental interdisciplinary course explores traditional North Indian (Hindustani) music and dance as both an artistic practice and a cultural system. Course work combines regular group lessons on the tabla—the principal percussion instrument in the performance of Hindustani raga—with weekly reading, listening, and viewing assignments focusing on Indian music theory, history, and aesthetics. Visiting artists will demonstrate the central dance, instrumental, and vocal forms of Hindustani performing arts. No prior musical experience required.

Cross-Listed as: MUS 17.02

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 52.02 - Arts of Tibet: Sacred Abode of the Himalayas

This course surveys the art and culture of Tibet from the time of the introduction of Buddhism in the seventh century to the modern period. Traditionally understood as the divine abode of Avalokitesvara, the bodhisattva who embodies the compassion of all buddha in Buddhist cosmology, Tibet was also fantasized as the immortal realm of “Shangri-la” by western interpreters. In this course, we will begin by examining the imagination and representation of Tibet and its culture in modern western discourses, and then shift the focus to the development of artistic forms of Tibet in the context of Tibet’s history and religious movements, from ancient times to the present.

Cross-Listed as: ARTH 34.01

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 52.03 - Arts of South Asia

This course introduces 2000 years of the art of the Indian subcontinent, from the Indus Valley in the 2nd century BCE, and moves chronologically to the present day. Topics cover the sculpture and architecture of Buddhism and Hinduism, painting and architecture of Islamic courts, colonial and national period visual culture, and post-partition Indian and Pakistani modern and contemporary art. In this course, you will be taught to look at, think about, and engage in critical discussions of the visual arts of South Asia. Our class lectures and discussions will focus on the formal and material aspects of architecture, epigraphy, sculpture, painting, calligraphy, photography, and print, as well as the historical contexts in which these works were made and understood.

Cross-Listed as: ARTH 31.01

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 52.04 - From Bombay to Bollywood and Beyond: History of and through the Hindi Film

India’s film industry is one of its biggest “soft power” exports. Every year, “Bollywood” (as the Hindi film industry centered in Mumbai is known) produces more films than all of America, and Bollywood is just one of the many film industries located in the country. In this course, we will focus on two aspects. First, we will think about the history of films in the region—the antecedents of film through theatre and radio, the transition to sound and the emergence of *filmi* music, and the different genres of what makes a typical “masala” (potboiler) Bollywood film.

The second aspect of this course is about how films are consumed and circulated in—and beyond—South Asia. In examining what makes films appeal to diverse audiences, we think about how these films were influenced by, and in turn influenced, postcolonial India’s social, class relations, politics and religion at different points of time— from the optimism of the 1950s to the disillusionment of the 1970s and the neoliberal fantasies of early 21st century India.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 53.02 - Imagining Freedom: Literature and Cinema of Decolonization in South Asia

The twentieth century witnessed global struggles against Euro-American colonialism across Asia, Africa, and the Caribbean worlds. Decolonization, or the process through which previously colonised nations became free of their imperial rulers, was at once a political, social, cultural, and psychological phenomenon. Not only did anti-colonial struggles challenge colonial domination, they also envisioned heterogeneous imaginaries of “freedom” that would shape their futures for years to come. Freedom was never a static idea. In international conferences like those of the Afro-Asian Writers Association, previously colonised people vigorously debated the meanings and visions of freedom for postcolonial futures. Women, workers, and indigenous peoples drew attention to the fissures in national independence that prioritised certain hegemonic voices over others. Moreover, debates on what constituted “freedom” under decolonization were also shaped by the geopolitical and cultural politics of the global Cold War.

What became of these global imaginaries of hope and dissent, and what lessons do they offer us today? This course will look at how art, cinema, and literary writing shaped conceptions of freedom in the twentieth and twenty-first centuries. Taking the case of South Asia, the course will introduce students to literature and art from/about India, Pakistan, Sri Lanka, Afghanistan, and Bangladesh. We will consider the work of literary and cultural figures like Ismat Chughtai, Kamila Shamsie, Romesh Gunsekera, Meena Kandasamy, and R.K.

Narayan, avante-garde artists like M.F. Hussain and Akbar Padamsee, and filmmakers like Mani Ratnam and Syed Akbar Mirza. While learning about transnational literary and artistic movements from South Asia like the Progressive Writers' Association, the Dalit Panthers, the Bombay Progressive Artists Group, Parallel Cinema and Bollywood, students will take away an expansive and historically informed idea of what was decolonization and how its meanings have evolved in our current historical conjuncture.

Cross-Listed as: COLT 62.11

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 54.03 - The City in Modern South Asia

South Asian cities are currently undergoing massive demographic and spatial transformations. These cannot be understood without a consideration of both the specific history of South Asia and a broader account of urban change. This course examines these changes in historical perspective and situates urban South Asia within a global context. How did colonial rule transform cities such as Delhi, Lahore, and Bombay? How were the differing ideologies of India and Pakistan mapped onto new capitals such as Chandigarh and Islamabad? How are ethnic pasts and techno futures reconciled in booming cities such as Bangalore and Mumbai? How are slums produced and what are the experiences of people living in them? What are the connections between the urban environment and political mobilization? We consider a range of sources, including scholarly literature, films, and short stories.

Cross-Listed as: HIST 92.05

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 54.04 - Partition in South Asia

In the years leading to 1947, nationalist activism against the British and tensions between Hindus and Muslims escalated in the Indian subcontinent. This culminated in Partition and the emergence of the nations of India and Pakistan. Independence was marred, however, by the bloodshed accompanying the mass movements of Muslims into Pakistan and Hindus into India. What were the factors leading to this juxtaposition of triumphal Independence with shameful Partition? What were the implications of Partition for ordinary people? How have memories of Partition continued to affect powerfully politics and culture in the subcontinent? This seminar investigates such questions using a wide variety of materials including films, memoir, fiction, and scholarly works. This course follows recent scholarship in focusing on the long-term implications of Partition for the subcontinent. Hence, while we certainly will investigate the events leading up to Partition, our emphasis will be on understanding the effects of Partition on the lives of ordinary people during and after.

Cross-Listed as: HIST 92.04

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 54.07 - Colonialism, Development, and the Environment in Africa and Asia

This course examines the environmental history of Africa and Asia, focusing on the period of European colonialism and its aftermath. Topics include deforestation and desertification under colonial rule; imperialism and conservation; the consequences of environmental change for rural Africans and Asians; irrigation, big dams and transformations in water landscapes; the development of national parks and their impact on wildlife and humans; the environmentalism of the poor; urbanization and pollution; and global climate change in Africa and Asia. Open to all classes.

Cross-Listed as: HIST 75; AAAS 50; ENVS 45

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 54.08 - From Colonial India to Post-Independence South Asia

This course examines the history of modern South Asia (focusing on the nations of India, Pakistan and Bangladesh) from the eighteenth century to the present. Key themes include: the character of British colonialism and its impact on Indian society; cultural change and the "invention" of new religious and caste identities; the Indian middle class; the emergence of the Indian national movement under Mahatma Gandhi; Partition in 1947 and Partition violence; and post-independence South Asian politics and economy.

Cross-Listed as: HIST 076

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 54.09 - The Vietnam War

Instructor: Miller

This course examines the conflict which Americans call "The Vietnam War" as a major event in the 20th century histories of both the United States and Vietnam. In addition to exploring the key decisions made by U.S. and Vietnamese leaders, students will also learn about the experiences of ordinary soldiers and civilians. This course incorporates multiple American and Vietnamese sources and perspectives, and also investigates multiple explanations of the war's origins and outcome. Open to all classes.

Cross-Listed as: HIST 026

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

ASCL 54.10 - Global South Asia

Home to some of the world's richest people and biggest companies, South Asia has been the source of countless stories of success. Yet there's more to these stories than meets the eye. What makes South Asia important globally and what is the history behind South Asia's recent rise? Global South Asia answers these questions by looking at the ways the region has been connected to other parts of the world throughout history.

Cross-Listed as: HIST 90.09

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 54.11 - Gandhi, Twentieth Century India and the World

This course explores the history of modern India through the figure of Mahatma Gandhi. After exploring early developments in Gandhi's life and his philosophy of non-violence, we will examine the role of Gandhi and of his image in major political developments in India. We will also take up many key issues relating to Gandhian thought, including Hindu-Muslim relations, caste, gender and sexuality, and social equality. Finally, we will discuss Gandhi's legacy in India and globally.

Cross-Listed as: HIST 05.11

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 54.12 - State and Society in Early Modern India, 1500-1800

Instructor: Suri

This course surveys historical developments in what are now the modern nation states of India, Pakistan, and Bangladesh between the sixteenth and eighteenth centuries. Students will explore South Asian society, culture, and religion in the broader context of state-formation and empire-building. We will examine the makings of the Mughal Empire, one of the most influential states in the subcontinent's history, its predecessors, successors, and rivals, as well as its complex and contested legacy. The Taj Mahal stands as a powerful example of both Mughal imperial achievement and continuing controversy about early modern pasts. Moreover, this course will emphasize the makings of Islam in India, Persianate political and literary culture, as well as early modern commerce and politics.

Cross-Listed as: HIST 90.15

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 54.20 - The Cold War in Southeast Asia

Instructor: Singh

This course offers a Southeast Asian perspective to the study of the Cold War. It explores the ways in which the Cold War is documented, memorialized, imagined, and re-imagined in the Southeast Asian region. The Cold War was a key period of global history, which deeply affected the politics and culture of Southeast Asia, changing the everyday life of people as well as the function of the nation-state.

The course will move beyond the idea of the Cold War as a contestation between the USA and USSR, to explore the inter-play of superpower dynamic in Southeast Asian countries, given their "Global South" and "Third World" contexts. We will explore how many conflicts in various Southeast Asian polities were shaped by -- and in turn shaped -- the Cold War superpower dynamics. The course challenges the idea that there was a 'Cold War' per se and expands the understanding of the Cold War into actual conflicts, which caused significant casualties in the Southeast Asian region, and the Asia-Pacific more broadly. The course takes a thematic approach to thinking about the Cold War in Southeast Asia by introducing various ideas around the political dynamics and cultural dimensions of the conflict in the region, and demonstrates how local actors and their agency, be they politicians, novelists, filmmakers and others, all shaped how the Cold War in the region was experienced. We will also explore how the memory of the period continues to live on in various Asian diasporas, alongside the troubled legacies of conflict in relation to mass killing and political violence.

The course aims to destabilize notions that the Cold War was necessarily only about grand geopolitical moves (even as it explores them), but in fact, it inspired various local expressions of either ideological alignment, resistance or ambivalence. We will explore the conditions for postcolonial emergence and decolonization of the states in the region (Brunei, Burma [Myanmar], Cambodia, Indonesia, East Timor, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam), and examine how the Cold War introduced neocolonial dimensions to these configurations. We will also explore how this speaks to broader conversations about development in the 'global south' as a legacy of the period, and the lasting impacts of war and devastation on the nations in the region.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 55.01 - Anthropology of Tibet and the Himalayas

Instructor: Craig

This course introduces students to the peoples and cultures of Tibet and the greater Himalayan region (Nepal, northern India, Bhutan). We examine the cultural, ecological, political, religious, and economic interfaces that define life on the northern and southern slopes of Earth's greatest mountain range. In addition to learning about Himalayan

and Tibetan lifeways, we will also learn about how these mountainous parts of Asia have figured into occidental imaginings, from the earliest adventurers to contemporary travelers.

Cross-Listed as: ANTH 32

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 55.02 - Religion in a Global South Asia

Instructor: Upadhyay

What are the social and political functions of religion? How does religion shape our everyday experiences and the way we make meaning of the world? What is the relationship between religion and structures of power? This course travels to South Asia to tackle these questions. South Asia is home to large populations of the world's major religions as well as many local and syncretic religious traditions, making the region an illuminating site for investigating religion from a sociological perspective. The semester will begin with the theoretical interventions from classical social theorists like Marx, Weber and Durkheim. We will then move to critical perspectives on the social functions of religion, which will be based on empirical material and analysis that is rooted in the context and experience of post-colonial societies in South Asia. Students will have the opportunity to develop critical perspectives on different facets of religion and their intersections with structures of power, including imperialism, colonialism, class, gender, and race.

Cross-Listed as: SOCY 041

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 55.03 - Insurgent South Asia

Instructor: Upadhyay

Within the short quarter century run of the 21st century, the world has witnessed a global upwelling of insurgency. Southern Asian sites, including but not limited to India, Sri Lanka, Bangladesh, and Nepal have been fertile grounds for tens of millions of insurgent publics protesting against austerity, rising living costs, student debt, corrupt governments, police brutality, and government neglect during the COVID-19 pandemic. Who are these Southern Asian insurgent publics? How does South Asia reflect – or depart from – global patterns of insurgency and other forms of social protest? Do we need to theorize southern insurgency differently from those occurring in other parts of the world?

Cross-Listed as: SOCY 052

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 59.04 - Intensive Foreign Study in Vietnam

Instructor: Miller

This interdisciplinary course is the second required component of the foreign study program “Developing Vietnam”, exploring the contemporary history, society and culture of Vietnam. This course, held during Dartmouth’s December “winterim” period, consists of three weeks of intensive and immersive learning in Ho Chi Minh City. Students live and study at a partner university in Vietnam and complete their group research project (begun during the fall term in ASCL 70.22) on some aspect of development in contemporary Vietnam.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 60.03 - Frontier in Traditional Chinese Thought: Beyond the Great Wall and the Becoming of China

Instructor: Xie

The conceptions of frontier, frontier-heartland relations, unity and territoriality are crucial to the formation of the Chinese cultural and spatial identity from the ancient time to today. At the moment, the frontier space beyond the Great Wall takes up more than half of the entire Chinese territory. The ways Chinese people deal with their ethnic minority regions, differentiate the northerners and the southerners, view their own culture and cultural others and imagine their regional and global roles can all be related to the spatial conceptions with regard to the frontier in pre-modern China. This course will trace the development of these conceptions through a variety of philosophical, cosmological, religious, historical, geographical, and literary texts and images. Classical Chinese texts however are not categorized by discipline but represent a body of interdisciplinary knowledge that reflects the culture’s thoughts and values. The course will deal with the materials in a way that relive their a-disciplinary nature while maintaining a critical perspective on them. When relevant, the course will also examine broader theoretical issues such as political morality, gender and sexuality, and border-crossing.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 60.04 - Modern Chinese Literature and Society

Instructor: Xie

What does it mean when literature is entrusted with the task of rescuing, rejuvenating, revolutionizing and modernizing the entire nation as China entered the age of modernization? What does it mean when literature subsequently played a seminal role in almost all social and political movements in modern and contemporary China, from socialist revolutions to contemporary #MeToo movements? How does such a literature speak for collective longings, individual differences, alternative

communities, and internal struggles among a vast and diverse population? And moving beyond the boundaries of the political state of People's Republic of China, how can we approach a body of literature written in Chinese and other languages from various Chinese-speaking communities across the globe?

This course will introduce participants to major works in modern Chinese literature and related media forms, as well as to critical discussions surrounding them. We will closely examine how each work engages with the historical development and contemporary dynamics of modern China and Chinese-speaking communities. From literary and cultural perspectives, this course addresses and problematizes some of the most difficult issues that modern China has been working hard to deal with, including colonial modernity, war memory, revolution and trauma, ethnic minorities, overseas Chinese, gender and sexuality, and so on.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.10 - Eco-Fiction: Stories of Ghosts and Other Beings from Premodern China

Instructor: Zheng

In this class, we will read a selection of Chinese literary texts (anecdotes, full-fledged tales, poetry) from the third to the nineteenth centuries that feature ghosts. We will consider these ghost stories as a means by which premodern Chinese literary authors explored the ecological connections between the natural and human worlds, and reflected on the relations among humans and between humans and other beings, both animate and inanimate. We will see that ghosts are not just metaphors in these stories. Interaction with ghosts enable human authors to contemplate and unlearn conditions of being and becoming human.

Because close reading is the key skill that students will learn and practice throughout the quarter, the class will also incorporate creative writing exercises and creative assignments to help students better understand techniques of storytelling. Towards this goal, we will read selected theoretical texts on ecocriticism and narratology and discuss how premodern Chinese literary texts can respond to questions and propositions raised by modern and contemporary theorists in creative ways.

Cross-Listed as: COLT 55.03

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.11 - Introduction to Chinese Poetry

Instructor: Wang

This course offers an extensive exploration of Chinese poetry spanning three millennia, from the Zhou Dynasty to the 21st century. Beginning with Confucian discussions on

the function of poetry, students will explore how poetry has served as a foundation for education, a tool for social engagement, a meditative practice, and an indispensable channel for self-expression. They will examine major poetic forms, influential poets, and the cultural contexts that have shaped Chinese poetry. Additionally, they will learn creative techniques developed by Chinese poets, including call-and-response, metaphorical riddles, and the integration of poetic lines into the visual arts.

Readings in English translations include essential works such as the *Book of Songs (Shijing)*, *Nineteen Ancient Poems*, *Music Bureau* ballads, the great Tang masters, Song lyrics, courtesan poetry, Chan Buddhist poetry, the modernist poetry movement of the 1980s, migrant worker poetry of the 2000s, and poems responding to the COVID-19 pandemic. The course also examines how modern Western poets like Ezra Pound, Eliot Weinberger, and Gary Snyder have drawn inspiration from the Chinese poetic tradition. To enhance their learning experiences, students will participate in workshops led by poet-translator Eleanor Goodman and the renowned Chinese poet Zang Di.

All readings are in English translation. No prior knowledge of the Chinese language or poetry is required.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.12 - The Natural Environment, Fantastic Worlds, and the Human Realm in Chinese Literature

Instructor: Wang

This course explores how Chinese writers have envisioned the relationship between humans, nature, and the supernatural throughout literary history. It examines the influence of Daoist, Buddhist, and Confucian traditions on depictions of both natural and fantastical realms, revealing them as spaces for meditation, transcendence, utopian ideals, and political reflection. Students will investigate how mountains, rivers, animal dens, immortal lands, and human-made spaces—such as shrines and gardens—serve not just as backdrops but as dynamic meeting points infused with cosmic energy and social tensions. Additionally, the course will analyze the ongoing dialogue between civilization and wilderness, the influence of the Chinese literary traditions on contemporary films and visual arts, and how imaginary worlds reflect cultural values and spiritual pursuits.

Readings include classical texts featuring sacred mountains and Daoist cosmology, medieval landscape poetry and essays, utopian visions such as the grotto heavens and the secluded villages, supernatural tales from *Journey to the West* and *Strange Tales from a Chinese Studio*, alongside works addressing shamanism, alchemy, folk religions, ghost stories, and narratives of pilgrimage, exile, and migration. In addition to literary and philosophical texts,

we will analyze how contemporary Chinese films such as *Still Life* (2006) and *Hello, Mr. Tree* (2011) respond to the significant environmental changes in 21st-century China and engage with migration, urbanization, and social conflicts. A special event will be led by the contemporary documentary filmmaker Wang Bo, who will engage with students in a discussion on how the people of his hometown, the "Mountain City" of Chongqing, draw upon the region's unique natural environment and deep-rooted cultural traditions to create various forms of performance and entertainment.

All readings are in English translation. No prior knowledge of Chinese language or literature is required.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.19 - Languages of China

Instructor: Pulju

In this course, we will survey both the history of language in China, and the current linguistic situation. Topics will include: geographical and genealogical classification of languages in China; the phonological and grammatical systems of representative languages; the reconstruction of Middle and Old Chinese; ways of writing both Sinitic and non-Sinitic languages; language as a marker of ethnic identity; and past and present language policies, both governmental and non-governmental.

Cross-Listed as: LING 11.02

Degree Requirement Attributes: Dist:SOC; WCult:NW; Lang:LRP

ASCL 60.20 - Languages and Scripts of Gender, Class, and Nation

Instructor: Schmidt-Hori

While language is commonly believed to be a great "tool" with which we describe our feelings and physical phenomena, it is also *the* portal through which we understand the world. In other words, language defines, constrains, and colors human experiences. With this premise as the basis, this course attempts to expand our horizons by examining the ways the spoken languages of Japan, Korea, and China convey concepts such as masculinity, femininity, affection, status, and solidarity. In the latter half of the term, we will also explore the layers of complexity embedded in the writing systems of these three nations. In so doing, we will shed light on each society's historical negotiation of its national identity, Sinophilia, and desire to become a first-class nation of the modern world. No previous knowledge of an Asian language is required.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW; Lang:LRP

ASCL 60.21 - Body Politics in Japan: Beauty, Disfigurement, Corporeality

Instructor: Schmidt-Hori

The body is a tangible, self-evident entity. Or is it? The premise of ASCL 60.21 is that the body is a political, ethical, sociocultural, and historical phenomenon deeply ingrained in our perceptions of self, other, and the world. This course is an endeavor to understand the politics of the body in premodern and modern Japan through a wide range of primary and secondary texts. In order to consider the multiple perspectives of the body across time, the readings are organized thematically, covering topics from physical beauty as virtue/vice, symbolic meanings of hair and clothing, aesthetics of the Tale of Genji, to disfigurement, disability, aging, race, among other things. This course is open to everyone and no knowledge of Japanese literature or language is required.

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

ASCL 60.22 - Gender, Sexuality, and Power in Premodern Japan

With a mythical transgendered Sun Goddess, amorous noblemen in pursuit of beautiful ladies, vengeful women wreaking revenge on unfaithful lovers, and Buddhist priests and samurai in same-sex love affairs, classical Japanese literature is populated by figures with a surprisingly diverse range of gender types. The course will cover, in chronological order, myths, courtly tales, poetry, martial epics, ghostly drama, and medieval short stories from the 8th to 16th centuries, and through these texts depicting the interrelationship of gender, sexuality, and power, students will come to an understanding of how historical, political, linguistic and cultural forces shape subjectivity. The course is open to all students; it is taught in English and there are no pre-requisites.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 60.23 - Critiquing Modern Japan through the Works of Murakami Haruki

Instructor: Schmidt-Hori

The students will read and discuss several works of Japan's best-known contemporary author, Murakami Haruki. Through focusing on the recurrent themes of violence, isolation, disconnection, materialism, apathy, and sexuality in Murakami's fictions, the students will consider the various societal issues of post-1970s Japan.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.24 - Image and Text in Modernizing Japan

Instructor: Dorsey

Images and text have been variously combined in the Japanese tradition, from the ancient picture scrolls to today's manga (comics). This course traces the evolution of such media in early modern Japan, with a focus on the late nineteenth century shift from the "communal reading" of visually-oriented texts to the silent, solitary reading of fiction. Some consideration will also be given to the re-emergence of the visual imagination in film, manga, and animation.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.25 - The Art of War: Stories, Paintings, Films, and Propaganda from Japan's Modern Wars

Instructor: Dorsey

In this course we will examine the relationship between a wide variety of cultural artifacts and modern Japan's experience of war, particularly WW II. Topics addressed within this context include: government censorship, literary subversion, popular culture versus high culture, visual versus written media, postwar cultural memory, the ideology of suicide squads, and the mentality of victimhood. No Japanese language is required for the course, but students with sufficient ability will be expected to make use of original sources.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.26 - Thinking of Contemporary Issues in Japan through Graphic Novels (Manga)

Instructor: Schmidt - Hori

This course aims to explore some of the critical and interconnected issues of contemporary Japan as they are represented in graphic novels (manga): gender roles (*Ooku*, *Little Miss P*, *The Way of Househusband*), same-sex intimacy (*My Brother's Husband*, *Whispered Words*), disabilities (*Real*, *Silent Voice*), body image (*In Clothes Called Fat*), and more. For the first week, students will learn the basic mechanics of manga, its history, and its significance both within Japan and on a global scale, which will help them better understand this medium vis-a-vis "comic books" in the United States. Beginning in Week 2, students will carefully read the assigned work (usually multiple volumes per day; one volume ranges from 200-250 pages) while taking detailed notes. Though it is important for students to enjoy and appreciate the form and content of the assigned primary texts, they are also expected to read the works introspectively—"What do I think about this trope/story/character and why? Is my evaluation valid?"—and comparatively.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.30 - Modern Korean Literature in a Global Context

Instructor: Xie

With our understanding of Korea and Korean literature increasingly reaching beyond the confines of the peninsula, this course explores modern Korean literatures both from the Korean peninsula and in diaspora. It will introduce participants to canonical works in modern Korean literature and well-known works from Korean diaspora communities in Japan, the US, and China, as well as to the critical discussions surrounding them. We will closely examine how each work, with its particular content and form, engages with the historical development and contemporary dynamics of modern Korea and Korean diaspora communities. From literary and cultural perspectives, this course addresses and problematizes some of the most difficult issues that modern Korea has been working hard to deal with, including colonial modernity, the US occupation and the division, democratic movement and trauma, overseas Koreans, gender and sexuality, and so on.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ASCL 60.92 - Theory and Practice of Translation

Instructor: Dorsey

Every time we interpret a facial expression, cloud-filled sky, data set, blood test result, or sequence of musical notes, we are, in a sense, "translating." This course seeks to make us more aware of that process through an engagement with the theory and practice of translation as it has been practiced between English and Japanese, two utterly unrelated languages. We'll look at Japanese and English textbook translations, manga and young adult "translations" of classics like the *Tale of Genji*, Murakami Haruki's translation of Salinger and Rubin's translations of Murakami. We'll try our hand at translating poetry, jokes, songs, puns, prose and more, polishing our own translating skills while experimenting with different conceptual approaches and "workshopping" our attempts. Prerequisite: JAPN 31 or equivalent.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 60.93 - Countercultures of Japan's 1960s

Instructor: Dorsey

Like their American counterparts, Japanese youth in the 1960s occupied university administration buildings, protested war and imperialism, and denounced discrimination, exploitation, and the status quo. This course will explore their counterculture through the music, fiction, film, and comics (*manga*) of that decade. Topics include: ambivalent attitudes towards the U.S., generational discord, new conceptions of love and sex, the legacy of war and the relationship of culture to politics. Most of the course will be conducted in Japanese, but some theoretical and historical issues will be researched and discussed in English.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 61.01 - The Religions of China

Instructor: Raz

An introduction to China's three major religions—Confucianism, Daoism, and Buddhism—through the reading of classic texts. Also, a look at important elements in Chinese folk religion: ancestor worship, temples, heavens and hells, and forms of divination. Special attention will be paid to the importance of government in Chinese religious thought and to continuity and change in the history of Chinese religion. Open to all classes.

Cross-Listed as: REL 10

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.05 - Women and Religion in Japan

Instructor: Simpson

This course examines how Japanese religious traditions (such as Shinto, Buddhism, and others) have informed the lives of women in premodern and modern Japan, and the roles that women have played as nuns, patrons, lay practitioners, and religious specialists. We will examine both what religious traditions said about women and womanhood, and how women interacted with religious views and practices, many of which denigrated or limited women's participation.

Cross-Listed as: REL 19.29

Offered: Summer.

Degree Requirement Attributes: Dist:TMV

ASCL 61.06 - Religions of Japan

This course examines the historical development of the various religious traditions of Japan, from prehistoric to contemporary times. While prehistoric artifacts indicate what early Japanese religion may have looked like, the bulk of Japanese history features interactions between native, local Japanese practices and beliefs and the influence of continental traditions such as Buddhism, Confucianism, Daoism, and geomancy. Here, we will consider how the Japanese have adapted, combined, and redefined religious traditions over the centuries while interrogating what the word "religion" means within the context of each religion, sect or locality. Open to all.

Cross-Listed as: REL 19.31

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.07 - Shinto: Foundations, Festivals, and Fox Shrines

Shinto has been called the way of the gods, a nature religion, a native Japanese religion, a nationalist religion, to name but a few of its many descriptions. In this class, we will spend a great deal of time figuring out what Shinto

is and is not, debating the relative merits of these classifications. We will see that Shinto is, to say the least, a multifaceted tradition with a complex history and countless local variations. Open to all.

Cross-Listed as: REL 19.32

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.08 - Buddhism in Korea and Japan: From Tribute Missions to Temple Tourism

Buddhism has long been an established religious tradition and important aspect of cultural heritage in both Korea and Japan. However, there are key differences in how Buddhism developed and how the religion functions today. In South Korea, most people classify themselves as Buddhist or Christian; in Japan, the majority consider themselves non-religious, yet visit Buddhist temples and hold Buddhist funerals; in North Korea, roughly 10,000 Buddhists remain in spite of religious persecution by the state. Clerical marriage is widely accepted in Buddhist sects throughout Japan, whereas the practice has been the subject of heated debate in South Korea since the 1950s. How did these differences emerge, and what common ground remains?

Cross-Listed as: REL 41.06

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.10 - Japanese Martial Arts: History, Philosophy, Practice

Instructor: Dorsey

This course will apply noetic (intellectual) and somatic (bodily) approaches to an understanding of a pillar of Japanese history and culture: the martial arts. In the classroom we will read about the emergence of the warrior caste (the samurai), the codification of its tenets (bushido), and the evolution of these traditions through modern times; in the gym we will practice the martial art of aikido as a means of embodying that history. The course will also include an exploration of intersections between the martial arts and conflict resolution, gendered identities, cross-cultural communication, and globalization.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.11 - Daoism: Transformations of Tradition

Instructor: Raz

In this course we will explore the historical developments and transformations of Daoism from its ancient roots to present-day practices. We will begin by looking at early traditions of immortality seekers and self-cultivation and at the religious and philosophical ideas in the ancient Chinese texts of the Laozi, Zhuangzi, and Guanzi. We will also examine recent archaeological findings, imperial religious practices, and the complex interaction of Daoism with

Buddhism. We will in addition look at contemporary Daoist practices in China and Taiwan. Along the way we will devote special attention to meditation and divination techniques; alchemy and sexual techniques for transcendence; the place of women and the feminine in Daoism. Open to all classes.

Cross-Listed as: REL 046

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.12 - Buddhism in China

Instructor: Raz

A study of the advent of Buddhism in China, its accommodating yet transforming response to Chinese traditions and values, the emergence of the authentically Chinese schools of T'ien-T'ai, Hua-yen, Ch'an, and Pure Land Buddhism, and the enduring Buddhist heritage of China. Open to all classes.

Cross-Listed as: REL 047

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 61.20 - The History of Jews in China

This course moves away from a Eurocentric lens of Chinese and Jewish history by uncovering a lost and global history of Chinese and Jewish encounters, from the early Sino-Middle Eastern-European interactions and through missionary and colonial endeavours in the late 19th and the first half of the 20th century, and then to China and Israel's relationship in the late 20th and 21st century. It situates China and the Jews in global and national historical narratives as imagined spaces and communities; ancient civilizations and cultures; as inspirations of European Enlightenment and as anti-images of European modernity; models of and space for nationalistic as well as revolutionary projects, as well as the Chinese and Jewish re-imaginings. Emphasising methodological issues and disciplinary dialogues, this course encourages students to reflect on the historical and political conditions of knowledge production while training students in innovative and boundary-crossing modes of inquiry.

Cross-Listed as: JWST 11.03

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 62.02 - Traditional Performance in China: Past and Present

Instructor: Gibbs

From folksong collection in Confucian times to current efforts at preserving Intangible Cultural Heritage, this course begins by introducing traditional ideas about the folk and folk culture in China, and how the relationship

between folk and elite has changed over time, with special emphasis on the twentieth and twenty-first centuries. Through the examination of local traditions of storytelling, epic singing, folksongs, ritual, and local drama from various time periods and geographical areas, students will gain a deeper, more nuanced understanding of the diversity of regional and ethnic expressive forms within China and how they continue to develop over time through the present day. During this course, you will also become familiar with important theories from folklore studies and learn to apply them in analyzing performances and texts—skills that can be fruitfully extended to both personal and professional areas of your life in the future.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 62.03 - Chinese Painting

This course surveys the Chinese painting tradition, from the second half of the first millennium BCE to the present. Following a dynastic timeline, the course covers important painting genres including funerary, religious, figures and portraiture, landscape, ink, bird-and-flower, and oil painting and considers them in the context of the shifting historical and cultural context of China. Key themes of the course include the relationship between the art of painting and religious beliefs, political ideology, self-expression, premodern painting theories and criticism, and encounters between the East and the West.

Cross-Listed as: ARTH 34.02

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.06 - Exploring Korea Through Film

Instructor: Kim

This course explores cinematic representations of Korean history and the diverse interpretations of social, cultural, and political issues portrayed in modern and contemporary Korean films. The course is structured by thematic issues, including: Korean ideas about politics and monarchy, North Korea's self-identity, rapid industrialism, South Korea's democratic movement, and Korean's concept of love. The class will view Korean films, and also read novels depicting similar issues and compare and contrast the theatrical and literary representations.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 62.07 - Introduction to Korean Art

Instructor: Kim

This course will introduce the arts and culture of Korea from the prehistoric period through the twentieth century. Significant examples of painting, ceramics, sculpture, and architecture will be closely examined in their political, social, and cultural contexts. We will explore how East Asian motifs were incorporated into traditional Korean art. We will see how Korea struggled to find its artistic identity within the international context during the 20th century.

Cross-Listed as: ARTH 32.11

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.08 - Modern and Contemporary Korean Art

Instructor: Kim

This course examines the art and culture of Korea from the late nineteenth century through the twentieth century. During this period Korea experienced the fall of its 500-year-long dynasty, annexation to Japan, the Korean war, division into two Koreas, and internationalization/globalization. The class will explore how visual art, including paintings, photographs, posters, ceramics, and film, reflected and expressed the political, socio-economic, and cultural changes and concerns of each period, in both South and North Korea.

Cross-Listed as: ARTH 62.20

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.09 - Krieger's Virtual Girlfriend: Japanese Anime and the Idea of the Posthuman

Instructor: Washburn

An examination of major trends in popular visual culture in Japan since the 1980s focused on the growth in production and distribution of animated films, tv series, and video games. Screenings will include works by Miyazaki Hayao, Rintaro, Takahata Isao, and Kon Satoshi. Readings will include both critical and historical sources that will provide the social and economic contexts for the development of the anime industry, theories of animation, and the global impact of Japanese popular culture .

Cross-Listed as: FILM 47.19

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.10 - Sacred Art and Architecture of Japan

Instructor: Hockley

This course examines Shinto and Buddhist architectural, sculptural, painting and print traditions from the prehistoric to the modern era. The primary emphasis will be on the relationship of these arts to their doctrinal sources and the ritual, social, and political contexts in which they were created and utilized.

Cross-Listed as: ARTH 32.21

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.11 - The Japanese Painting Tradition

Instructor: Hockley

This course provides a comprehensive introduction to the Japanese painting tradition. Surveying a broad range of themes, formats, and styles and exploring the relationship

between indigenous sensibilities and the traditions Japanese artists borrowed from continental Asia and the West, it defines the unique aesthetic experience offered by Japanese sacred and secular painting. Its focus on patronage and studio practice emphasizes the social, political, and cultural processes that underscored important developments in the painting tradition.

Cross-Listed as: ARTH 32.22

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.12 - Japanese Prints

Instructor: Hockley

A survey of the Japanese print tradition from its inception in the seventeenth century through modern prints in the early twentieth century, this course emphasizes the relationship between prints and the political, social, and cultural milieu in which they circulated. The curriculum includes applications of recent critiques and theoretical approaches from fields as diverse as sexuality and gender studies, mass culture and media studies, aesthetics of popular arts, and the sociology of consumption.

Cross-Listed as: ARTH 62.30

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 62.13 - Women, Gender, and Art in East Asia

Instructor: Kim

This course will focus on women as the subjects, the creators, and the patrons of art in China, Korea, and Japan from the 16th century to the present. It will be organized chronologically, culturally, and thematically. This will involve an exploration of powerful matrons of art and their aspirations, a historical survey of women artists and their artistic contributions, and an examination of the religious and secular images of women and its limitations. The course will also look at contemporary artists and investigate their artistic discourses, messages, and experimentations. Extensive attention will be given to the creation, modification, and persistence of these images throughout history, due to various social, economical, psychological, and intellectual conditions. This course will develop students' thinking skills in the history of art and improve their ability to conduct research and communicate both orally and in writing within the discipline.

This course requires no previous coursework or experience, but is intended for those who like interdisciplinary approaches to art and culture.

Cross-Listed as: ARTH 62.81

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 63.01 - Asian Medical Systems

Instructor: Craig

This course investigates systems of healing practiced in, and derived from, Asia. We will focus primarily on three Asian medical systems: Ayurveda, Chinese medicine, and Tibetan medicine. We will strive to understand how these medical systems are based on coherent logics that are not only biologically but also culturally determined. We will also analyze the deployment of these medical systems in non-Asian contexts, and examine the relationship between Asian systems and "western" biomedicine.

Cross-Listed as: ANTH 045

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.01 - Cultural Struggles in Colonial Korea

Instructor: Kim

This course explores Korean history between 1876 and 1945, as Korea entered the modern period. First, we will examine how Japan, China, and Korea responded to Western imperialism in the 19th century, and then how China and Korea responded to Japanese imperialism early in the 20th century. The second half of the class will explore the Japanese colonial government's assimilation policy during the colonial period in Korea, and how Korea was affected by and reacted to various aspects of this policy. The establishment of historiography, formulation of aesthetic and cultural canons, and shaping of images of Koreans and their land will be explored by examining diverse media including literature, photographs, exhibition catalogues, and other primary sources. The class will conclude with the continuing legacy of the Japanese colonial period. All readings are in English. No prior knowledge of Korea or Korean language assumed.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.03 - North Korea: Origins and Transitions

Instructor: Suh

This course explores the history of the Democratic People's Republic of Korea (North Korea) from a global perspective. Topics include the Japanese colonial legacies; liberation, division, and foreign occupation between 1945 and 1950; the meanings of the Korean War; comparing Kim Il-Sung's North Korean revolution with Park Chung-hee's state building in the South; the reality of "Self-Reliance"; social control and everyday life; and issues around human rights.

Cross-Listed as: HIST 78.02

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.04 - Christianity in Korea

Instructor: Suh

This course examines Korean Christians' beliefs and practices, which have shaped and brought tensions to current socio-religious phenomena. Topics include the Korean origins of Christianity, the encounter between Catholicism and Neo-Confucianism in the eighteenth century, Protestant missionaries' role in medicine and education, the rise of nationalism and Christianity under Japanese colonialism, churches in North Korea, Pentecostalism under South Korea's rapid industrialization and democratization, Korean missionaries around the world, and Christian musicians and entertainers in Korea, as well as the interface between gender and Korean Christian culture.

Cross-Listed as: HIST 78 REL 32.01

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 64.05 - The Two Koreas, 1948-Present

Instructor: Suh

This course explores the emergence of the two Koreas, from a global perspective. Beginning with the legacies of the Chosŏn Dynasty, we will examine the impact of Japanese colonialism on the divergence of the two nation-states: the Republic of Korea (South Korea) and the Democratic People's Republic of Korea (North Korea). Analyzing scholarly writings and primary sources, the course will focus on the domestic and international processes through which the two regimes clashed and competed in the context of the Cold War. We will primarily focus on drastic differences manifested between the two countries' ideologies, cultures, and political economies, but also pay attention to unexpected parallels experienced by Koreans across the hostile division. Students will pursue a final research project, in consultation with the instructor, on a comparison of their choice related to the themes of this course. No prior knowledge of the Koreas or the Korean language is expected.

Cross-Listed as: HIST 78.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.08 - The History of China since 1800

Instructor: Lu

This survey course traces China's social, political, and cultural development from the relative peace and prosperity of the high Qing period, through the devastating wars and imperialist incursions of the nineteenth century, to the efforts, both vain and fruitful, to build an independent and powerful new nation. Open to all classes.

Cross-Listed as: HIST 05.03

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.09 - Late Imperial China in Global Context

China's history, from the 3rd century BCE to the twentieth century, examined in the context of global developments in demography, economy, urbanization, technology, trade, and the arts. Open to sophomores, juniors, and seniors.

Cross-Listed as: HIST 072

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.11 - The Emergence of Modern Japan

Instructor: Ericson

A survey of Japanese history from the mid-nineteenth century to the present. Topics to be covered include the building of a modern state and the growth of political opposition, industrialization and its social consequences, the rise and fall of the Japanese colonial empire, and the postwar economic 'miracle.'

Cross-Listed as: HIST 05.05

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.12 - Postwar Japan: From Occupied Nation to Economic Superpower

Instructor: Ericson

This course examines the internal and external forces that have shaped Japan's government, economy, and society since 1945. Topics to be treated include American Occupation reforms, the conservative hegemony in politics, rapid economic growth and its costs, the mass middle-class society, and Japan's changing world role. Open to all classes.

Cross-Listed as: HIST 79

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.13 - Intellectual History of East Asia

A comparative exploration of Chinese and Japanese thought, from the formation of Confucianism in the Warring States period to the confrontation between traditional thought and the imported ideologies of the twentieth centuries. In writing assignments, students may concentrate upon either Chinese or Japanese topics. Open to sophomores, juniors, and seniors.

Cross-Listed as: HIST 074

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 64.14 - Slaves and Rebels in Korea, 1392-1910

Instructor: Suh

This course explores the history of Choson Korea (1392-1910) through the experiences of outcasts and commoners. By examining the desires and despair of peasants, slaves, rebels, entertainers, and religious minorities, this course

assesses the foundation of the state and the operation of society as manifested at the margins of society. How did the religious and intellectual heritage of Korea legitimize hereditary status, slave ownership, gender division, and regional discrimination? In what ways did ordinary people conform to or struggle against elite governing? Does the longevity of the Choson dynasty testify to the successful control of the status system by those at the top? Or does the stability elucidate social mobility and dynamic interactions across the status divisions? Focusing on various status groups illuminates the mechanisms of domination, compliance, and resistance carried out at the micro level. The experiences of the underrepresented shed light on the transition to modern Korea and present the complicated process of constructing Korean identity over time. A background in Korean history is not required.

Cross-Listed as: HIST 78.04

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.15 - Nationalism and Revolution in China, 1890-Present

Instructor: Lu

This course examines the dynamics of China's revolutionary ideology in the context of the modern world through the lens of nationalism. By employing a range of discussions of China's nationalist discourse, we will encounter and construe the voices of various groups of people for whom the rhetoric and ideology of nationalism emerged as a question or dilemma, developed as a motivating force, and fermented as a problem. The course proceeds chronologically, beginning in the late nineteenth century and moving to the present. Each week's readings, including primary and secondary texts, also discuss particular aspects of nationalism and its connection to China's revolutionary agenda. Focusing on China and its Asian surroundings, this course will explore major historical themes, including reform versus revolution, intellectuals and society, center and locality, ethnicity and identity, violence and confrontation, foreign relations and national strategies, charisma and mass movements, and nation-building and propaganda. Not open to students who have received credit for HIST 90.16.

Cross-Listed as: HIST 72.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 64.16 - China to 1800

Instructor: Lu

This course explores China's history from its ancient origins to the end of the 18th century. It examines the profound economic, social, and cultural changes that have shaped China over time, including geography, dynastic rise and fall, relationships with nomadic societies, political

philosophy, gender and family dynamics, and global interactions. The course also investigates the contemporary use of China's pre-modern history in politics and popular culture. Through primary sources, field trips, and digital activities, students will develop historical analysis and argumentation skills. No prior knowledge of Chinese culture, history, or language is necessary.

Cross-Listed as: HIST 72.04

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 67.01 - Politics of Japan: A Unique Democracy?

This course offers a survey of Japanese politics with a focus on understanding the electoral and policy-making processes in Japan from theoretical and comparative perspectives. No prior knowledge of Japanese politics is required. The course will explore electoral systems and voting behavior, candidate selection and electoral campaign, dynamics of party competition, executive-legislative relationships, local politics and central-local relationships, the roles of the mass media and civil society in policy making, etc.

Cross-Listed as: GOVT 40.03

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 67.03 - Conflict, Control, and Controversy in Chinese Politics

Instructor: Rezvani

This course introduces students to key concepts, actors, and events in Chinese politics. What is the nature of accountability and informal institutions within the Middle Kingdom? Does democracy or China's current system of rule have bigger advantages? What are the key sources of China's remarkable economic growth? What are China's strategies in light of its challenges in Taiwan, Hong Kong, Xinjiang, and the South China Sea? Students will confront these and a wide range of other pivotal economic, security, and global controversies. Students will debate and assess the merits of China's policies on issues such as the China model, economic growth, authoritarian resilience, decentralization, informal institutions, media censorship as well as the relations of China's government with domestic, regional and international actors.

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 67.10 - Cultures of Business, Labor, and Wealth in Contemporary China

Instructor: Gibbs

This course examines discourses of work, wealth, ethics, and status in contemporary Chinese society through the lenses of ethnography, film, and literature. Topics covered include the effects of market reform and neoliberal desires on conceptions of consumption, philanthropy, and "social quality" (*suzhi*), ways in which gendered identities are negotiated in different professions, the experiences of migrant workers in Chinese cities, and the intersection of entrepreneurship and the arts.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 67.11 - Business History of Modern China

Instructor: Lu

This course explores China's transformation through business history, examining how enterprises have navigated the nation's blend of capitalism and single-party rule. It delves into cycles of prosperity and decline, from the Qing Dynasty to its current status as a global economic power. Using case studies, the course analyzes diverse actors — from family firms to foreign traders, ordinary workers to tech giants — to understand China's model of capitalism and socialism and its global impact.

Cross-Listed as: HIST 72.06

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 67.20 - The Commodification of Japan's (Self-) Image in the Global Marketplace

Instructor: Schmidt-Hori

The images of Japan comprise many dichotomies: infantile schoolgirl femininity and curmudgeon-samurai masculinity; voracious neophilia and stubborn neophobia; embracement of foreign tourists and rejection of immigrants; cool and weird; rude and polite; stoic and hedonistic; and more. Such paradoxical images of Japan, accurate or exaggerated, circulate around the globe, creating global discourses of Japanese-ness, a mirror for Japan to see itself. The massive network of images and narratives about Japanese-ness provides rich marketing cues for government agencies, private industries, and creators of cultural products and help them strategize the process of commodifying Japan's self-image in the global marketplace.

This course traces the evolution of Japan's self-image, especially since 1945, and analyzes how Japan's changing self-images have influenced the nation's economic strategies over time. We will pay particular attention to how the tangible and intangible products of geek culture (*otaku*) and girly aesthetics (*kawaii*), which were marginalized in the West until recently, came to be mainstreamed globally since the early 2000s.

This class is open to all students who are interested in Japanese culture, business, or both. Though there are no prerequisites, ASCL 10.03 is recommended.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 69.04 - Chinese Religions in Taiwan

Instructor: Raz

This course examines Chinese religious traditions as practiced in Taiwan. Due to its particular history, Taiwan has preserved a tremendously rich, varied, and complex religious landscape. While most of these religious traditions had originated in China over the previous millennia, their current conditions in Taiwan present us with an almost unique laboratory of traditional religions within contemporary, modern settings.

The course surveys developments of traditional Chinese religions and their current practices in Taiwan. We will discuss the diversity and complexity of Chinese religions, the development of popular, Confucian, Daoist and Buddhist traditions and practices in China and their transmission to Taiwan.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 69.23 - Shogun and Samurai: Japan in the Age of the Warrior

This course explores the origins and development of the warrior class that dominated and redefined the political economy and high culture of Japan between the twelfth and nineteenth centuries. Through readings, discussions, lectures, and films, we will examine such topics as the rise of the samurai, the transition from imperial to warrior government, the evolution of samurai values and beliefs, and the legacy of warrior rule and culture for modern Japan.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 69.24 - Japan at the Margins: Place and Displacement in Postwar Film and Fiction

Instructor: Washburn

This course examines cinematic and literary representations of displaced people living on the margins of Japanese society and of the spaces they are forced to inhabit. Vagabonds, gangsters, sex workers, rogue cops, war widows, dispossessed lovers, abandoned children—these have all been recurring figures throughout Japanese cultural history, but they have a occupied place an especially important place in film and fiction from the late 1940s to the present day. Aesthetic representations of the plight of the displaced challenge the dominant postwar narrative of Japan as a successful liberal democracy and economic superpower.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 70.01 - Sacred Architecture of Asia

Instructor: Hockley

This course provides an introduction to the sacred architecture of Asia through a series of case studies that include Buddhist monasteries, Hindu temples, Mosques, Daoist and Confucian temples, Shinto shrines, funerary architecture, and the sacred dimensions political authority as manifested in palaces, city plans, and mausolea. The pan-Asiatic nature and long historical development of Buddhism, Hinduism, and Islam affords opportunities to examine national and sectarian adaptations of architectural practices. Focusing on relationships between sacred architecture and religious doctrine, ritual practice, and the communities that use sacred sites this course introduces an array of analytical approaches to sacred architecture that students will learn to employ in class discussion and written assignments. This course has no prerequisites and assumes no prior experience with Asian religions or architectural studies.

Cross-Listed as: ARTH 38.01

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

ASCL 70.02 - East Meets West

Instructor: Kim

This class explores the interaction between the cultures of East Asia and the West from as early as c. 200 BCE to the early 20th century. The course consists largely of four themes: the Silk Road and the Arts, the Pottery Stories, the Jesuits and the Arts, and Asian Arts in Europe. The class starts with the Silk Road, the world's first great superhighway that from ancient times linked East Asia to the Mediterranean World across Central Asia, and examines how ideas, art, and religions traveled and were transformed through their journey. The second theme, the Porcelain stories, conveys how aesthetics, technology, designs and motifs were transmitted from East to West and vice versa. We will ask questions, such as: Why was porcelain so desirable? Where did porcelain rank in the hierarchy of art forms and materials in Asia and Europe? How much did a piece of porcelain cost at any moment in time? Why did Japan and Korea have "the Pottery War" and what was the significance of that war in East Asia (and Europe)? The third theme, the Jesuits and the Arts, looks at the hybrid blend of two or more traditions and the artistic productions that arose from those blends. We also will examine together the paintings of Asian and European artists, the paintings of European artists on Asian themes with a traditional Asian medium, and the work of Asian painters' on European subject matter with a European medium. The last theme, Asian art in Europe, scrutinizes the Western reception of Asian subjects, motifs, designs,

and aesthetic values, and their appropriation for artistic productions. European interpretation (or imitation) of Chinese arts, so called *Chinoiseries*, and the Japanese influence on European art, known as *Japonism*, will be closely examined. Through lectures, readings, and films, we will explore the historical and artistic links between East and West and some selected art associated with those routes. This course requires no previous experience, but is intended for those who like interdisciplinary approaches to art and culture. No previous coursework is required.

Cross-Listed as: ARTH 38.03

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 70.03 - Asian Animation as Socio-Political Artifact

Because animated films have traditionally been targeted at children, animators in Asia have often been able to sidestep much of the political control exercised by some of their more centralized governments to create sophisticated artistic works that speak as much to educated adults as they do to children. The course will feature the most interesting of these works from China, Japan, and Korea, and students will analyze them within a socio-political and cultural context. Particular attention will be paid to the development of both originality and argumentation in student papers and class participation.

Cross-Listed as: FILM 42.08

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 70.04 - Tokyo and Shanghai as Ideas: Urban Space/Imagined Modernity

Instructor: Washburn

Tokyo and Shanghai are not just major centers of political and economic activity. They are also ideas, functioning as imagined space that is backdrop for and symbol of the desires, aspirations, and dislocations characteristic of contemporary Asian societies. This course examines the hold Tokyo and Shanghai have had on East Asian writers, artists, and intellectuals, and the role these metropolises currently play in the globalization of modern culture.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ASCL 70.05 - China in the Japanese Imagination: Translations of Identity

Instructor: Washburn

China has profoundly influenced every formative element of identity in Japan: language, legal and political institutions, religion, philosophy, and the visual and literary arts. This course surveys key historical moments -- the Taika Reforms of the seventh century, mid-Heian appropriations of Tang court society, Tokugawa

adaptations of Ming and Qing culture -- to examine how the process of translating Chinese cultural forms radically reshaped Japanese society and impacted the vexed modern relationship between the two nations.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ASCL 70.06 - Magic and Supernaturalism in Asian Literature and Film

Instructor: Chin

This course examines magical and supernatural elements in literature and films from China, Japan, India and Southeast Asia. It studies artistic, psychological and political implications and interregional traditions of folklore and fiction. Literary texts include Pu Song Lin's *Strange Tales from a Studio*, Catherine Lim's *The Howling Silence*, Batin Long bin Hok's *Jah Hut Tales* and Tunku Halim's *Dark Demon Rising*. Films may include Akira Kurosawa's *Dreams*, Masaki Kobayashi's *Kwaidan* and contemporary works such as Chan Wook Park's *Thirst*.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ASCL 70.07 - Asian Performance Traditions

Instructor: Chin

This course studies the performance traditions of Asia, focusing on China, Japan, Indonesia and India. Classical forms studied include Noh, Bunraku, Beijing opera, Sanskrit drama, Balinese dance and Javanese puppet theater. Attention is paid to social, religious and aesthetic influences on these traditions, theories on which they are based, the history behind the theatrical practices, and training and dramatic techniques. Students gain an appreciation of the rich variety and scope of theatrical conventions of Asia.

Cross-Listed as: THEA 24

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 70.10 - Music from the Lands of the Silk Road

Instructor: Levin

The Silk Road, the trans-Eurasian network of trade routes that stretched from Europe to Japan, and from South Siberia to South Asia, was not only a conduit for trade in luxury goods, but also for technological innovation and cultural exchange, including in the domain of music. This course addresses selected musical styles, genres, and repertoires from the lands of the Silk Road and the way they have been shaped by contact and interaction with other cultures. Examples are drawn from contemporary and historical musical traditions of the Middle East, Central Asia, the Caucasus, India, Tuva and Mongolia, China, Korea, and Japan. Where possible, guest artists are invited

to offer live musical demonstrations. No prior musical experience is required.

Cross-Listed as: MUS 45.06

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 70.12 - Literatures and Cultures of Asian Borderlands

Instructor: Xie

Borderlands are where modern nation-states are geographically defined and where their orders are both challenged and reinforced. This course studies the formation of modern nations in Asia and its consequences in the twentieth century from a “borderland perspective.” The cases to be studied include Hokkaido in Japan, Manchuria in mainland China, the Partition of India and Pakistan, the division of the two Koreas, the Taiwan island, and the highlands connecting East and South Asia commonly referred to as Zomia. The long historical process from colonial expansion to post-war demarcation across Asia, along with the ordinary people’s experience of this process, is witnessed by writers and artists from the borderlands with distinctive creativity and criticism. The disciplinary perspectives involved in the course range from literature, film, and art to history, anthropology, and linguistics. Enrollment is open, and there are no prerequisites. You do not need to know any Asian language to take the course.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ASCL 70.16 - Eat, Drink, Japan: An Interdisciplinary Approach

Instructor: Ericson

This course is an interdisciplinary survey of food and beverage in Japan from premodern times to the present. Through lectures, readings, discussions, and films, we will explore the subject from the multiple perspectives of history, culture, and contemporary politics and society. The topics covered will range from food production and consumption to religious and artistic representations and the construction of cultural identities in Japan’s past and present.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 70.17 - Women in Asian Cities

We live in a time of increasing urbanization and globalization, paralleled with prevailing poverty and uneven access to infrastructure. In this course, we will explore these issues through a focus on women across Asia. We will also examine how politics of race, class, caste, religion, and migration status shape urban experiences for these women. Major thematic areas for this course include migration, informal economies, mobility, culture, and urban nature. The class will draw on academic

scholarship, newspaper articles and popular culture to introduce gendered perspectives on cities across Asia including Istanbul, Tehran, Mumbai, Hong Kong, and Manila.

Cross-Listed as: GEOG 80.06 WGSS 37.06

Degree Requirement Attributes: Dist:SOC; WCult:CI

ASCL 70.18 - Social Revolutions East and West: Japan and the United States in the 1960s

Instructor: Dorsey

This course examines social movements in the United States and Japan during the turbulent 1960s. Activists and artists engaged with civil rights causes, anti-war movements, and campaigns to end discrimination of all sorts, blending these political agendas with the production of culture and the deployment of new technologies. As a result, new cognitive praxes came into place, and the patterns of knowledge production were forever changed. With a focus on the genres of music, comics/manga, and literature as they evolved in America and Japan in the 1960s, students in the course will learn to recognize how knowledge and worldviews are shaped by the systems of culture that generate them. There are no prerequisites for this course.

Cross-Listed as: COLT 57.10

Offered: Winter.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

ASCL 70.20 - Buddhist Meditation Theory

Instructor: Seton

The Buddhist theory of meditation was first articulated 2,500 years ago and has since been adapted to numerous cultural contexts in Asia and the West. This course offers a survey of the three traditional religious frameworks for meditation practice, but also pays some attention to the secularized applications of mindfulness techniques in modern society and to the current status of scientific studies on the effects of those techniques. The course primarily concerns theoretical questions and controversies surrounding Buddhist meditation, but students will get the chance to experiment with secular mindfulness techniques outside of class and to attend a field trip to a local Buddhist temple. Optional secular meditation, normally MWF 8am-9am.

Cross-Listed as: REL 41.04

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 70.22 - Developing Vietnam: History, Environment, and Culture

Instructor: Miller

This interdisciplinary course explores the history, society, and culture of Vietnam, with particular attention to the theme of *development* in Vietnam since the 1980s. It is part of a teaching and learning partnership between Dartmouth and Fulbright University Vietnam, a Vietnamese liberal arts university in Ho Chi Minh City. Throughout the term, Dartmouth and Fulbright students will interact and co-learn with each other via online discussions, collaborative assignments, and a small group research project.

Prerequisite: This course is only open to students who have been accepted for the winterim FSP in Vietnam.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 70.23 - Travel, Migration, and Diaspora in the Transpacific Asias

Instructor: Eom

This interdisciplinary course provides an overview of migration and diaspora studies in Asia and across the Pacific. The course places travelers and migrants at the heart of modern Asian history and culture while examining the social, cultural, political, and economic implications of the movement of people across geographic boundaries. The course deals with a series of case studies that include, but are not limited to, imperial travelers, missionaries, colonial settlers, labor migrants, American GIs, international adoptees, orphans and refugees, transnational domestic workers, return migrants, and Asian diasporas in the Americas. With a strong emphasis on transpacific migrants and their residential, commercial, religious, and social spaces, the course will engage in an interdisciplinary dialogue and utilize a range of activities and media—site visits, walking tours, interviews, autobiographies, literature, and film—to offer students fruitful methods for understanding multifaceted aspects of transnational connections and diasporic identities that migrants have cultivated between Asia and the world.

Cross-Listed as: GEOG 30.03

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ASCL 70.24 - Asian American Art and Architecture

Instructor: Eom

This course introduces students to the politics of Asian American identity and visual culture in the twentieth century. With an overview of social and legal contexts of Asian America, from immigration policies and residential exclusion to Japanese American internment to struggles over citizenship rights, the course explores what it meant to be Asian American and how Asian American art and architecture have emerged at specific historical moments. By discussing case studies including Japanese American

internment camps, Chinatowns, the Vietnam Veterans Memorial, and works of artists and architects such as David Hyun, Yong Soon Min, Maya Lin, Poy Gum Lee, Isamu Noguchi, Yun Gee, Yasuo Kuniyoshi, and Mine Okubo, students are expected to examine how Asian American and diasporic artists strove to define their identity and imagine their place in the material world.

Cross-Listed as: ARTH 39.01

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

ASCL 70.25 - Translating East Asian Languages: Theory and Practice

Instructor: Dorsey

Translation is an ancient practice tied intimately to interpretation, cross-cultural understanding, colonization, proselytization, and business. When it crosses vast cultural divides such as between Asia and the West, the challenges are amplified, the issues complicated, and the stakes raised. What are the practical, cultural, and philosophical issues involved? This course explores these questions by studying theories of translation and the history of it the East Asian context while also offering an experiential component in the form of various translation assignments ranging from technical manuals, fiction, and religious texts to poetry, song lyrics, and humor. The focus will be on Chinese, Korean, and Japanese; students hoping to work with other Asian languages should consult the instructor before enrolling.

Cross-Listed as: COLT 19.07

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; Lang:LRP; WCult:NW

ASCL 70.26 - Apocalyptic Thought

Instructor: Raz

In this class we will examine ideas about the cataclysmic end of the world, possible ways to survive such calamities, or to bring them forth appear in several religious traditions in East Asia. This course examines a variety of such eschatological and salvific ideas, beginning with Daoist and Buddhist scriptures in medieval China, proceeding through various religious rebel movements to modern cults such as Aum Shinrikyo in Japan and Falun Gong in China.

Cross-Listed as: REL 49.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 70.27 - Geographies and Ecologies of Warfare in Asia & the Pacific

This course surveys the ecological and historical impacts of U.S.-occupied military bases in Asia and the Pacific Islands, through the activism and scholarship of Asians and

Pacific Islanders. It brings together the fields of critical Asian studies, Asian American studies, geography, gender studies, and Indigenous studies to comparatively analyze the place-based forms that U.S. militarism, settler colonialism, and empire can take in U.S.-occupied American Samoa, Bikini Islands, Guåhan/Guam, Hawai'i, Korea, Okinawa, Vietnam, and the Philippines. Guided by the course instructor, students will engage Asian and Pacific Islander scholarship through course readings, films, podcasts, poems, and guest lectures featuring Asian and Pacific Islander demilitarization organizers. The course will culminate in a final Story Maps project that analyzes a social movement discussed in class and presents the group's findings about it in multimedia form.

Cross-Listed as: GEOG 40.06

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 70.28 - Crossing the Pacific: Empire, Labor, Migration

Instructor: J. Miller

This course explores how trans-Pacific interactions shaped both the United States and the Pacific region from nineteenth-century gold rushes to the U.S. war in Vietnam. In particular, it examines the relationship between migration, race, and empire, with a focus on how U.S. colonialism and imperialism depended on migration and labor of Asian and Pacific peoples. This discussion-based course uses a wide array of historical sources, including speeches, laws, photographs, oral histories, and maps.

Cross-Listed as: HIST 09.05

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

ASCL 70.30 - The Business of Development in Asia

Instructor: Upadhyay

From the economic miracles of the East Asian Tigers to the rise of the supersize economic powerhouses of China and India, the Asian continent has captured the world's attention as a dynamic site for economic growth and development. This course focuses on the diverse developmental experiences taking place on the Asian continent to offer students a critical examination of the theory and practice of economic development.

The course begins with the fundamental question – what is development? – and then delves into its fraught historical origins, first as a practice of colonialism and then as a mode of nation-building. We then cover some of the most influential paradigms of development theory, evaluating each with case studies from the Asian region. The course ends with a contemplation of some of the most critical

challenges to developmental pursuits today: what does it mean to develop in a world facing ecological devastation and where inequalities are growing at breakneck speed? Open to all classes.

Cross-Listed as: SOCY 022

Offered: Fall.

Degree Requirement Attributes: Dist:INT

ASCL 70.31 - Art, Business, and Soft Power in Asia

Instructor: Kim

This class examines the intersection of art, business, and soft power through two key areas of inquiries. First, we explore how Asian art acquires both symbolic and economic value across various institutional contexts, including art fairs, museums, and commercial galleries. Through an analysis of pricing, authentication, interpretation, and marketing strategies, we will investigate how artistic value is created, negotiated, and sustained in these spaces.

The course includes guest speakers from diverse fields, such as artists, curators, museum and gallery directors, and corporate professionals. An optional two-day field trip to New York offers students the opportunity to visit auction houses and commercial galleries specializing in Asian art and attend lectures by art management experts. ASCL will cover accommodation and transportation for the trip.

Cross-Listed as: ARTH 62.91

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

ASCL 70.50 - Disputes, Power, and Diplomacy in Asia

Instructor: Rezvani

This course will focus on diplomatic relations, disputes, as well as key aspects of political, military, and economic power in Asia. The course will include research, writing, and debates on the relations between Asian powers and the status of sub-state zones of conflict. It will critically examine the interplay of Asian powers, including China, the US, India, Japan, and North and South Korea. It will also evaluate a number of key zones of sub-state conflict in territories such as Kashmir, Hong Kong, Myanmar, Taiwan, the South China Sea, and Mindanao.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 80.01 - Colonial Photography

Instructor: Hockley

This course examines the uses of photography by colonial governments, anthropologists, commercial photographers, and tourists in nineteenth-century Asia and the Middle

East. It also addresses indigenous uses of photography that conform with and/or react against colonialist uses of the medium. The primary focus of the course is on photographs but consideration is also given to the diffusion of photographic images into other media including news publications, government documents, scientific studies, travelogues, fiction, textbooks, and museum displays.

Degree Requirement Attributes: Dist:INT or ART;
WCult:CI

ASCL 80.03 - Arts and Culture of Korea's Last Dynasty

Instructor: Kim

This course provides an introduction to the arts and culture of the Joseon dynasty (1392-1910), which was founded on Confucianism. We will examine Confucian philosophy and how Confucian ideas shaped the social hierarchy, gender roles, and aesthetic values through exploration of the architecture of royal palaces and aristocratic houses, paintings both sacred and secular, ceramics, textiles and other crafts. Use of color, symbolic motifs, and stories in the arts and culture will be investigated. Understanding Korea's final 500-year dynasty will deepen your comprehension of contemporary Korean culture as it manifests the legacy Joseon Korea.

Cross-Listed as: ARTH 82.01

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

ASCL 80.05 - Regional Identity in Modern Chinese Literature

Instructor: Gibbs

How does the concept of "region" in contemporary Chinese literature connect to discussions of gender, ethnicity, tradition/modernity, country/city, and north/south? In this course, we will examine ways in which contemporary writers have evoked place through literature, looking at how social discussions occur across/between spaces. Students will be encouraged to explore authors, places, and subtopics related to their own interests in the final papers. No knowledge of the Chinese language is required for this course, although students who can read Chinese are encouraged to make use of Chinese-language materials.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 80.07 - The History of Development in Asia

Instructor: Miller

For more than a century, development has been a central theme in the study of Asian politics, culture, and societies. But what is "development," exactly? This seminar explores the history of development in Asia by

treating development as a species of politics, rather than a socio-economic process. In the assigned readings and discussions, we will examine the complex interactions between development and empire in various places in Asia, in both colonial and postcolonial contexts. We will also compare recent efforts by scholars to develop new methodological approaches to the study of development ideas and practices in Asia. In addition to completing the assigned readings, each student will write an article-length paper about a particular topic or event in the history of development in Asia. This paper must be based on original research in primary sources.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 80.08 - Imperialism in Modern East Asia

Instructor: Ericson

An examination of Western and Japanese imperialism in East Asia from the Opium War to the Pacific War. Subjects to be treated include the imposition of unequal treaties, the "scramble for concessions" in China, the creation of Japan's formal and informal empires, and the rise and fall of the Greater East Asia Co-Prosperity Sphere. Open to all classes.

Cross-Listed as: HIST 77

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ASCL 80.09 - War and Peace in Korea, 1231-1876

Instructor: Suh

This seminar examines Korea's responses to the three foreign intrusions: The Mongol Invasions of 1231-1271, the East Asian War of (or the Japanese Invasions of) 1592-1598, and the Manchu Invasions of 1627-1636. When compared, the three moments of national crises elucidate interregional forces that shaped political, diplomatic, and cultural changes in the Korean peninsula. Korea's experiences of conflicts, negotiation, and endurance shed light on the meaning of being a neighbor to the rising and declining empires in East Asia.

Cross-Listed as: HIST 96.40

Offered: Fall.

Degree Requirement Attributes: DIST:SOC; WCult:NW

ASCL 80.10 - Asian Art Herstory: Gender, Culture, and Politics

Instructor: Kim

This course looks closely at women as subjects and creators in the realm of art from the pre-modern period to contemporary times in Asia. The class will initially examine how Confucian ideology defined the social roles and values of women and how women and their activities

were depicted visually and confined architecturally. Then, through study of the global women's rights and feminist art movements in the context of world economic and political history, the class will scrutinize the rise of Asian "New Women" and "Modern Girls" (the Asian counterparts of American "flappers" and French garconnes) in the 1920s and 1930s, and look at individual and groups of women artists who expressed their social and political agendas through their art. Extensive attention will be given to the creation, modification, and persistence of certain images throughout history, in relation to various social, political, psychological, and intellectual conditions. The class will also see how modern women artists have developed new and diverse media, including textiles, films and photography, installation and performance, and other hybrid materials, in reaction to a long patriarchy in fine art, male-gazed artistic rendering, and traditional cultural and social norms.

This course does not require prior knowledge or experience in Asian history or languages, but it is designed for students interested in interdisciplinary approaches to art and culture. As a senior advanced seminar, it involves extensive reading, class discussions, and research presentations. The course is primarily offered to ARTH majors, who are expected to have a strong foundation in art history, though no prior knowledge of Asian history is necessary. It is also available to ASCL majors, who are not required to have taken an ARTH course but should demonstrate some pan-Asian expertise.

Cross-Listed as: ARTH 82.03

Degree Requirement Attributes: Dist:ART; WCult:NW

ASCL 80.12 - Religions on the Silk Road

Instructor: Raz

For centuries, travelers, merchants, and missionaries of various religions crisscrossed Asia along the so-called Silk Road, trading silk, horses, and spices while exchanging ideas about gods, divine powers, and efficacious rituals for securing the living and the dead. This class explores a variety these religious traditions, including Buddhism, Daoism, Christianity, Islam, Manicheism, Zoroastrianism, and Judaism. These discussions will also explore how religions, languages, and ethnic identities were understood in traditional Asia.

Cross-Listed as: REL 80.12

Degree Requirement Attributes: Dist:TMV; WCult:NW

ASCL 80.20 - The Tale of Genji

Instructor: Washburn

The Tale of Genji is a defining work of Japanese culture. Expansive in form, sophisticated in its depiction of the inner lives of its characters, challenging in its representation of ethical concerns and aesthetic ideals,

Murasaki Shikibu's masterpiece occupies a central place in one of the world's most important literary traditions.

I have several objectives for this course. First, to cultivate the practice of slow, close reading as a way to develop critical self-awareness of our own cultural/historical position vis-à-vis the text we will be studying and critiquing. Second, to foster a deeper understanding of the culture and history not just of Japan, but of Asia more broadly. Third, to help you develop important elements of writing and analysis: formulating productive questions; using comparative strategies to develop a thesis and support analysis; producing your own unique analytical voice and writing style. Finally, to increase your understanding of the social and symbolic differences that make meaning in literary art possible.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ASCL 89 - Independent Research

Instructor: ASCL Faculty

Independent research under the direction of members of the staff. Students should consult with a member of the staff in the term preceding the term in which the independent work is to be done.

Offered: Fall, Spring, Summer, Winter.

ASCL 90 - Honors Thesis I

Instructor: ASCL Faculty

The ASCL Honors Program consists of a two-term, two-course sequence comprised of ASCL 90 and ASCL 91, during which the student completes an honors thesis. To qualify for the Honors Program the applicant must have a GPA of 3.0 overall and GPA of 3.4 in the major. Admission to the program is contingent upon acceptance of the applicant's thesis proposal. Students should develop a thesis proposal in consultation with a prospective advisor. The primary advisor for an honors thesis must be an ACSL affiliated faculty member. Secondary advisors drawn from ASCL or other departments and programs are encouraged when the student's project warrants additional expertise. Proposal guidelines can be found on the ASCL website.

As part of the Honors curriculum, ASCL 90 and 91 carry high expectations regarding student performance with regard to writing, deadlines, accountability, and critical reflection. The thesis advisor will assess the student's progress at the end of the first term of the Honors course sequence. If insufficient progress has been made on the thesis, students will be dropped from the program and given a grade for the work completed in the first term. The grade can count toward the ASCL major but not as a substitute for the ASCL Culminating Experience. A public presentation of the honors thesis at the end of the second term is a requirement of the Honors program. Completion of both ASCL 90 and 91 replace the ASCL culminating

experience. ASCL 91 is an addition to ASCL's ten-course major.

Students wishing to pursue a fall/winter thesis should submit their proposal to the Steering Committee no later than the fifth week of their junior-year spring term. Proposals for winter/spring theses should be submitted no later than the fifth week of the applicants senior-year fall term. Admission to the Honors Program is by vote of ASCL Steering Committee.

Students are awarded one course credit for successful completion of this course upon completion of ASCL-091. Students register for ASCL-090 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for ASCL-091 the subsequent term to complete the coursework. A final grade will replace the "ON" in ASCL-90 upon completion of ASCL-091.

Offered: Fall, Spring, Summer, Winter.

ASCL 91 - Honors Thesis II

Instructor: ASCL Faculty

Students are awarded one course credit for successful completion of this course. Students who have registered for ASCL-090 register for ASCL-091 to complete the coursework. A final grade will replace the "ON" for ASCL-090 upon completion of this course for a total of 2 credits for ASCL-090 and ASCL-091.

Offered: Fall, Spring, Summer, Winter.

CHIN - Chinese

CHIN 1 - First-Year Courses in Chinese

Instructor: Chinese language faculty

An introduction to spoken and written Modern Standard Chinese. Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and the use of the basic patterns of speech. Intensive reading is conducted for textbook lessons. Grammar is explained, and written exercises given. Traditional characters are learned in Chinese 1 and 2; simplified characters are introduced in Chinese 3. Classes are conducted increasingly in Chinese. Mandatory student-run drill sessions meet Monday to Thursday for fifty minutes each day for all beginning Chinese language classes. Students who plan to use these courses to fulfill the language requirement may not take it under the Non-Recording Option.

Satisfactory completion of Chinese 3 fulfills the language requirement.

Offered: Fall.

CHIN 2 - First-Year Courses in Chinese

Instructor: Chinese language faculty

An introduction to spoken and written Modern Standard Chinese. Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and the use of the basic patterns of speech. Intensive reading is conducted for textbook lessons. Grammar is explained, and written exercises given. Traditional characters are learned in Chinese 1 and 2; simplified characters are introduced in Chinese 3. Classes are conducted increasingly in Chinese. Mandatory student-run drill sessions meet Monday to Thursday for fifty minutes each day for all beginning Chinese language classes.

Satisfactory completion of Chinese 3 fulfills the language requirement.

Prerequisite: CHIN 001 or placement via placement test

Offered: Winter.

CHIN 3 - First-Year Courses in Chinese

Instructor: Chinese language faculty

An introduction to spoken and written Modern Standard Chinese. Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and the use of the basic patterns of speech. Intensive reading is conducted for textbook lessons. Grammar is explained, and written exercises given. Traditional characters are learned in Chinese 1 and 2; simplified characters are introduced in Chinese 3. Classes are conducted increasingly in Chinese. Mandatory student-run drill sessions meet Monday to Thursday for fifty minutes each day for all beginning Chinese language classes.

Satisfactory completion of Chinese 3 fulfills the language requirement.

Prerequisite: CHIN 002 or placement via placement test

Offered: Spring.

CHIN 4 - Advanced First-Year Chinese

Instructor: Chinese language faculty

This course is designed for students with varying, minimal levels of competence in speaking, listening, reading, and writing. Weekly class hours include four sixty-five minute sessions with the master teacher and up to four fifty-minute drill and/or conversation sessions. There are weekly exams, a midterm, and a final, as well as writing assignments, oral presentations, and supplementary work assigned as needed. This course seeks to achieve two goals: 1) to help students equalize their levels of the required speaking, listening, reading, and writing skills; 2) to allow them to raise these levels and thereby significantly increase their understanding of Modern Standard Chinese.

Chinese 4 is an accelerated first-year course. Satisfactory completion of Chinese 4 satisfies the Foreign Language Requirement and places the student into the 20-level series.

Students who plan to use this course to fulfill the language requirement may not take it under the Non-Recording Option.

Offered: Fall.

CHIN 22 - Intermediate Modern Chinese (Second-year level)

Instructor: Chinese language faculty. Offered on China LSA+ in summer and also on campus in winter.

CHIN 22 and CHIN 23 cover a full second-year level course, using the textbook *Integrated Chinese, Level Two* and a variety of other materials. The course is designed for students who have completed CHIN 4 or the equivalent. Students who have only completed CHIN 3 may be eligible for this course with permission of the instructor. Class hours include four sixty-five or five fifty-minute sessions with the master teacher and up to four fifty-minute drill and/or conversation sessions. There are weekly exams, a midterm, and a final, as well as writing assignments, oral presentations, and supplementary work assigned as needed. This series is intended to raise the student's levels in speaking, listening, reading, and writing skills and, thereby, significantly increase their understanding of Modern Standard Chinese.

Prerequisite: CHIN 003 or CHIN 004 or instructor permission.

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 23 - Intermediate Modern Chinese (Second-year level)

Instructor: Chinese language faculty. Offered on China LSA+ in summer and also on campus in spring.

CHIN 22 and CHIN 23 cover a full second-year level course, using the textbook *Integrated Chinese, Level Two* and a variety of other materials. The course is designed for students who have completed CHIN 4 or CHIN 21 or the equivalent. Students who have only completed CHIN 3 may be eligible for this course with permission of the instructor. Class hours include four sixty-five or five fifty-minute sessions with the master teacher and up to four fifty-minute drill and/or conversation sessions. There are weekly exams, a midterm, and a final, as well as writing assignments, oral presentations, and supplementary work assigned as needed. This series is intended to raise the student's levels in speaking, listening, reading, and writing skills and, thereby, significantly increase their understanding of Modern Standard Chinese.

Prerequisite: CHIN 22 or instructor permission

Offered: Spring, Summer.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 31 - Advanced Modern Chinese (Third-year level)

Instructor: Chinese language faculty. Offered on China LSA+ in summer and also on campus in fall.

This course is not repeatable. Under some circumstances and with the permission of the instructor, this series (31, 32 and 33) may be taken non-sequentially. Readings will be selected from literary, political, and historical publications. There will be regular exams, writing exercises, oral presentations, and supplementary work assigned as needed.

Prerequisite: CHIN 23 or permission of the instructor.

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 32 - Advanced Modern Chinese (Third-year level)

Instructor: Chinese language faculty. Offered on China LSA+ in summer and also on campus in winter.

This course is not repeatable. Under some circumstances and with the permission of the instructor, this series (31, 32 and 33) may be taken non-sequentially. Readings will be selected from literary, political, and historical publications. There will be regular exams, writing exercises, oral presentations, and supplementary work assigned as needed.

Prerequisite: CHIN 23 or permission of the instructor.

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 33 - Advanced Modern Chinese (Third-year level)

Instructor: Chinese language faculty.

This course is not repeatable. Under some circumstances and with the permission of the instructor, this series (31, 32 and 33) may be taken non-sequentially. Readings will be selected from literary, political, and historical publications. There will be regular exams, writing exercises, oral presentations, and supplementary work assigned as needed.

Prerequisite: CHIN 23 or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 40 - Advanced Chinese

Instructor: Chinese language faculty

040 courses are "topics courses" designed to develop mastery of the spoken and written language. Students who have completed at least two 30-level courses are

encouraged to continue their language study through 040 courses. Depending on the topic, readings are drawn from literary, cultural, political, business, and historical publications. Assigned work includes written and oral presentations.

CHIN 40.03 - Advanced Reading in Modern Chinese Short Stories (Fourth-year level)

Instructor: Chinese language faculty

This course aims to help students develop an ability to use Chinese at an advanced level – critical reading of original literary works, writing and speaking to express a broad range of topics, as well as literature appreciation, through reading selected modern Chinese short stories by well-known Chinese writers. Not open to students who have received credit for CHIN 043.

Prerequisite: Two third-year level Chinese courses or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 40.04 - Advanced Chinese for Commerce and Economics

Instructor: Chinese language faculty

This course will improve students' four communication skills (reading, writing, listening, and speaking), with a particular emphasis on speaking and writing, while also introducing students to an array of authentic and relevant economy-related topics and materials in Chinese. Course materials will include essays, dialogues, business cases and newspaper articles, as well as supplementary audio-visual materials. Students will learn about the general economic and business environment in China, and will use the case study method to gain insights into the business models of specific, influential Chinese companies and international firms that have successfully entered the Chinese market. The course will further develop students' Chinese proficiency at an advanced level. The combination of textbook and supplementary readings, and topic-based knowledge beyond "pure language" will achieve the goal of enhancing both students' language ability and their understanding of the world of Chinese business.

Prerequisite: Two third-year level Chinese courses or permission of the instructor.

Offered: Spring.

CHIN 41 - Advanced Chinese (Fourth-year level)

Instructor: Chinese language faculty

Advanced readings from literary, political, and historical publications.

Prerequisite: Two third-year level Chinese courses or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 42 - Advanced Chinese (Fourth-year level)

Instructor: Chinese language faculty

Advanced readings from literary, political, and historical publications.

Prerequisite: Two third-year level Chinese courses or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 45.01 - Introduction to Classical Chinese

Instructor: A. Wang

This course introduces students to the fundamentals and methods of reading Classical Chinese, also known as Literary Chinese. Readings include historical, philosophical, anecdotal, and poetic texts from the pre-imperial period to the medieval period. Class discussions will be conducted primarily in English.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 49 - Independent Advanced Study in Chinese Language and Literature

Instructor: ASCL Faculty

Available to students who wish to do advanced or independent study in Chinese. Chinese 49 may be considered a non-language course with approval of the advisor. The student must first submit a proposal to the Major/Minor advisor, and the section faculty, before obtaining permission from the faculty member with whom he or she wishes to work.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

CHIN 50.01 - Advanced Chinese - Dream of the Red Chamber (5th-year level)

Instructor: BNU Exchange professor

In this Chinese language course, through selected readings of chapters from *Dream of the Red Chamber* and discussions on related topics, students will become familiar with the language of classical Chinese novels and enhance their ability to read Chinese classical literary works. Specifically, students will gain insights into the characteristics and common techniques of character depiction in Chinese novels, as well as learn the understanding and application of idioms and formal language. They will also analyze the differences between written and spoken language, further improving their Chinese writing skills and abilities in structured expression.

Dream of the Red Chamber was written in the 18th century and has long been celebrated as one of the great works of classical Chinese literature. The story revolves around the tragic love and marriage of Jia Baoyu, Lin Daiyu, and Xue Baochai, as well as the rise and fall of four prominent families: the Jia, Shi, Xue, and Wang. It features a multitude of vividly depicted characters. The language of the novel is mature, elegant, and vivid. There are numerous adaptations of *Dream of the Red Chamber* in the forms of poetry, opera, fiction, film, TV, painting, and more, translated into over 20 languages.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN - Japanese

JAPN 1 - First-Year Courses in Japanese

Instructor: Japanese language faculty

An introduction to written and spoken modern Japanese. In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Conversational drill and comprehensive exercises in classroom and laboratory provide practice in pronunciation and the use of the basic patterns of speech. Classes are conducted in Japanese. Reading in simple materials is extensive. Mandatory student-run drill sessions meet four times a week for fifty minutes for all beginning Japanese language classes.

Offered: Fall.

JAPN 2 - First-Year Courses in Japanese

Instructor: Japanese language faculty

An introduction to written and spoken modern Japanese. In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Conversational drill and comprehensive exercises provide practice in pronunciation and the use of the basic patterns of speech. Classes are conducted in Japanese. Reading in simple materials is extensive. Mandatory student-run drill sessions meet four times a week for fifty minutes for all beginning Japanese language classes.

Prerequisite: JAPN 001 or placement via placement test

Offered: Winter.

JAPN 3 - First-Year Courses in Japanese

Instructor: Japanese language faculty

An introduction to written and spoken modern Japanese. In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening

comprehension. Conversational drill and comprehensive exercises provide practice in pronunciation and the use of the basic patterns of speech. Classes are conducted in Japanese. Reading in simple materials is extensive. Mandatory student-run drill sessions meet four times a week for fifty minutes for all beginning Japanese language classes.

Never serves in partial satisfaction of Distributive or World Culture requirements

Prerequisite: JAPN 002 or placement via placement test

Offered: Spring.

JAPN 22 - Intermediate Modern Japanese

Instructor: only offered on Japan LSA+

A continuation of the fundamentals of grammar and further acquisition of spoken communication skills, aural comprehension, and proficiency in reading and writing. This is an intensive course that integrates homestays and the local environment into course materials. Students will be expected to master a wide variety of reading and video materials.

Offered: Summer.

Degree Requirement Attributes: WCult:NW

JAPN 23 - Intermediate Modern Japanese

Instructor: Only offered on Japan LSA+

A continuation of the fundamentals of grammar and further acquisition of spoken communication skills, aural comprehension, and proficiency in reading and writing. This is an intensive course that integrates homestays and the local environment into course materials. Students will be expected to master a wide variety of reading and video materials.

Offered: Summer.

Degree Requirement Attributes: WCult:NW

JAPN 31 - Advanced Japanese

Instructor: Japanese language faculty

A progression of materials from JAPN 23. Intensive review and continued study of modern Japanese at the advanced level. Conversation skills will continue to be an important aspect of this course, but more emphasis will be placed on reading and writing skills. Reading materials will be drawn from current newspapers, contemporary fiction, essays from journals, and excerpts from poetry. Short audiovisual selections will be used as well. Assigned work includes written compositions and oral presentations.

Prerequisite: JAPN 23 or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 32 - Advanced Japanese

Instructor: Japanese language faculty

A progression of materials from JAPN 31. A variation of materials used in JAPN 31. Note: Although the materials used in this course differ from the materials used in JAPN 31, the general level of proficiency required to enroll in either JAPN 31 or JAPN 32 is roughly equivalent. Students may take JAPN 32 even if they have been unable to enroll in JAPN 31.

Prerequisite: JAPN 31 or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 33 - Advanced Japanese

Instructor: Japanese language faculty

A continuation and progression of materials used in JAPN 31 and JAPN 32. Note: the level of proficiency required to enroll in JAPN 33 is higher than the proficiency required for either JAPN 31 or JAPN 32.

Prerequisite: JAPN 32 or permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 40 - Advanced Japanese

Instructor: Japanese language faculty

040 courses are "topics courses" designed to develop mastery of the spoken and written language. Students who have completed at least two 30-level courses are encouraged to continue their language study through 040 courses. Depending on the topic, readings are drawn from literary, cultural, political, business, and historical publications. Assigned work includes written and oral presentations.

JAPN 41 - Advanced Japanese

Instructor: Japanese language faculty

A variation of materials used in JAPN 33. Note: although the materials used in this course differ from the materials used in JAPN 33, the general level of proficiency required to enroll in either JAPN 33 or JAPN 41 is roughly equivalent. Students may take JAPN 41 even if they have been unable to enroll in JAPN 33.

Prerequisite: Two third-year level Japanese courses, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 42 - Advanced Japanese

Instructor: Japanese language faculty

A progression of materials from JAPN 41. Designed to develop mastery of the spoken and written language. Assigned work includes written compositions and oral presentations.

Prerequisite: JAPN 41 or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 43 - Advanced Japanese

Instructor: Japanese language faculty

A progression of materials from JAPN 41 and JAPN 42. Designed to develop mastery of the spoken and written language. Assigned work includes written compositions and oral presentations.

Prerequisite: JAPN 41 or JAPN 42, or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 45.01 - Classical Japanese Grammar and Translation Workshop

Instructor: Schmidt-Hori

The students will first learn the basic grammar and vocabulary of classical Japanese through the textbook and workbook, rather than lectures given by the instructor. Class time is spent on comparing the students' answers to clarify specific difficulties and doing new exercises as a group. Once the basics are introduced and learned, the students will translate excerpts of classical literature, such as the *Tale of Genji* and *Hojoki*, as homework and compare their works in class.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

JAPN 49 - Independent Advanced Study in Japanese Language and Literature

Instructor: ASCL Faculty

Available to students who wish to do advanced or independent study in Japanese. The student must first submit a proposal to the Major/Minor Advisor, and the section faculty, before obtaining permission from the faculty member with whom he or she wishes to work.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

KOR - Korean**KOR 1 - First-year Course in Korean Language 1**

This course is an introductory course to Korean language and culture for students with little or no previous knowledge of Korean. In this course, students will learn how to engage in everyday conversations on familiar topics using key expressions, basic sentence structures, and

cultural knowledge by focusing on all four language skills: reading, listening, speaking, and writing. Topics include Hangeul (Korean alphabet), self-introduction, greetings, telling time and day, daily and weekly activities, and past experiences. Cultural topics will also be covered to develop intercultural competence.

KOR 2 - First-year Course in Korean Language 2

This course is a continuation of the first-year Korean language sequence with an emphasis on the further development of basic language skills. Topics include future plans, preferences, honorifics, making an apology, and making invitations.

KOR 3 - First-year Course in Korean Language 3

This course is a continuation of the first-year Korean language course sequence with an emphasis on the further development of basic language skills. Topics include talking about family, describing clothes and colors, making telephone calls, making a polite request, writing letters, shopping, ordering food, and describing feelings.

Biological Sciences - Undergraduate

Chair: Magdalena Bezanilla

Professors M. P. Ayres, M. Bezanilla, R. G. Calsbeek, K. L. Cottingham, M. L. Guerinot, T. P. Jack, W-L. Lee, M. A. McPeck, K. J. Peterson, G. E. Schaller, E. F. Smith, L. A. Witters; Associate Professors P. J. Dolph, B. He, R.A. Hill, M. B. Hoppa, C. D. Nadell, C. E. Hicks Pries, O. Zhaxybayeva; Assistant Professors A. A. Amodeo, E.L. Behrman, D. D. Ghosh, J. Mutz; Senior Lecturer N. M. Grotz; Lecturer W. Ryan, J. D. Warren; Professor Emeritus E. M. Berger, C. L. Folt, J. J. Gilbert, C.R. McClung, D. R. Peart, R.D. Sloboda; Research Professor and Professor Emeritus S.E. Bickel, R. T. Holmes; Associate Professor Emeritus S. J. Velez; Adjunct Professors D. Gilbert-Diamond, K. E. Griswold, D. A. Leib, L. R. Lynd, G. A. O'Toole, M. J. Turk, M. E. Zegans; Adjunct Associate Professor M. E. Romano; Adjunct Assistant Professors C. G. Howe; Research Professor C. Y. Chen; Research Associate Professor T. Punshon; Research Assistant Professor J. V. Trout-Haney, Principal Instructor C. D. Layne; Senior Instructors A. L. Socha, N. R. Sylvain; Instructor T. L. Tornig

To view Biological Sciences Undergraduate courses, click here. (p. 170)

To view Biological Sciences Graduate requirements, click here. (p. 826)

To view Biological Sciences Graduate courses, click here. (p. 826)

Requirements for Majors in the Department of Biological Sciences

The biological sciences are a diverse collection of scientific disciplines that interact and intermingle in tremendously complex and interesting ways. To provide the maximum potential for students to explore this vast area of science, the Department of Biological Sciences offers a flexible major that allows students to select coursework to fit their individual interests and career aspirations. Before declaring an area of concentration, students develop their course plan in consultation with one or more faculty advisors.

Prerequisites: CHEM 5 or CHEM 11 and one quantitative course from among BIOL 29, COSC 1, ENGS 20, EARS 17, QSS 15, MATH 8 or above. MATH 10 (or equivalent) satisfies the quantitative requirement. Students who elect to include BIOL 29 in their area of concentration (see below) must fulfill this prerequisite with one of the other courses listed above. Although not required for the major, some upper-level Biology courses require CHEM 6, and 51-52 (or equivalent). In addition, because many graduate and professional schools require CHEM 51-52 for admission, we highly recommend that students consider taking these courses. Students must pass all prerequisite courses for the major in order to graduate.

Entering the Major:

BIOL 09 (Researching Cellular Mysteries) is one pathway for entering the Biology curriculum. BIOL 09 is a small enrollment course (about 20 students). The course is designed to give students a hands-on, discovery-based introduction to understanding and applying the scientific method to answer questions in biology. BIOL 09 counts toward the major if it is taken anytime during the first year (including after taking one or more Foundation courses) or as the first biology course.

BIOL 11 (The Science of Life) is another pathway for entering the Biology curriculum. BIOL 11 is a topics-based introductory Biology course. There are several offerings of BIOL 11 each year, each organized around a different topic that the instructors have chosen to introduce fundamental concepts and develop a perspective on the life sciences. BIOL 11 counts toward the major if it is taken anytime during the first year (including after taking one or more Foundation courses) or as the first biology course. Only one offering of BIOL 11 may be taken for credit.

Students may count both BIOL 09 and BIOL 11 for major/minor credit.

To help students determine if they are sufficiently prepared to enter a foundation course directly, the biology department has established an online self-assessment exam for students. Students who have any concerns about their

preparedness should take BIOL 09/BIOL 11 before enrolling in a foundation course.

Foundation Courses: A student must take three courses from among five foundation courses: BIOL 12/BIOL 19 (Cell Structure and Function); BIOL 13 (Gene Expression and Inheritance); BIOL 14 (Physiology); BIOL 15 (Genetic Variation and Evolution); BIOL 16 (Ecology). The foundation courses are not sequenced and may be taken in any order. Students interested in Bio FSP are encouraged to take BIOL 16 in fall or spring of their first year and BIOL 15 in their first or second year. In deciding which three courses to select from this list, students should discuss with their faculty advisors which foundation courses would be most appropriate for their area of concentration. Not all foundation courses need to be completed before the student moves on to courses in their area of concentration.

Area of Concentration: To complete the major, a student develops an area of concentration by taking seven additional courses, including at least two biology courses numbered 50 or above. Biology courses numbered 07 or below may not be counted towards the major. On our website, we list a number of possible areas of concentration that students may find useful in guiding their course selection. We offer these only as examples and not as an exhaustive list. The courses listed for each area are suggestions to help you get started. Students are not required to limit themselves to the courses listed under a single area. Students may also develop Areas of Concentration that are not listed. Any Biology faculty member may serve as your advisor even if they are not listed under a specific area of concentration (provided they feel comfortable advising you in that area). Our hope is that together with your advisor you will design a major that fulfills your unique interests and goals. Faculty members with interests in the listed areas are on our website; students interested in other areas should ask the Department Chair or the departmental Undergraduate Committee to suggest a faculty member who would be appropriate to advise the student in developing their course plan. In recognition of the interdisciplinary nature of the life sciences, up to two suitable advanced courses from other departments may be included in the Area of Concentration when appropriate to the student's objectives, or a modified major may be constructed (see below). One term of Independent Research (BIOL 95) or Honors Research (BIOL 97) may also be included among the seven courses.

Culminating Experience: To satisfy the culminating experience requirement, students must take a course numbered 50 or above, normally during their senior year. Any Biology course numbered 50 or above that is appropriate for the student's area of concentration will satisfy the culminating experience requirement. Each student will determine with their faculty advisor which course is suitable as a culminating experience for their area

of concentration and interests. These courses include the Biology foreign study program, independent research courses, courses that focus on the primary literature in a discipline, and courses with substantial laboratory components and/or individual projects. The culminating experience course should be taken in a student's senior year, although a course taken in the junior year may in exceptional circumstances satisfy the culminating experience and requires the approval of the Department Chair or the departmental Undergraduate Committee.

Independent Research and the Biology Honors Program

Biology majors are encouraged to undertake independent research in biology either as part of the Honors Program or separately. Participants in the Honors Program should apply to enroll in BIOL 97/98. The subject of the honors research project should be directly relevant to the student's area of concentration. Those who conduct research outside of the Honors Program should enroll in BIOL 95/96.

Work on an Honors thesis normally extends through three or more terms. Candidates for Honors must meet the minimum College requirements. *Application to enroll in BIOL 95/96 or BIOL 97/98 should be made at least one month prior to the beginning of the term in which the course is to be elected.* Plans for research should be made in the term before the project begins. Independent research conducted off campus during a leave/transfer term without the direct supervision of a faculty advisor from the Dartmouth College Department of Biological Sciences cannot be used to earn credit for BIOL 95, BIOL 96, BIOL 97 or BIOL 98.

BIOL 97 (or BIOL 95) may be counted only once among the seven courses for the area of concentration, but two terms of Independent Research may be taken for course credit towards graduation.

Each Honors candidate shall submit a thesis to a committee at least two weeks before the end of the last term. The committee will be composed of three faculty members, including the thesis supervisor. At least two members of this committee must be members of the Biological Sciences faculty. Each candidate's Honors Program concludes with the candidate making a public presentation of their work, followed by an oral examination conducted by the thesis committee, on the thesis work and related topics. The quality of the written thesis and the student's grasp of his or her research program as determined by their performance on the oral exam determine if the student's degree is awarded with honors.

Requirements for a Biology Modified Major

Students who wish to complement their interest in the life sciences with several courses in one or more disciplines may consider a modified major. For a modified major, the

prerequisite and foundation course requirements remain the same. The Area of Concentration consists of five advanced Biology courses (additional foundation courses and courses numbered 20 and above) and four suitable advanced courses from another department or combination of departments. At least two of the advanced Biology courses must be numbered 50 and above; one of these is the culminating experience, normally taken in the senior year. Courses outside the Biological Sciences Department may not be substituted for foundation courses or for the five advanced Biology courses in their area of concentration.

Biology Major Modified with Math

Mathematics is the “Language of Science”. Students who are more quantitatively oriented may want to consider modifying their Biology major with Mathematics. To facilitate this, the Biological Sciences and Mathematics Departments have agreed on the following structure for a Biology modified with Mathematics major. In addition to the biology courses in their area of concentration, students choosing this option will take four courses from among the offerings in Mathematics. Prerequisites and foundation course requirements for the Biology major remain the same. All students choosing this option must take MATH 22 (Linear Algebra with Applications) and MATH 23 (Differential Equations). The other two mathematics courses should be chosen in consultation with your Biology advisor depending on your area of concentration. Any two courses in the following list of Mathematics Department courses are appropriate:

Discrete Methods and Modeling: MATH 20 (Probability), MATH 36 (Mathematical Models in the Social Sciences), MATH 76 (Topics in Applied Mathematics)

Probability and Statistics: MATH 20 (Probability), MATH 28 (Introduction to Combinatorics), MATH 40 (Probability and Statistical Inference), MATH 50 (Introduction to Linear Models), MATH 70 (Elements of Multivariable Statistics and Statistical Learning)

Dynamics: MATH 46 (Introduction to Applied Mathematics), MATH 53 (Chaos!), MATH 76 (Topics in Applied Mathematics)

Requirements for the Biology Minor

The prerequisites for the Biology minor are CHEM 5 or CHEM 11 and one quantitative course from among BIOL 29, COSC 1, ENGS 20, EARS 17, QSS 15, MATH 8 or above. MATH 10 (or equivalent) satisfies the quantitative requirement. In addition, students will complete two foundation courses and four additional Biology courses (BIOL 09 or above). Students may choose to use BIOL 29 as a prerequisite or as one of the four additional Biology courses, but not both. Students who elect to count BIOL 29 as one of the four additional courses must fulfill the quantitative prerequisite with one of the other courses listed above. Students do not need to develop an area of

concentration for the minor but they may do so if they wish. Courses outside the Biological Sciences Department may not be substituted for foundation courses, or the four additional Biology courses.

Academic Standing

- Satisfactory completion of the Biology major or modified major requires obtaining a final grade point average of at least 2.00 in the ten courses that count toward the major.
- Post-matriculation transfer credits may not be used for BIOL 11 or the Foundation courses.
- No more than two transfer credits may be used for area of concentration courses. The one exception is that three courses may be transferred in from the Dartmouth exchange program at the Marine Biology Lab in Massachusetts.

Credit and Advanced Placement *The Department gives no credit for courses taken at another college or university prior to first year matriculation at Dartmouth.*

- BIOL - Biological Sciences - Undergraduate Courses

BIOL - Biological Sciences - Undergraduate Courses

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BIOL 3 - Mindful Physiology

Instructor: D. Gilbert-Diamond

As defined by the Zen Master Thich Naht Hanh, “Mindfulness is the awareness of what is happening inside and around us in the present moment.” This course introduces basic physiology to help students increase their understanding of and appreciation for the biological mechanisms occurring inside and around their bodies. This course also teaches basic research principles to enable students to critically evaluate research studies on the physiological effects of mindfulness. To deepen students’ understanding of mindfulness and the scientific research examined, enrolled students will engage in mindfulness practices throughout the term.

Prerequisite: No prerequisites

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 9 - Researching Cellular Mysteries

Instructor: Sylvain, Torng

Students in this course will apply the scientific method to answer questions in Biology through discovery-based laboratory experiences. Lecture topics will cover the structure and function of DNA, RNA, and proteins. Class meetings will occur in the laboratory, where students will perform and analyze experiments designed to address novel questions in Biology. These experiments will generate new, previously unobserved findings. Open to all students without prerequisite.

Prerequisite: No prerequisites

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 11.03 - Emerging Infectious Diseases: How Microbes Rule the World

Instructor: Guerinot

Emerging infectious diseases, which have shaped the course of humanity and caused untold suffering and death, will continue to challenge society as long as humans and microbes co-exist. This course will explore why infectious diseases emerge and re-emerge. The viruses, bacteria and eukaryotes that cause these diseases continually evolve in response to their hosts. Dynamic interactions between rapidly evolving infectious agents and changes in the environment and in host behavior provide such agents with favorable new ecological niches. In addition, dramatic increases in the worldwide movement of people and goods drive the globalization of disease.

Prerequisite: No prerequisites

Offered: Spring.

Degree Requirement Attributes: SCI

BIOL 11.06 - Why can't we all just get along? Cooperation and Conflict across the Biological Sciences

Instructor: R. Calsbeek

Cooperation and conflict are universal themes that arise when considering how entities at various levels of organization interact. This is particularly true in biology, from atoms interacting within a molecule, molecules interacting within a cell, or cells interacting within a multicellular organism, individuals interacting within groups, disease organisms interacting within their host, or nations interacting with one another. We will explore how the concepts of game theory apply at the biochemical, cellular and organismal levels to explore how groups of entities at these various levels interact, and how groups transition to individuals. All along the way we will discuss a lot of biology and see how biologists apply what they know to new problems.

Prerequisite: No prerequisites

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 11.09 - Biology of the Brain

Instructor: Ghosh

This course seeks to introduce students to the wonders of the brain and how it works through its basic cellular unit: the neuron. Importantly, this course is intended for students *with no prior knowledge* interested in indulging their curiosity about basic biology and neuroscience. We will first establish some fundamental principles of the biology of the neuron. Next, we will examine how neurons connect with one another, change and learn, and control behavior. Finally, we will explore our current understanding of neurobiology in disease and neurotechnology. The class will consist of lectures with weekly quizzes and culminate with a cumulative final exam.

Prerequisite: No prerequisites

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 12 - Cell Structure and Function

Instructor: Grotz, Ghosh, He

BIOL 12 will provide a foundation in the fundamental mechanisms that govern the structure and function of eukaryotic cells. Topics include membrane transport, energy conversion, signal transduction, protein targeting, cell motility and the cytoskeleton, and the cell cycle. Emphasis will be placed on discussion of the experimental basis for understanding cell function. The laboratory section will provide students with hands-on experience in modern laboratory techniques including microscopy, cell fractionation, and protein purification. Open to all students without prerequisite. Biology 19 is a foundation course equivalent of Biology 12. Note: BIOL 12, BIOL 13, BIOL 14, BIOL 15, BIOL 16 may be taken in any order.

Prerequisite: No prerequisites

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SLA

BIOL 13 - Gene Expression and Inheritance

Instructor: Dolph, Amodeo, Behrman/Jack

This course provides a foundation in genetics and molecular biology. Topics covered include the flow of genetic information from DNA to RNA to protein, transmission of genetic information from one generation to the next and the molecular mechanisms that control gene expression in bacteria and eukaryotes. These concepts will be integrated into a discussion of contemporary problems and approaches in molecular genetics. Laboratories utilize basic molecular biology techniques to further investigate topics discussed in lecture. Open to all students without

prerequisite. Note: BIOL 12, BIOL 13, BIOL 14, BIOL 15, BIOL 16 may be taken in any order.

Prerequisite: No prerequisites

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:SLA

BIOL 14 - Physiology

Instructor: Socha

This course introduces students to the complexity of organisms by studying how their different organ systems strive to maintain internal homeostasis in the face of different environmental demands. The adaptive responses of selected organisms (humans, different animals and plants) to a variety of environmental factors will be studied from the molecular, cell, tissue, organ, and systems level of organization. Some of the topics to be covered include biological control systems (hormones, neurons) and coordinated body functions (circulation, respiration, osmoregulation, digestion). All systems studied will be integrated by analyzing how different organisms adapt to living in extreme environments (deserts, high altitude) or facing changing environmental demand (navigation, exercise). Open to all students without prerequisite. Note: BIOL 12, BIOL 13, BIOL 14, BIOL 15, BIOL 16 may be taken in any order.

Prerequisite: No prerequisites

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:SLA

BIOL 15 - Genetic Variation and Evolution

Instructor: McPeck

This course examines fundamental population-level processes and mechanisms that give rise to diversity of living organisms. The class will explore the interplay of evolutionary forces acting on genetic variation for both single-gene traits and complex traits determined by multiple genes and environmental conditions. Evolution of the human population will serve as the main study system. The class periods will include problem-solving sessions and hands-on activities on experimental evolution, observational data analyses and computer-based evolutionary inferences. Open to all students without prerequisite. Note: BIOL 12, BIOL 13, BIOL 14, BIOL 15, BIOL 16 may be taken in any order.

Prerequisite: No prerequisites

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 16 - Ecology

Instructor: Hicks Pries, Ayres/Mutz

This course examines fundamental concepts in the rapidly developing areas of ecology. These topics include the factors that limit the distributions and abundances of organisms, the effects that organisms have on ecosystems, the integration of ecosystems around the globe, and the conservation of species diversity. The class will also explore how the behavior and physiology of individual organisms shape both local and global patterns of distribution and abundance. Laboratories focus on experimental and quantitative analyses of local ecosystems, with an emphasis on field studies. Open to all students without prerequisite. Note: BIOL 12, BIOL 13, BIOL 14, BIOL 15, BIOL 16 may be taken in any order.

Prerequisite: No prerequisites

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SLA

BIOL 21 - Population Ecology

Instructor: McPeck

This course explores the description of populations, population growth, and the determination of abundance. Examples will be drawn from a diversity of plant and animal taxa to illustrate the broad scope of population ecology, including its role as a foundation for evolutionary ecology and community ecology, and its contributions to applied problems in conservation biology, pest management, human demography, and the management of harvested populations. Throughout, this course will emphasize the development of verbal, graphical, and mathematical models to describe populations, generate predictions, test hypotheses, and formalize theory. No student may receive course credit for both BIOL 21 and BIOL 51. Offered in alternate years.

Prerequisite: BIOL 15 or BIOL 16

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 22 - Methods in Ecology

Instructor: Cottingham

This course is an introduction to sampling and survey methodologies for populations and communities in both aquatic and terrestrial environments. The course will be divided into week-long modules, each focusing on a particular group of organisms in the environment. A great deal of emphasis will be placed on hypothesis generation, experimental design and statistical analysis. Participation in the laboratory/field component is both required and critical as one of the primary benefits of this course will be "on the ground" training in field methods.

Prerequisite: BIOL 16

Offered: Summer.

Degree Requirement Attributes: Dist:SLA

BIOL 24 - Vertebrate Zoology

Instructor: Calsbeek

This course will examine origins, diversity, structure and function within and among the vertebrate classes (including fish, amphibians, reptiles, birds and mammals). We will consider the evolution of the vertebrate body plan and innovations associated with common organ systems (e.g., skeletal, muscular, digestive, sensory, etc.) shared by different taxa. In addition, we will consider specialization of form and function to the diverse ecology of vertebrates as well as the manner in which very different taxa cope with similar habitats and environmental demands. In so doing, we will draw on evolutionary principles such as adaptation, convergent and parallel evolution and evolutionary constraints. The course will primarily consist of lecture and readings with examination of specimens and opportunities for off-campus field trips. Offered in alternate years.

Prerequisite: BIOL 15 or BIOL 16

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 25 - Introductory Marine Biology and Ecology

Instructor: Chen

A course designed both for biology majors and other students interested in the interrelationships between marine organisms and their physical and biological environments. The course emphasizes the marine environment as an ecosystem with special focus on communities in coastal margin, open ocean, and deep sea habitats ranging from polar to tropical latitudes. Applied issues relevant to human impact and conservation in marine ecosystems will also be covered. Offered in alternate years.

Prerequisite: One from among BIOL 12/BIOL 19, BIOL 13, BIOL 14, BIOL 15, or BIOL 16

Degree Requirement Attributes: Dist:SCI

BIOL 26 - Global Change Biology

Instructor: Hicks Pries

We live in the Anthropocene era in which humans have an outsize effect on the environment. In this course, we will apply ecological concepts to understand the consequences of environmental changes for species and ecosystems. Through discussing scientific literature and exploring long term ecological datasets, we will investigate how humans have altered the environment and the repercussions for biogeochemical cycling and species distributions, phenology, and interactions. We will also evaluate solutions for mitigating these consequences.

Prerequisite: BIOL 16, ENV 2 or GEOG 3

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 27 - Animal Behavior

Instructor: Calsbeek

Behavioral sciences are extremely broad and the study of animal behavior requires an interdisciplinary approach that integrates psychology, ecology, evolutionary biology, neural science and the underpinnings of learning and memory science. We will draw on each of these fields as we explore topics ranging from signaling and cognition to mating behaviors and sexual selection to foraging and optimality theory. We will consider how proximate and ultimate causality structure behavior throughout the animal kingdom. Thus, the course will take an evolutionary approach to understand behavior in vertebrates and insects and other invertebrates; in fresh water and marine systems, and in terrestrial groups. Offered in alternate years.

Prerequisite: BIOL 15 or BIOL 16 or instructor permission

Degree Requirement Attributes: Dist:SCI

BIOL 28 - Macroevolution

Instructor: Peterson

Macroevolution focuses on the evolutionary process from the perspective of the species and through the lens of deep time. More specifically, it focuses on the issue of whether life is organized hierarchically, and if so, can selection occur at any/all of these other levels, in addition to the level of the organism. This course is especially well suited for discussion and question, as the definition of macroevolution, as well as its very existence, is under intense discussion by both microevolutionists and macroevolutionists alike. Topics covered include punctuated equilibrium, species-level selection, homology, and mass extinctions.

Prerequisite: One from BIOL 12/BIOL 19, BIOL 13, BIOL 14, BIOL 15, BIOL 16, or EARS 2; or instructor permission.

Cross-Listed as: EARS 032, ANTH 50.46

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 29 - Biostatistics

Instructor: McPeck

The course will cover basic descriptive statistics, simple probability theory, the fundamentals of statistical inference, regression and correlation, t-tests, one-way analysis of variance, basic analyses of frequency data and non-parametric statistics, and the general philosophy of experimental design. We will explore these topics from the perspective of biological applications. Examples will be drawn from all sub-disciplines of biology (e.g. biochemical

kinetics, development, physiology, ecology, and evolution).

Prerequisite: Two courses in biology numbered 11 or higher.

Degree Requirement Attributes: Dist:QDS

BIOL 31 - Physiological Ecology

Instructor: Trout-Haney

What factors determine the distribution and abundance of organisms? What are the consequences of climate change for biological communities? This course is an exploration of environmental effects on fundamental physiological processes in plants and animals. Abiotic factors, such as temperature and water availability, interact with biotic forces, such as predation, herbivory, and competition, to constrain the ability of organisms to survive, grow, and reproduce. Physiological solutions that allow success in one environment may preclude it in another. This course seeks to build up from physiological principles to understand characteristics of populations, communities, and ecosystems. Laboratories will challenge students to generate and test their own hypotheses using contemporary theoretical frameworks and modern research apparatus. Offered in alternate years.

Prerequisite: One from among BIOL 12/BIOL 19, BIOL 13, BIOL 14, BIOL 15, or BIOL 16

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

BIOL 35 - Cellular and Molecular Neuroscience

Instructor: Hoppa

This course focuses on cellular and molecular mechanisms that underlie the development and function of the nervous system. The course focuses on three phases of cellular neuroscience: 1) Developmental neuroscience including cell division, migration, and survival; 2) Neural communication including the function of ion channels and synaptic plasticity; and 3) Molecular mechanisms of neurological diseases and therapeutic approaches. Lectures are supplemented by in class discussion and exploration of techniques for studying cellular neuroscience including microscopy, electrophysiology, advanced genetic approaches, and animal models used to study the nervous system and neurological disorders.

Prerequisite: One from among BIOL 12/BIOL 19, BIOL 14, PSYC 6.

Cross-Listed as: PSYC 035

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 37 - Endocrinology

Instructor: Witters

The molecular, biochemical, genetic and physiologic aspects of the endocrine system will be explored with an emphasis on human and mammalian biology. We will use examples of pathobiology arising from dysfunction of this system to draw attention to the normal modes of endocrine regulation. Topics will be drawn from seminal publications in the biomedical literature. The course will employ a hypothesis-based, problem-solving paradigm, involving, in part, the study of experimental techniques used in investigation.

Prerequisite: BIOL 12/BIOL 19. A prior course that emphasizes genetics is recommended. Otherwise permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 40 - Biochemistry

Instructor: Lee, Schaller

This course studies molecular structure and function from a biochemical point of view, emphasizing the biochemistry of proteins, lipids, and carbohydrates. Topics include protein structure and function, enzymes and enzyme kinetics, lipids and membranes, and carbohydrates and cell walls. The participation of these biomolecules in metabolism is also discussed, and focuses on the metabolic pathways of glycolysis, gluconeogenesis, fatty acid oxidation, amino acid catabolism, the TCA cycle, and oxidative phosphorylation. The course concludes with a look at the integration of metabolism in mammals. Students with credit for CHEM 41 may not receive credit for BIOL 40.

Prerequisite: BIOL 12/BIOL 19 and CHEM 52 or CHEM 58 or permission of the instructor.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 41 - Cells into Organs: Assembly, Function and Disease

Instructor: He

How do cells organize into the myriad forms of tissues and work together to perform specific physiological functions? In this course, we will use epithelial tissues as an example to explore these fundamental questions. Epithelia are among the most common types of tissue organization in animals. They line the cavities, ducts and surfaces of all the major organ systems and provide a variety of functions such as secretion, protection and sensing. During development, epithelial tissues also function in morphogenetic processes that guide the formation of body patterns. Defects in epithelial growth control and function play a major role in human diseases such as cystic fibrosis

and cancer. The goal of this course is to understand the form, dynamics and function of epithelial tissues, and how dysregulation of epithelia can lead to various human diseases.

Prerequisite: BIOL 12/BIOL 19 or instructor permission

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 42 - Biology of the Immune Response

Instructor: Turk/Pioli/Obar/Rothstein

This course will consider immunoglobulin structure, antigen-antibody reactions, complement, hypersensitivity, immunogenetics, immunodeficiency, tumor immunology and therapy, and autoimmunity.

Prerequisite: BIOL 12/BIOL 19 or BIOL 13, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 44 - Microbiology, without Laboratory

Instructor: Nadell

This course teaches the fundamentals of modern microbiology, the study of organisms smaller than the eye can see. These include a wide range of species across the tree of life, which carry great importance for elemental cycling in the wild, as well as in an enormous variety of contexts more directly connected to human health, including food production, water treatment, and pathogens that cause disease. Topics will range from the basics of bacterial cell structure and metabolism to the complex multi-species communities that make up part of the human microbiome. Identical to BIOL 46, but without the laboratory. No student may receive credit for both BIOL 44 and BIOL 46.

Prerequisite: One from among BIOL12/BIOL 19, BIOL 13, BIOL 14, BIOL15, BIOL 16

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 45 - Molecular Biology

Instructor: Grotz

This course will build upon the material presented in BIOL 13 with in depth analysis of the molecular mechanisms underlying fundamental processes including DNA replication, transcription and translation in bacteria and eukaryotes. Key regulatory events that influence gene expression will be discussed including the function of promoters and enhancers, chromatin structure and epigenetics, RNA mediated silencing and mRNA processing. Emphasis will be placed on understanding how molecular techniques are used to elucidate critical aspects

of these processes. Selected papers from the primary literature will be presented to illustrate current advances.

Prerequisite: BIOL 13

Offered: Summer.

Degree Requirement Attributes: Dist:SCI

BIOL 46 - Microbiology, with Lab

Instructor: Nadell

This course teaches the fundamentals of modern microbiology, the study of organisms smaller than the eye can see. These include a wide range of species for across the tree of life, which carry great importance for elemental cycling in the wild, as well as in an enormous variety of contexts more directly connected to human health, including food production, water treatment, and pathogens that cause disease. Topics will range from the basics of bacterial cell structure and metabolism to the complex multi-species communities that make up part of the human microbiome. Identical to BIOL 44, but with the laboratory. No student may receive credit for both BIOL 44 and BIOL 46.

Prerequisite: One from among BIOL12/BIOL 19, BIOL 13, BIOL 14, BIOL15, BIOL 16

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

BIOL 47 - Genomics: From Data to Analysis

Instructor: Zhaxybayeva

Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

Prerequisite: BIOL 13 OR BIOL 15

Degree Requirement Attributes: Dist:SCI

BIOL 50.02 - Ecology of Infectious Disease

Instructor: Cottingham

This advanced undergraduate seminar will explore the dynamics of infectious disease through the lens of ecological science while providing training in writing and reviewing research proposals. We will begin by carefully reading case studies from the literature to develop content mastery and strategies for identifying important research questions. Groups of students will then write research proposals, practice the art of constructive peer review, and participate in a mock grant review panel.

Prerequisite: BIOL 16 and one from among BIOL 21-31, BIOL 44, BIOL 46 or BIOL 48

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 51 - Advanced Population Ecology

Instructor: McPeck

This course explores theory and data regarding properties of biological populations. Topics of lectures and analytical exercises include: descriptions of abundance, dispersion, and demographic schedules; applying life tables and matrix models to understand population growth and age structure; life history theory; influence of endogenous feedbacks and exogenous forces on population dynamics; spatial patterns and processes; and contributions of population ecology to applied issues in conservation, pest management, human demography, and the management of harvested populations. No student may receive course credit for both BIOL 21 and BIOL 51. Offered in alternate years.

Prerequisite: BIOL 16 and one course from among BIOL 22 - BIOL 32

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 53 - Aquatic Ecology

Instructor: Ryan

The study of interactions between biological communities and their freshwater environment. Lecture and readings provide the scientific background necessary for understanding the physical, chemical and biological dynamics of freshwater habitats. Emphasis is placed on application of fundamental concepts to problems in conservation and management of aquatic ecosystems. The laboratory and fieldwork, including a weekend field trip during the first week of classes, will acquaint students with modern methodological approaches for studying aquatic ecosystems.

Prerequisite: BIOL 15 or BIOL 16 and one course from among BIOL 21, BIOL 22, BIOL 23, BIOL 24, BIOL 25, BIOL 27, BIOL 28, BIOL 29, BIOL 31, BIOL 46

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

BIOL 54 - Advanced Methods in Ecological Research

Instructor: Ayres

Students will work in small groups to conduct original research projects addressing ecological questions that are developed by the students with inspiration from natural history observations, published research, and discourse within student working groups. Students will develop skills in exploring natural history, formulating interesting answerable research questions, deriving hypotheses from theory, developing research design, acquiring and analyzing data, making statistical and logical inferences, writing scientific papers, and presenting seminars.

Prerequisite: BIOL 16 and one from among BIOL 21- BIOL 32

Degree Requirement Attributes: Dist:SLA

BIOL 55 - Ecological Research in the Tropics I

Instructor: Trout-Haney

The Biology Foreign Studies Program (BIOL 55, BIOL 56, BIOL 57) exposes students, through intensive, full-immersion study, to Earth's most diverse biological communities. BIOL 56 is a continuation of BIOL 55; these courses comprise the first two-thirds of the FSP, and focus on land (tropical forests) and tropical freshwater ecosystems in Costa Rica. BIOL 57 focuses on coral reef ecosystems in the Caribbean. Students are challenged to know, understand and appreciate the diversity of form and function in organisms, and the interactions that generate the often-spectacular patterns they see in the field. Habitats in Costa Rica include lowland rain forest, cloud forest, dry forest, montane forest, alpine paramo, streams and wetlands. The schedule is full, including fieldwork, laboratories, lectures and discussions, with emphasis on original research, mostly in small groups of 2-3. Faculty and advanced graduate TAs share field accommodations with students, and are in continuous contact as mentors, day and evening, throughout the program. Students master field and analytical methods (including hypothesis testing, statistical and software skills) for observational and experimental research. We pursue a great variety of research topics, including plant-pollinator and plant-herbivore interactions, processes driving coral reef structure (and coral reef decline), determinants of species distributions, animal behavior, and conservation ecology. Students practice the classic scientific approach: making observations, asking testable questions, generating hypotheses, developing experimental protocols, collecting data, making statistical inferences, writing scientific papers, and presenting seminars. Research papers are published in an annual book. Accommodations are at field stations in Costa Rica, and at a marine laboratory in the Caribbean. Acceptance into Program is required. In addition, BIOL 15 & BIOL 29 are recommended.

Prerequisite: BIOL 16, one course from among BIOL 21 - BIOL 32; acceptance into program, BIOL 15 and BIOL 29 recommended

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

BIOL 56 - Ecological Research in the Tropics II

Instructor: Ayres

A continuation of BIOL 55. See BIOL 55 for a description of the Biology Foreign Study Program.

Prerequisite: BIOL 55 (taken in same term)

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

BIOL 57 - Ecological Research on Coral Reefs

Instructor: Chen

Field and laboratory investigations of marine organisms and coral reef communities. Lecture and research topics include studies of algae, aquatic plants, invertebrates, and fish, with emphasis on populations, species interactions, community structure and energetics, and reef conservation and management. The course is based at the Little Cayman Research Center, Little Cayman Island. Scuba diving is optional. See BIOL 55 for an overview of the Biology Foreign Study Program.

Prerequisite: BIOL 55 and BIOL 56 (taken in same term)

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

BIOL 58 - Advanced Community Ecology

Instructor: McPeck

This course will examine the various mechanisms structuring ecological communities of plants and animals. The course will consist of regular lectures, readings from the primary literature, and individual projects. Topics to be covered include simple two-species interactions (e.g. predation, competition, parasitism, mutualisms), simultaneous multispecies interactions, food web structure, regulation of species diversity on ecological and evolutionary time scales, community succession, and biogeography. Emphasis will be placed on the development of mathematical models and their relationship to empirical studies. Offered in alternate years.

Prerequisite: BIOL 15 and BIOL 16 and one from among BIOL 21- BIOL 32

Degree Requirement Attributes: Dist:SCI

BIOL 59.01 - General Linear Models

Instructor: McPeck

This is an advanced course in general linear statistical models. Topics covered include simple linear regression, multiple regression, regression with qualitative and quantitative parameters, and one and two-way analysis of variance. Emphasis is on model building, experimental design, and diagnostic measures for linear models. Statistical analyses will be programmed in MATLAB using matrix algebra, though no prior programming experience is necessary.

Prerequisite: One from among BIOL 29, QSS 15, GOVT 10, ECON 10, SOCY 10, or PSYC 10

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

BIOL 60.01 - Evolutionary Ecology

Instructor: Calsbeek

Theodosius Dobzhansky said "nothing in biology makes sense except in the light of evolution." Evolutionary ecology explores the fundamental and diverse role of evolutionary process in the natural world. We will explore the importance of natural and sexual selection acting in natural communities on land and in the water. Lecture topics will include the evolution of life history variation, competition, predation, behavior, physiology, migration and dispersal, and molecular evolution. Because the course covers a wide range of topics, students should have a solid foundation in basic ecology and evolution prior to taking BIOL 60.01.

Prerequisite: One from the following: BIOL 21 - BIOL 32, BIOL 47 or BIOL 48

Degree Requirement Attributes: Dist:SCI

BIOL 60.02 - Evolution of Sex

Instructor: Calsbeek

Despite the many benefits of asexual reproduction, the vast majority of eukaryotes reproduce sexually. How sex evolved, and how it persists despite its many associated costs, are major unanswered questions in evolutionary biology. We will explore the diversity of sexual reproduction and related evolutionary phenomena with a focus on critically evaluating current research and theory in this area.

Prerequisite: BIOL 15 and at least 1 from among BIOL 21, BIOL 23, BIOL 24, BIOL 27, BIOL 28, BIOL 32, BIOL 37, BIOL 47 or instructor permission

Degree Requirement Attributes: Dist:SCI

BIOL 61 - End of Winter: Winter Ecology

Instructor: Hicks Pries

Winter is changing faster than any other season. As we witness its demise, we must understand what ecological changes will be wrought by the end of winter. Warmer

winters change the cost/benefit ratio of species adaptations to cold temperatures, disrupt species interactions, and alter ecosystem functioning. This advanced class on winter ecology is a course-based undergraduate research experience in which the class will design and carry out a field experiment on or near campus.

Prerequisite: Biol 16 and one from among BIOL 21, 22, 23, 24, 25, 26, 27, 29, 31

Degree Requirement Attributes: Dist:SLA

BIOL 63 - RNA: The Real Secret of Life

Instructor: Peterson

Legend has it that after the discovery of the structure of DNA Francis Crick announced to the patrons of the Eagle Pub in Cambridge, England that they had discovered the secret of life. But what has been learned since this February day in 1953 is that although DNA is the bedrock of modern molecular biology, it is actually RNA that allowed for the emergence of life, and is *the* central molecule in life's Central Dogma. Indeed, with the application of new deep sequencing technologies we are discovering that much of the genome is transcribed into functional RNA that does not code for proteins, but instead is involved in gene regulation and genomic architecture, in addition to the maintenance of genome integrity and even possibly the evolution of morphological complexity. In fact, the very question of "what is a gene?" is even being reconsidered, as the fundamental unit of genomic organization appears not to be the classical DNA-based "gene" but instead is the RNA-based transcript. In this course we will explore these issues and more through lectures, literature discussions, student-led presentations, and student writing assignments.

Prerequisite: One from among BIOL 40, BIOL 41, BIOL 43, BIOL 45, BIOL 47 or CHEM 41

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 66 - Molecular Basis of Cancer

Instructor: Grotz

In this course we will explore how cancer develops on a cellular level. Using primary literature as a guide, we will examine the basic cellular processes malignant tumors exploit to promote their rapid, invasive growth and ultimately disease. Topics that will be considered include the genetic factors that initiate cancer cell formation, cell cycle regulation, programmed cell death, cell signaling, angiogenesis, cytoskeletal rearrangements as well as how current cancer therapies work on a cellular level.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13 and one from among BIOL 40, BIOL 41, BIOL 43, BIOL 45 or CHEM 41

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 69 - Cell Signaling

Instructor: Dolph

This course will focus on how signals are transmitted from the cell surface into changes in cellular function. Detailed analysis of specific membrane receptors, second-messenger systems, and protein kinases will be presented as well as how these components are integrated into larger "systems" such as apoptosis, metabolic signaling, synaptic transmission, and sensory transduction. Particular emphasis will be on the biochemical analysis of the pathways and their individual components as well as how these pathways are impaired in certain disease states. The course will consist of lectures and weekly discussions of recent primary literature.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13 and at least one from among BIOL 37, BIOL 40, BIOL 41, BIOL 43, BIOL 45, CHEM 41

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 70 - Biologic Lessons of the Eye

Instructor: Zegans

The eye is unique. Unlike organs hidden deep within the body the transparent nature of the visual axis permits the direct observation of its living tissues without invasive surgery or imaging. Accordingly, the study of vision has yielded many far-reaching biologic insights which will be explored in this course. The course will conclude with a 10-14 day visit to Aravind Eye Hospital in Tamilnadu to present research and observe the delivery of eye care in India.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13, one from BIOL 40, BIOL 41, BIOL 45, CHEM 41 and instructor permission.

Degree Requirement Attributes: Dist:SCI

BIOL 71.01 - Microtubule Dynamics and Motor Functions in Cell Biology

Instructor: Lee

This course will examine how cells use microtubules to establish cell shape, move organelles, and segregate chromosomes during cell division. We will also cover current techniques employed for studying microtubules, microtubule-associated proteins (MAPs), and microtubule-dependent motor proteins. Each topic listed will be introduced and explored via lectures, review articles, and discussion of landmark paper(s) or papers from current literature. The overriding goal will be to improve your ability to critically analyze and evaluate original research

data presented in the form of papers published in the scientific literature. Student participation during the course is critical to ensure that we have an active and productive discussion of the topics. The course will culminate in students working in small groups on the molecular basis of diseases linked to defects in MAPs or motor proteins.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13 and one from among BIOL 40, BIOL 41, BIOL 43, BIOL 45, CHEM 41.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 71.02 - Cell Biology Across Scales

Instructor: Amodeo

This course investigates the size relationships between cellular components using “back-of-the-envelope” techniques to develop intuitions about biological problems. The course consists of lectures, in-class exercises, and primary literature discussion. Content is organized by a central motivating question (ex. “How many mitochondria does a cell need?”). The goal is to improve biological numeracy and to consider cell biological questions quantitatively. Active participation will be essential. The course will culminate in small group presentations on scaling questions.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13 and one from among BIOL 40, BIOL 41, BIOL 43, BIOL 45, CHEM 41

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

BIOL 72 - Foundations of Epidemiology I

Instructor: Howe, Gilbert-Diamond

Epidemiology is the science of studying and understanding the patterns of disease occurrence in human populations with the ultimate goal of preventing human disease. This course is the first in a two-part sequence that aims to build mastery of fundamental epidemiological theory and methods for research. Topics will include introductions to population characteristics and disease frequencies, epidemiological study designs, measures of excess risk associated with specific exposures, and inferring causality in exposure-disease relationships.

Prerequisite: BIOL 29

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:SCI

BIOL 73 - Foundations of Epidemiology II

Instructor: Romano

Epidemiology is the science of studying and understanding the patterns of disease occurrence in human populations

with the ultimate goal of preventing human disease. This course is the second in a two-part sequence. Building off of concepts covered in Foundations of Epidemiology I, it aims to develop an in-depth understanding of population characteristics and disease frequencies, epidemiological study designs, measures of excess risk associated with specific exposures, and inferring causality in exposure-disease relationships.

Prerequisite: BIOL 72 and permission of instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 74.01 - Development, Plasticity and Dysfunction of the Synapse

Instructor: Hoppa

Seminar class in neurobiology focusing on synaptic transmission and neurobiological diseases of development and aging. Papers will introduce class to details of methods including optogenetics, microscopy, genetic manipulations and electrophysiology. Major questions in the field of neurobiology will be introduced through recent high-impact papers and live lectures and interviews with off-campus research labs that authored the paper. We will focus on connecting basic research to neurological diseases such as Parkinson’s, ALS, Epilepsy and Autism.

Prerequisite: Two from among BIOL 12, BIOL 13, BIOL 14, BIOL 49, BIOL 35, PSYC 6, PSYC 35, PSYC 46, PSYC 65

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 74.02 - Diseases of the Nervous System

Instructor: Hill

This course will investigate the cellular basis of several common neurodegenerative diseases including Alzheimer’s, demyelinating disorders and ALS. For each we will take a holistic approach to understand the: 1) cell types and pathways that are dysfunctional, 2) mechanisms of disease presentation, heterogeneity and patient prognosis and 3) current state of the scientific literature. Commonalities will be studied to understand how dysfunction in multicellular interactions results in a degenerative cascade of mind and body.

Prerequisite: Two from among: BIOL 12, BIOL 13, BIOL 14, BIOL 35, BIOL 49, PSYC 6, PSYC 35, PSYC 46, PSYC 65

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 76 - Advanced Genetics

Instructor: Behrman

Methods and strategies for the analysis of gene structure, function and genetic interactions. The course will examine how the genetic manipulation of model organisms, including yeast, *Drosophila*, *C. elegans*, and mouse, is used to explore the mechanisms of fundamental biological processes such as cell division, development, and intercellular communication. Emphasis will be placed on the application of classical genetic methods, including mutant screens, recombination and complementation analysis, genetic mosaics, and the use of conditional mutations. Modern molecular-based approaches, including gene knockout, gene dosage and misexpression studies will also be included. Three hours of lecture and one hour of discussion per week.

Prerequisite: BIOL 12/BIOL 19 and BIOL 13 and one from among BIOL 40, BIOL 41, BIOL 43, BIOL 45, BIOL 47, CHEM 41 or instructor permission

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

BIOL 78 - Molecular Mysteries of Human Biology

Instructor: Witters

Knowledge of molecular mechanisms allows new approaches to understanding human biology and disease. This course will explore the normal and abnormal biology of several human conditions relying on biochemistry, molecular genetics, and physiology as tools of inquiry. Examples will be drawn from the histories of Mona Lisa, Michel-Eugène Chevreul, Otto Warburg, Hendrickje Stöffels, Steve Jobs, Paul Cézanne, Pearl Buck, Auguste D and Luigi Cornaro among others.

Prerequisite: BIOL 13 and BIOL 40 (or CHEM 41) or permission of instructor. A prior course on some aspect of mammalian physiology is recommended (e.g. BIOL 2, BIOL 14 or BIOL 37). Priority will be given to senior Biology majors.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

BIOL 95 - Independent Research in Biology I

Original and independent investigation of a biological problem with associated study of primary literature sources under the supervision of a faculty member for one academic term. Open only to Dartmouth Biology majors and minors. Projects may include research in laboratory settings, field work, modeling, data mining, or development of new methodologies that will further understanding of a relevant basic or applied biological problem. May be taken as one course in the major by students not enrolled in the honors program. Students electing both BIOL 95 and BIOL 97 may count only one among the seven courses in the area of concentration. In no

case may a student elect more than two courses among BIOL 95, 96, 97, and 98.

Prerequisite: At least three Biology courses numbered 11 or above, a 2.67 average in previous biology courses, and permission of the Undergraduate Committee and the supervising instructor. The application and research proposal must be submitted at least one month prior to the beginning of the term in which the course is to be elected.

Offered: Fall, Spring, Summer, Winter.

BIOL 96 - Independent Research in Biology II

A second term of original and independent investigation of a biological problem under the supervision of a faculty member. Open only to Dartmouth Biology majors who have satisfied the requirements for BIOL 95 and who wish to continue their independent research for a second term. Does not count for credit in the major. In no case may a student elect more than two courses among BIOL 95, 96, 97, and 98.

Prerequisite: Satisfactory completion of BIOL 95 (including research paper) and permission of the Undergraduate Committee and the supervising instructor(s). The application and research proposal must be submitted at least one month prior to the beginning of the term in which the course is to be elected.

Offered: Fall, Spring, Summer, Winter.

BIOL 97 - Honors Research in Biology I

Original and independent investigation of a biological problem with associated study of primary literature sources under the supervision of a faculty member. Open only to Dartmouth Biology majors. Projects may include research in laboratory settings, field work, modeling, data mining, or development of new methodologies that will further understanding of a relevant basic or applied biological problem. Required of honors students as part of the major. Students taking BIOL 95 and BIOL 97 may count only one of these courses toward the elective courses for their major. In no case may a student elect more than two from courses among BIOL 95, 96, 97, and 98. Students who have completed or are taking BIOL 97 may enroll and receive college credit for BIOL 99 during spring term of their senior year.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for BIOL 98 and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both BIOL 098 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: At least two Biology courses numbered 20 or above, a 3.0 average in previous Biology courses, and permission of the Undergraduate Committee and the

supervising instructor, obtained at least one month prior to the beginning of the term in which the course is to be elected.

Offered: Fall, Spring, Summer, Winter.

BIOL 98 - Honors Research in Biology II

Original and independent investigation of a biological problem with associated study of primary literature sources under the supervision of a faculty member. Open only to Dartmouth Biology majors. Projects may include research in laboratory settings, field work, modeling, data mining, or development of new methodologies that will further understanding of a relevant basic or applied biological problem. BIOL 98 does not count for credit in the major. In no case may a student elect more than two courses among BIOL 95, 96, 97, and 98. Students who have completed or are enrolled in BIOL 98 may enroll and receive college credit for BIOL 99 during spring term of their senior year.

Students are awarded one course credit for successful completion of this course. Students who have registered for BIOL 97 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both BIOL 97 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: BIOL 97

Offered: Fall, Spring, Summer, Winter.

BIOL 99 - Senior Seminar in Biology

Instructor: Schaller

This course will focus on presentation techniques and critical evaluation of other students' research and presentations. Students who have conducted independent research will present background information related to their research projects, develop seminars based on their own findings, and receive feedback. All students taking BIOL 97 are encouraged to enroll in this course. The course does not count towards the major.

Prerequisite: Senior standing and previous or current enrollment in BIOL 97

Offered: Spring.

Chemistry - Undergraduate

Chair: Ekaterina V. Pletneva

Professors: I. Apahamian, D. S. Glueck, F. J. Kull, J. E. G. Lipson, D. F. Mierke, D. E. Wilcox, J. Wu; Associate Professor: K. A. Mirica, M. J. Ragusa; Assistant Professors: M.I. Gonzalez, X. Qi, P. J. Robustelli, M. Sneha, W. Zhang; Senior Lecturer: W. S. Epps, C. O. Welder; Research Professors: R. Ditchfield, G. W.

Gribble, R. P. Hughes, M. Pellegrini; Research Assistant Professors: C. R. Midgett

To view Chemistry Undergraduate courses, click here.

To view Chemistry Graduate requirements, click here.

To view Chemistry Graduate courses, click here.

Requirements for the Chemistry Major

The Chemistry Department offers four major programs. All major programs require an average GPA of 2.0 in all courses counted toward the major, including prerequisites taken in Chemistry. Normally, all courses that would serve as prerequisites to, or count toward, a major in Chemistry, and that are presented at the time the student declares a major must individually have a GPA of 2.0 or higher. Three of the major programs are offered as majors in chemistry: Plan A, for those who wish a broad and thorough training in chemistry; Plan B, for those whose scientific interests are only partially based in chemistry; and a modified major, which is similar to Plan B, but also includes a second program involving another college department.

Plan A should be chosen by students who plan to do graduate work in chemistry or a closely allied science. Such students should normally take additional courses in chemistry, physics and mathematics to augment the plan's minimum requirements. Plan A is also a suitable choice for premedical students.

Plan B is less structured and is suitable for students planning to engage in chemically-related careers, such as medicine, environmental science, life science or industrial science, or professions for which the study of chemistry may prove desirable, such as teaching, law or business.

The third program is a major in biophysical chemistry. This major is designed for students who are interested in using physical chemistry to understand biological systems. This major is suitable for premedical students while also providing a strong biophysical background for students interested in pursuing a graduate education focused on using structural biology or spectroscopy to understand protein structure and function.

The fourth program is a major in biological chemistry. This major is designed for students interested in applications of chemistry to fundamental biological processes, similar to the biophysical chemistry option, but with less emphasis on the physical chemical underpinnings. In addition to being suitable for premedical students, it provides the framework for further graduate study in all areas of biological chemistry and biomedicine.

Dartmouth College requires that all majors must complete a substantial, graded culminating or integrating activity in

their major. Many chemistry majors will satisfy this requirement by participating in undergraduate research by registering for (p. 187)CHEM 80 (p. 187), Independent Study in Chemistry, or for one or two terms of CHEM 87 (p. 187), Undergraduate Investigation in Chemistry; such students will often be enrolled in the Chemistry Honors Program as well.

Other chemistry majors will satisfy the requirement for a culminating or integrating experience by including in their major programs one of the three-course groups listed below. The course groups, each of which provides an integrated presentation of an important area of modern chemical sciences, are: *Biophysical Chemistry* CHEM 75 (p. 186), CHEM 76 (p. 186) and CHEM 95.0x; *Biological Chemistry* CHEM 40 (p. 185), CHEM 41 (p. 185), and CHEM 42 (p. 185); *Physical Chemistry* CHEM 75 (p. 186), CHEM 76 (p. 186) and CHEM 96.0x; *Inorganic/Environmental Chemistry* CHEM 63 (p. 186), CHEM 64 (p. 186), and CHEM 91 (p. 187) or CHEM 92 (p. 187); *Synthetic Chemistry* CHEM 51 (p. 186), CHEM 52 (p. 186), and CHEM 93.0x; *Materials Chemistry* CHEM 51 (p. 186), CHEM 52 (p. 186), and CHEM 94.0x.

Students must indicate their preliminary plans for satisfying the requirement for the culminating or integrating experience when they declare a major in the sophomore year. Since a student may not enroll in CHEM 87 (p. 187) until they have been approved to do so (see later), the initial declaration of a major must show how the culminating experience requirement will be satisfied using one of the three-course groups mentioned above. Students must confirm their final plans for satisfying the culminating experience at the beginning of the fall term of the senior year. Modified majors with Chemistry as the primary department must define a culminating or integrating experience as part of the coherent and unified whole of their modified major, and must provide a statement to the Department's Undergraduate Advisory Committee at chemistry@dartmouth.edu and to the Registrar, explaining their rationale for the courses selected for the modified major. This is required as they submit their modified major plans in DartWorks.

1. Plan A Major

Prerequisite: CHEM 5 (p. 184) and CHEM 6 (p. 185) or CHEM 11 (p. 185); MATH 3 (p. 566), MATH 8 (p. 567), and MATH 13 (p. 568) (or equivalents); and (p. 663)PHYS 13 (p. 663) and PHYS 14 (p. 663) (p. 663)(*strongly recommended*) or (p. 663)PHYS 3 (p. 663) and PHYS 4 (p. 663) or (p. 663)PHYS 15 (p. 663) and PHYS 16 (p. 663)

Required Courses: CHEM 51 (p. 186), CHEM 52 (p. 186), CHEM 64 (p. 186), CHEM 75 (p. 186), CHEM 76 (p. 186) and CHEM 96.

Two additional courses selected from among CHEM 41 (p. 185), CHEM 42 (p. 185), CHEM 63 (p. 186), (p. 187)CHEM 80 (p. 187) or CHEM 87.01 (p. 187), (p. 187)CHEM 91 (p. 187), CHEM 92 (p. 187), CHEM 93.0x, CHEM 94.0x, CHEM 95.0x (two different offerings of CHEM 93.0x, CHEM 94.0x or CHEM 95.0x are acceptable) and another offering of CHEM 96.0x; graduate-level courses in Chemistry; (p. 174)BIOL 40 (p. 174); MATH 20 (p. 569), MATH 22 (p. 569) or MATH 24 (p. 569), MATH 23 (p. 569) and MATH 46 (p. 572); PHYS 19 (p. 664) and, with *prior written permission*, relevant major credit (or graduate-level) courses in other departments in the Division of the Sciences. BIOL 40 (p. 174) cannot be taken in conjunction with CHEM 41 (p. 185).

2. Plan B Major

Prerequisite: CHEM 5 (p. 184) and CHEM 6 (p. 185) or CHEM 11 (p. 185); MATH 3 (p. 566) and MATH 8 (p. 567) (or equivalent); and (p. 663)PHYS 13 (p. 663) and PHYS 14 (*strongly recommended*) or PHYS 3 (p. 663) and PHYS 4 or PHYS 15 (p. 663) and PHYS 16.

Required Courses: Of the eight courses, a minimum of six must be in chemistry to include a) CHEM 51 (p. 186) or CHEM 57, CHEM 75 (p. 186) and CHEM 76 (p. 186), and CHEM 64 (p. 186); b) two additional courses from the following group: CHEM 41 (p. 185), CHEM 42 (p. 185), CHEM 52 (p. 186), CHEM 63 (p. 186), (p. 187)CHEM 80 (p. 187) or (p. 187)CHEM 87.01 (p. 187), (p. 187)CHEM 91 (p. 187), CHEM 92 (p. 187), CHEM 93.0x, CHEM 94.0x, CHEM 95.0x, CHEM 96.0x (two different offerings of CHEM 93.0x, CHEM 94.0x, CHEM 95.0x or CHEM 96.0x are acceptable) and graduate-level courses in chemistry. Note that CHEM 76 (p. 186) is a prerequisite to some offerings of CHEM 96.0x.

The remaining two courses may be additional chemistry courses from group b) above or may be chosen from the following: BIOL 40 (p. 174); MATH 20 (p. 569), MATH 22 (p. 569) or MATH 24 (p. 569), MATH 23 (p. 569) and MATH 46 (p. 572); PHYS 19 (p. 664) and, with *prior written permission*, relevant major credit (or graduate-level) courses in other departments in the Division of the Sciences. BIOL 40 (p. 174) cannot be taken in conjunction with CHEM 41 (p. 185).

3. Modified Major

Modified Major with Chemistry as the primary department

Prerequisite: As required by courses elected.

Required Courses: Six in total, which must include CHEM 51 (p. 186), CHEM 64 (p. 186), and CHEM 75 (p. 186). The other three courses must be Chemistry Department courses.

Four additional courses from the secondary department selected with the approval of any member of the Undergraduate Advisory Committee (and under certain circumstances by the secondary department; see the Regulations under Department Major).

Modified Major with Chemistry as the secondary department

Prerequisite: As required by courses elected.

Required Courses: Four courses, which must be chemistry offerings, suitable (beyond prerequisites to the major) for completion of the Plan A or Plan B major.

4. Biological Chemistry Major

Prerequisite: CHEM 5 (p. 184) and CHEM 6 (p. 185) or CHEM 11 (p. 185); BIOL 12 (p. 171) or BIOL 19 (p. 171); MATH 3 (p. 566) and MATH 8 (p. 567) (or equivalent); (p. 663)PHYS 13 (p. 663) (p. 663) and PHYS 14 (p. 663)(*strongly recommended*) or (p. 663) (p. 663)PHYS 3 (p. 663) (p. 663) and (p. 663)PHYS 4 (p. 663) or (p. 663) (p. 663)PHYS 15 (p. 663) (p. 663) and PHYS 16 (p. 663). (p. 663)

Required Courses: CHEM 51 (p. 186), CHEM 52 (p. 186), CHEM 64 (p. 186), CHEM 40 (p. 185), CHEM 41 (p. 185) and CHEM 42 (p. 185).

Two additional courses selected from CHEM 63 (p. 186), (p. 187)CHEM 80 (p. 187) or CHEM 87.01 (p. 187), CHEM 91 (p. 187), CHEM 92 (p. 187), CHEM 93.0x, CHEM 94.0x, CHEM 95.0x, CHEM 96.0x (two different offerings of CHEM 93.0x, CHEM 94.0x, CHEM 95.0x or CHEM 96.0x are acceptable), graduate courses in chemistry, or *with prior written permission*, relevant major credit (or graduate level) courses in other departments in the Division of the Sciences. If CHEM 80 (p. 187) or CHEM 87.01 (p. 187) is selected as one of the two courses, the research project must have a biochemical focus.

There are many different ways to complete a major in Chemistry. To better inform your decision, the Department has prepared a document, *Planning for a Chemistry Major*, showing various paths that students can take through the major; not only does this emphasize that the major is more flexible than it might appear at first glance, but it also shows that there are several major plans that do not require taking two major courses in a term. This document along with additional information is available at <http://chemistry.dartmouth.edu/undergraduate/major>.

Students considering a Chemistry Department major are strongly encouraged to take CHEM 5 (p. 184) and CHEM 6 (p. 185) or CHEM 11 (p. 185) in their first year. Students with credit-on-entrance in a foreign language or in chemistry are urged to consider taking PHYS 13 (p. 663)-14 during the first year. This is also advisable for those students who delay completion of the language

requirement until sophomore year in Language Study Abroad. Students who plan to participate in Language Study Abroad should give early attention to the need for careful curriculum planning. In some cases it may be advisable to postpone the LSA term to the fall term of the junior year. If so, it is necessary to obtain (routine) approval from the Registrar for deferral of completion of the Language requirement.

All Chemistry majors have required courses, some of which must be taken in a particular order. While many sequences are possible, and the Department's Undergraduate Advisory Committee can give advice on this, it is essential to complete prerequisite courses before taking certain major courses. As a general guideline, it is recommended for majors that the physics and mathematics prerequisites for Physical Chemistry (CHEM 75 (p. 186) and CHEM 76 (p. 186), or CHEM 40 (p. 185)), as well as CHEM 51 (p. 186), be completed by the end of the sophomore spring term. Specifically, majors must complete PHYS 13 (p. 663) (or PHYS 15 (p. 663), or PHYS 3 (p. 663) and PHYS 4 (p. 663)) and MATH 8 (p. 567) before they take CHEM 75 (p. 186) or CHEM 40 (p. 185). *Any change of courses from those listed in the approved major must be discussed with a member of the Undergraduate Advising Committee before the course is taken for credit.*

Many Chemistry Department majors do research projects. This research is usually done during the senior (and sometimes junior) year and often for credit (see CHEM 80 (p. 187) and CHEM 87 (p. 187)), though occasionally a stipend is available to allow a student to do full-time research during a leave term. All majors are urged to investigate the numerous possible research projects offered by chemistry faculty members. A brochure describing faculty research interests and the CHEM 87 application form are available at <https://chemistry.dartmouth.edu/undergraduate/undergraduate-research-credit> and from the Department staff (102 Burke). The brochure enables a student to identify research areas of particular interest. A final choice of research project is made after consultation with the faculty member(s) concerned. The completed application form is submitted to the Chair for approval.

Requirements for the Chemistry Minor

The Chemistry Department offers a single minor program. All minor programs require an average GPA of at least 2.0 in all courses counted toward the minor, including prerequisites taken in Chemistry. Any student wishing to enroll in the minor program must obtain approval from a member of the Chemistry Department's Undergraduate Advisory Committee by no later than the *end of the first week of the last term in residence prior to graduation*.

Prerequisite: [CHEM 5](#) (p. 184) and [CHEM 6](#) (p. 185) or [CHEM 11](#) (p. 185) and [MATH 3](#) (p. 566).

Required Courses: [CHEM 51](#) (p. 186) and [CHEM 64](#) (p. 186).

Two additional courses selected from among [CHEM 40](#) (p. 185), [CHEM 41](#) (p. 185), [CHEM 42](#) (p. 185), [CHEM 52](#) (p. 186), [CHEM 63](#) (p. 186), [CHEM 75](#) (p. 186), [CHEM 76](#) (p. 186), [CHEM 80](#) (p. 187) or [CHEM 87.01](#) (p. 187), [CHEM 91](#) (p. 187), [CHEM 92](#) (p. 187), and [CHEM 93.0x](#); or graduate-level courses in chemistry. The NRO option is not allowed for any course taken to fulfill the chemistry minor. Students should note that many of the courses listed above have prerequisites in addition to [CHEM 6](#) (p. 185) and [MATH 3](#) (p. 566).

Requirements for the Materials Science Minor

The minor in Materials Science is sponsored by faculty in Chemistry, Physics and Engineering with an interest in interdisciplinary education and research in materials science.

Chemistry Department Honors Program

A student whose grades meet the minimum College requirement for honors work may apply to be admitted to the Honors Program. An honors major follows the basic pattern outlined in the requirements for the chemistry major but is very strongly urged to elect additional courses in chemistry and allied sciences.

An honors student carries out one of two individual projects. Usually an original experimental or theoretical investigation is undertaken in a well-defined area of interest under the guidance and supervision of a member of the faculty. A student with a strong interest in teaching may, however, formulate and carry out under the direction of a member of the faculty a program combining the development of instructional materials with actual experience in classroom or laboratory teaching. In either case, on completion of the work the student will write a thesis and take an oral examination.

A student electing an original experimental or theoretical investigation may conduct it by electing [CHEM 87](#) (p. 187) up to a maximum of two times (counting as two courses toward graduation, but only once toward the minimum group of major courses) or during a leave term of full-time effort. He or she may also request consideration of any appropriate combination of [CHEM 87](#) (p. 187) and noncredit research. A project concerned with the development of educational materials and experience in teaching will be similar in extent.

Ordinarily, the Honors Program will be undertaken by seniors, but juniors who have progressed sufficiently far in satisfying the normal requirements may be permitted to participate. A student who wishes to participate in the Honors Program must apply for admission to the Program by submitting a form, available at <http://chemistry.dartmouth.edu/undergraduate/undergraduate-research-credit>, or from the Department staff, *before* beginning work on an honors project, unless special permission has been obtained from the Chair. Before or at the time of application the student must arrange for the supervision of the work, normally by a member of the faculty of the Department. *The deadline for applications is the third day of the winter term of the senior year.* Additional information is available at chemistry@dartmouth.edu and from the Department administrative office.

Those students who satisfactorily complete the Honors Program with a 'B+' average or better in the grade(s) assigned to their honors work at the time of examination will earn Honors recognition in the major or, in appropriate cases, High Honors. High Honors will be granted only by vote of the Department on the basis of outstanding independent work and outstanding performance in the major. An interim evaluation of honors students will be made after one term and continuation will be recommended for those students whose work demonstrates the capacity for satisfactory (B+) work. Students who satisfactorily complete the Honors Program will have Honors in Chemistry or Biophysical Chemistry or Biological Chemistry, or, when appropriate, High Honors in Chemistry or Biophysical Chemistry or Biological Chemistry, entered on their permanent record.

CHEM - Chemistry - Undergraduate Courses

To view Chemistry Undergraduate requirements, click here. (p. 181)

To view Chemistry Graduate requirements, click here. (p. 832)

To view Chemistry Graduate courses, click here. (p. 834)

CHEM 5 - General Chemistry

CHEM 5 is the first course of a two-course sequence in general chemistry. This course introduces students to some fundamental principles of chemistry, including molecular and reaction stoichiometry, the properties of gases, solutions, chemical equilibria, acids and bases, an introduction to thermodynamic principles, and electrochemistry. This course also focuses on developing problem-solving skills. This course includes a required laboratory section that uses basic laboratory and experimental skills to illustrate fundamental chemical

concepts, considers how to properly design experiments, and demonstrates how to interpret experimental data to reach meaningful scientific conclusions.

An outline of topics for review of secondary school background in preparation for CHEM 5 is available on the Department of Chemistry website. In addition, an optional self-guided CHEM 5 preparatory course is available on Canvas which can be completed prior to the start of CHEM 5 to further aid students in their preparation for CHEM 5.

Students with a score of 4 or 5 on the AP Chemistry examination (or 6 or 7 on the IB exam, or A-level credit) are not eligible to enroll in CHEM 5 and are instead placed into CHEM 11.

Supplemental course fee required.

Prerequisite: Credit for MATH 3 (or MATH 8 or the equivalent)

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 6 - General Chemistry

The second term of a two-course sequence to introduce the fundamental principles of chemistry, including chemical stoichiometry; the properties of gases, liquids, and solids; solutions; chemical equilibria; atomic and molecular structure; an introduction to thermodynamics; reaction kinetics; and a discussion of the chemical properties of selected elements. The laboratory work emphasizes physical-chemical measurements, quantitative analysis, and synthesis. An outline of topics for review of secondary school background in preparation for college general chemistry is available from the Department of Chemistry. Students who are eligible to receive credit-on-entrance for CHEM 5-6 may not enroll in CHEM 5-6 or CHEM 10 for course credit without permission of the Department. Credit-on-entrance for CHEM 5-6 will be withdrawn for students who subsequently enroll in CHEM 5-6 or CHEM 10. Prerequisite for CHEM 5: MATH 3.

Prerequisite: Credit for MATH 3 (or MATH 8 or the equivalent) and CHEM 5

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 7 - First-Year Seminars in Chemistry

CHEM 11 - General Chemistry

CHEM 11 is a one-term general chemistry course for students with a background in chemistry and is designed to complement material emphasized in high school Advanced Placement courses. CHEM 11 focuses on topics including, thermodynamics, electrochemistry, reaction kinetics, quantum mechanics, and bonding at an introductory level. This course also includes a required laboratory section that

emphasizes physicochemical measurements and quantitative analysis.

Students with a score of 4 or 5 on the AP Chemistry examination (or 6 or 7 on the IB exam, or A-level credit) will be placed into CHEM 11; all other students interested in CHEM 11 will take a placement examination to determine whether they are placed into CHEM 11 or CHEM 5. Students who complete CHEM 11 will also be granted credit on entrance for Chemistry 5. CHEM 11 is not appropriate for students previously enrolled in CHEM 5, CHEM 6 or CHEM 10

Supplementary course fee required.

Prerequisite: Satisfactory performance on the chemistry placement examination (or a score of 4 or 5 on the Chemistry AP test, 6 or 7 on the IB exam, or A-level credit) and credit for MATH 3 (or MATH 8 or the equivalent).

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SLA

CHEM 40 - Physical Chemistry of Biochemical Processes

Topics in physical chemistry of relevance to fundamental biochemical processes. These will include the thermodynamic and spectroscopic characterization of macromolecular systems, ligand binding and adsorption equilibria, intermolecular interactions and the hydrophobic effect, and transport properties such as diffusion. Laboratory exercises apply these concepts to important biophysical problems, using calorimetric, spectroscopic and computational techniques.

Prerequisite: CHEM 6 (or CHEM 10) and PHYS 13 (or PHYS 15, or PHYS 3 and PHYS 4) and MATH 8, or permission of the instructor. Students with credit for CHEM 75 are not eligible to receive credit for CHEM 40. Supplemental course fee required.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 41 - Biological Chemistry I

This course is a one-term introduction to biochemistry presented from a chemical perspective. This course is intended for chemistry majors and uses specific examples to demonstrate and stress the role and integration of organic, inorganic and physical chemistry as applied to biochemical processes. This course also includes a required laboratory section that covers basic biochemical methods.

Not open to students who have received credit for BIOL 040.

Supplemental course fee required.

Prerequisite: CHEM 52 (or CHEM 58), or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

CHEM 42 - Biological Chemistry II

A one term advanced course with in-depth treatment of a number of important concepts in modern biological chemistry, including structural biology (both theoretical and experimental methods), protein folding, ligand binding, allostery, enzyme kinetics, and an introduction to molecular modeling and chemoinformatics. Laboratories will entail application of these methods/techniques.

Prerequisite: CHEM 40 (or CHEM 76), and CHEM 41, or permission of the instructor. Supplemental course fee required.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

CHEM 51 - Organic Chemistry

The first term of a two-term introduction to the chemistry of carbon compounds. The lectures deal with the preparation, properties, and reactions of most of the important classes of organic compounds. There is considerable emphasis upon reaction mechanisms and some attention is given to naturally occurring substances of biological importance. The laboratory work will introduce the student to experimental techniques and instrumental methods including several types of chromatography and spectroscopy, organic synthesis, and the systematic identification of organic compounds.

Prerequisite: CHEM 6 (or CHEM 10 or CHEM 11). Supplemental course fee required.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 52 - Organic Chemistry

The second term of a two-term introduction to the chemistry of carbon compounds. The lectures deal with the preparation, properties, and reactions of most of the important classes of organic compounds. There is considerable emphasis upon reaction mechanisms and some attention is given to naturally occurring substances of biological importance. The laboratory work will introduce the student to experimental techniques and instrumental methods including several types of chromatography and spectroscopy, organic synthesis, and the systematic identification of organic compounds.

Prerequisite: CHEM 51 (or CHEM 57 with permission of instructor). Supplemental course fee required.

Offered: Spring, Summer, Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 63 - Environmental Chemistry

A study of the chemistry of natural environmental processes and the impact of human activities on the atmosphere, hydrosphere and lithosphere. The course will consider the chemistry of topics such as air pollution in the troposphere and stratosphere, pesticides and herbicides, environmental and human health impact of toxic metals, acquisition and use of energy resources, chemicals and cancer, and climate change. The laboratory consists of a term-long, team-based experimental project using instrumental analysis of environmental samples to investigate an environmental chemistry issue or problem.

Prerequisite: CHEM 51 (or CHEM 57), or permission of the instructor. Supplemental course fee required.

Offered: Summer.

Degree Requirement Attributes: Dist:TLA

CHEM 64 - Basic Inorganic Chemistry

A study of bonding, structure, physical and chemical properties, and chemical reactions of inorganic compounds. Examples will be drawn from main group and transition metal compounds. The laboratory will involve preparations of inorganic compounds which illustrate appropriate experimental techniques for syntheses and manipulations, and instrumental methods for characterization of inorganic compounds.

Prerequisite: CHEM 51 (or CHEM 57), or permission of the instructor. Supplemental course fee required.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 75 - Physical Chemistry I

An examination of the laws of classical thermodynamics, followed by applications to the properties of gases, liquids, and solids, as well as to solutions, phase, and chemical equilibria. Chemical reaction thermodynamics and the kinetic theory of gases at equilibrium. An introduction to statistical thermodynamics, phenomenological transport and electrochemical reactions are discussed. Laboratories cover physical chemistry techniques drawn from these areas.

Prerequisite: CHEM 6 (or CHEM 10 or CHEM 11) and PHYS 13 (or PHYS 15, or PHYS 3 and PHYS 4) and MATH 8, or permission of the instructor. Supplemental course fee required.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

CHEM 76 - Physical Chemistry II

Topics in chemical reaction dynamics and the application of quantum mechanics to chemical bonding and spectroscopy. The examination of the fundamental ideas of quantum mechanics and their application to simple model systems such as the linear harmonic oscillator and a confined particle, and to atomic and molecular structure. Application of quantum theory to electronic, vibrational, rotational, and magnetic resonance spectroscopies. Chemical reaction kinetics and dynamics with focus on photochemistry, electron and energy transfer kinetics. Laboratories cover physical chemistry techniques drawn from these areas.

Supplemental course fee required.

Prerequisite: CHEM 75 or permission of the instructor.
Supplemental course fee required.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

CHEM 80 - Independent Study in Chemistry

An original and individual investigation under the supervision of a member of the faculty or staff. The project may involve either research or pedagogical development, with associated literature study. Students who continue the project into subsequent terms will receive a grade of "ON" (ongoing). Upon completion of the project, students will write a report and take an oral examination, after which a final grade in Chem 80 will be assigned.

Prerequisite: Sufficient training in the area of chemistry to be investigated, and permission of the Chair.

CHEM 87 - Undergraduate Investigation in Chemistry

Instructor: Chair and staff of the Department

An original and individual investigation with associated literature study in one of the fields of chemistry under the supervision of a member of the staff. Students electing the course will carry out preliminary reading during the preceding term and normally participate in a weekly colloquium. Open to qualified majors and minors, normally seniors, with permission of the Chair. The course may be elected more than once, but may be counted only once in satisfying the minimum major requirements. It may be elected for the last term in residence only if elected previously, or if the student has been doing research outside of this course. Students electing the course write a report and take an oral examination at the end of the term in which they last elect the course.

Prerequisite: Sufficient training in the area of chemistry to be investigated, and permission of the Chair

CHEM 87.01 - Undergraduate Investigation in Chemistry

An original and individual investigation with associated literature study in one of the fields of chemistry under the supervision of a member of the faculty or staff. The course may be elected once more (Chem 87.02), but only Chem 87.01 may be counted in satisfying the minimum major requirements. It may be elected for the last term in residence only if the student has already been actively involved in the research project. Students electing the course but who do not continue in Chem 87.02 will write a report and take an oral examination at the end of the term, and receive a final grade. Students who continue in Chem 87.02 will receive a grade of "ON" (ongoing).

Prerequisite: Sufficient training in the area of chemistry to be investigated, and permission of the Chair.

CHEM 87.02 - Undergraduate Investigation in Chemistry

Normally, Chem 87.02 serves as a continuation of the investigation begun in Chem 87.01. Students electing the course receive a grade of "ON" (ongoing) at the end of the term. Upon completion of the research project (which may extend into subsequent terms), students will write a report and take an oral examination, after which final grades for Chem 87.01 and Chem 87.02 will be assigned.

Prerequisite: Sufficient training in the area of chemistry to be investigated, and permission of the Chair.

CHEM 91 - Advanced Inorganic Chemistry: Catalysis

Instructor: Glueck

The role of metals in homogeneous and heterogeneous catalysis, with an emphasis on mechanisms of catalytic reactions. Applications to industrial processes, organic synthesis, and asymmetric synthesis will be discussed.

Prerequisite: CHEM 64, and either CHEM 52 or CHEM 58, or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 92 - Inorganic Biochemistry

Instructor: Pletneva

The role of metal ions in biological systems. Topics include metal ion transport, storage, and interaction with proteins and nucleic acids; metalloproteins involved in oxygen transport and electron transfer; metalloenzymes involved in activation of oxygen and other substrates; and medicinal, toxicity, and carcinogenicity aspects of metals; as well as inorganic model chemistry of bioinorganic systems. Several physical methods are introduced, and their application to current research on the above topics is considered.

Prerequisite: CHEM 64, and CHEM 41 or BIOL 40, or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 93 - Physical Organic Chemistry

Instructor: Aprahamian

Modern theories of organic reaction mechanisms, particularly the use of physical-chemical principles to predict the effect of changing reaction variables, especially reactant structures, on reactivity. Structure/property analyses will be used in assessing the stability and reactivity of various organic species.

Prerequisite: CHEM 52 or CHEM 58, or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 93.01 - Physical Organic Chemistry

Modern theories of organic reaction mechanisms, particularly the use of physical-chemical principles to predict the effect of changing reaction variables, especially reactant structures, on reactivity. Structure/property analyses will be used in assessing the stability and reactivity of various organic species.

Prerequisite: CHEM 52 (or CHEM 58, or permission of the instructor).

Degree Requirement Attributes: Dist:SCI

CHEM 93.02 - Advanced Organic Synthesis and Mechanisms

Advanced topics in organic chemistry, including: FMO theory, conformational analysis, stereoelectronic effects, and their effect on the stereochemical outcome of reactions. Additional topics will include olefin addition reactions and various classes of pericyclic reactions. Reaction mechanism, applications in synthesis, and the use of three-dimensional drawings will be emphasized.

Prerequisite: CHEM 52 (or CHEM 58) or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 93.08 - Introduction to Supramolecular Chemistry

Supramolecular Chemistry is a term coined by the Nobel laureate Jean-Marie Lehn, which means “chemistry beyond the molecules”. In supramolecular chemistry, weak and reversible noncovalent interactions are used to construct complex molecular architectures that would otherwise be almost impossible to synthesize. These interactions include hydrogen-bonding, metal coordination, hydrophobic forces, van der Waals forces, pi-p interactions, and electrostatic effects. We will be learning about these interactions and how to use them to make functional materials, such as molecular machines and muscles, self-

healing polymers, diagnostics and sensing platforms, and even molecular memory devices!

Degree Requirement Attributes: Dist:SCI

CHEM 94.05 - Functional Nanomaterials: Synthesis and Applications

This course focuses on synthesis, structure, and properties of nanomaterials. It begins with the introduction to the fundamental principles for understanding the size-dependent properties of materials that emerge at the nanoscale. It surveys a number of experimental techniques that can be utilized for observing and analyzing nanostructures, including X-ray techniques, scanning probe microscopy, and electron microscopy. It further details how strategies for synthesis, surface chemistry, and self-assembly can be utilized to control and tailor structure and properties of nanomaterials. Finally, the course highlights the applications of nanomaterials in chemical sensing, disease diagnosis and treatment, energy conversion and storage, and information storage. The class features a Wikipedia editing project, and visiting lectures highlighting modern technological applications of nanomaterials from PhD-level guest speakers.

Degree Requirement Attributes: Dist:SCI

CHEM 94.06 - Polymer Synthesis

Polymer synthesis is a senior-level course for undergraduate and graduate students desiring training in polymer chemistry. This course covers a broad spectrum of polymer synthesis methods, reaction mechanisms, and characterization methods. Students will actively participate in the learning process, which involves oral presentation and retrosynthesis practice.

Prerequisite: CHEM 51 (or CHEM 57) or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 95.01 - Membrane Biophysics

Instructor: Cantor

The structure and function of cell membranes, with emphasis on the complex behavior of intrinsic membrane proteins and its relation to physical properties of the lipid bilayer.

Prerequisite: CHEM 41, and CHEM 42 (or CHEM 76), or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

CHEM 95.02 - Biomolecular Simulations

Instructor: Mierke

An advanced treatment of modern computational approaches to the folding, structure, and dynamics of proteins and nucleic acids and their complexes. Topics include folding, searching algorithms, homology modeling,

energy landscape deformation, and multi-dimensional searching.

Prerequisite: CHEM 41, and CHEM 42 (or CHEM 76), or permission of the instructor.

CHEM 95.03 - Biomolecular NMR

Instructor: Mierke

The theoretical and practical aspects of the modern use of nuclear magnetic resonance in the study of biomolecules including peptides/proteins, synthetic and natural products, and nucleic acids will be developed.

Prerequisite: CHEM 41, and CHEM 42 (or CHEM 76), or permission of the instructor.

CHEM 95.05 - Protein Crystallography

Instructor: Ragusa

Theoretical aspects for the determination of protein structures using X-ray crystallography. Topics will include a detailed description of crystal symmetry, diffraction theory, data collection and processing, and methods for solving the crystallographic phase problem.

Prerequisite: CHEM 41, and CHEM 42 (or CHEM 76), or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

CHEM 95.06 - Enzymes

Instructor: Wilcox

Properties of enzymes that accelerate biochemical reactions, kinetic measurements to quantify enzymatic catalysis, methods to determine the mechanism of an enzymatic reaction, control and regulation of enzymatic activity, overview of the classes of enzymes and the reactions they catalyze.

Prerequisite: CHEM 41, and CHEM 42 (or CHEM 76), or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

CHEM 96 - Special Topics in Physical Chemistry

An in-depth exploration of a specific topic in physical chemistry. This course provides an introduction into the areas of current research in the field. The course is offered at least once each year, but the content changes according to the chosen topic.

CHEM 96.1 Quantum Chemistry

CHEM 96.2 Statistical Thermodynamics

CHEM 96.3 Molecular Spectroscopy

CHEM 96.4 Chemistry of Macromolecules

CHEM 96.7 Introduction to Materials Chemistry

CHEM 96.8 Chemical Kinetics

Degree Requirement Attributes: Dist:SCI

CHEM 96.01 - Quantum Chemistry

Instructor: Ditchfield

An introduction to the quantum mechanics of molecular systems. Approximate methods for calculating the electronic structure of molecules are discussed. Particular emphasis is placed on molecular orbital methods at various ab-initio levels. Methods which include the effects of electron correlation will also be presented. Evaluation of such methods for studies of molecular geometry, conformational problems, thermochemical data, and spectroscopic parameters is presented. Other topics considered may include the electronic structure of hydrogen bonded systems and of excited states.

Prerequisite: MATH 13 and CHEM 76 or equivalent, or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.02 - Statistical Thermodynamics

Instructor: Cantor

Elements of equilibrium statistical thermodynamics for classical and quantum mechanical systems, with applications to ideal gases, crystalline solids, imperfect gases and liquids.

Prerequisite: MATH 13 and CHEM 76 or equivalent or permission of instructor

CHEM 96.03 - Molecular Spectroscopy

Instructor: Winn

A study of optical spectroscopy including selected topics from amongst point group theory, vibrational spectra of polyatomic molecules, electronic and vibronic spectra of molecules and rotational spectra. May be offered on tutorial basis.

Prerequisite: CHEM 76 or equivalent, or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.04 - Chemistry of Macromolecules

Instructor: Lipson

Light scattering and other characterization techniques; thermodynamic and transport properties of macromolecular solutions. Structure-property correlations in amorphous and crystalline polymers.

Prerequisite: CHEM 75 or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.05 - Introduction to Statistical Thermodynamics and Molecular Simulations

Instructor: Zhang

An introduction to statistical mechanics and computer simulations of molecular liquids and solids. Discussions of fundamental concepts are complemented with demonstrations of computational and analytical methods for solving statistical mechanics problems.

Prerequisite: CHEM 75 or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.06 - Computational Methods in Chemistry and Biophysics

Instructor: Robustelli

A project-based introduction to computational methods in chemistry, molecular biophysics and structural biology. Projects will provide a practical introduction to data analysis and data visualization with python. Molecular dynamics simulations, Monte Carlo simulations and quantum calculations will be used to explore topics in protein dynamics, polymer dynamics, and the conformational analysis of small molecules. No prior coding experience is required.

Prerequisite: CHEM 76 or CHEM 42 or permission of the instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.07 - Introduction to Materials Chemistry

Instructor: BelBruno

This course begins with a review of fundamental concepts in material science, provides an introduction to some of the more advanced concepts, especially in regard to nanomaterials and, finally, focuses on the chemistry involved both in production of modern materials and their uses. The latter topics include the chemistry of thin films, self-assembled chemical systems, surface chemistry and cluster chemistry.

Prerequisite: Background in Chemistry equivalent to CHEM 76 or Physics equivalent to PHYS 24 or Engineering equivalent to ENGS 24 or permission of instructor

Degree Requirement Attributes: Dist:SCI

CHEM 96.08 - Chemical Kinetics

Instructor: BelBruno

Kinetics of chemical reactions in various media: reaction rate expressions, mechanisms, elementary processes. Elementary theories of rate processes: activated complex theory, elementary collision theory, unimolecular decomposition. Such topics as diffusion control of reactions, catalysis and photochemistry will be treated as time allows.

Prerequisite: MATH 13 and CHEM 76 or equivalent or permission of the instructor

Classics - Classical Studies; Greek; Latin

Classics - Classical Studies; Greek; Latin

Chair: P. Christesen

Professors P. Christesen, M. Graver, R. Stewart, L. Whaley; Associate Professor P. Glauthier, H. Tell; Assistant Professors: J. Hruby, A. Schultz; Language Program Director: J. Lynn; Lecturers: R. Dubit, M. Gaki, M. Kramer T. Ish-Shalom, B. Walker; Affiliated Faculty: A. Cohen, C. MacEvitt; T. Pulju; Professors Emeriti: E. Bradley, J. Rutter, W. Scott, J. Tatum, R. Ulrich, M. Williamson.

Additional information regarding the Classics Department can be found at classics.dartmouth.edu/

To view Classical Studies courses, click here.

To view Greek courses, click here.

To view Latin courses, click here.

The concentration in Classical Languages and Literatures combines contemporary methods in literary study with a broad range of ancient texts studied both in translation and in the original languages. Students may choose to gain competence in Latin, in Greek, or in both languages. In addition to such influential works as the *Iliad* and Vergil's *Aeneid*, courses are offered which explore less familiar but exciting options, from the political comedies of Aristophanes to the satire of Petronius and the medieval dramas of the abbess Hrosvitha. Students gain hands-on experience with the material remains of ancient literature, including medieval manuscripts in the Special Collections Library. The major may also be modified with Philosophy, Linguistics, Comparative Literature, or other subjects.

Beginning with the Class of 2019

Requirements for the Major in Classical Languages and Literature

- Any six courses in Greek and/or Latin numbered 10 or higher. These courses enhance students' knowledge of the corpus of ancient Greek and Latin texts, familiarize them with advanced methodologies of literary analysis, and build their research skills.
- Two courses distributed as follows:
 - One course selected from CLST 2-5, 10.x. This course helps establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduces students to the methodologies used in studying that subject matter.
 - One course selected from CLST 6, 11, 12, 14-26, 30, 31. This course helps establish a general

knowledge of ancient Greek and Roman history and material culture and introduces students to historical and archaeological methodologies.

- Two additional courses that can develop knowledge, skills and methodologies that are useful in the study of ancient texts, selected from: any CLST course numbered 2 or higher (excluding CLST 7); any course in Greek or Latin numbered 10 or higher; Art History 11.01, 11.02 and 12.01; courses in Comparative Literature numbered 10 or higher (when the content of the course focuses on Classical literature); Philosophy 11.
- Completion of Culminating Experience Requirement.

Requirements for the Modified Major in Classical Languages and Literatures

- Any five courses in Greek and/or Latin numbered 10 or higher. These courses enhance students' knowledge of the corpus of ancient Greek and Latin texts, familiarize them with advanced methodologies of literary analysis, and build their research skills.
- One course selected from CLST 2-5, 10.x; Philosophy 11. This course helps establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduces students to the methodologies used in studying that subject matter.
- Completion of Culminating Experience Requirement.

A modified major in Classical Languages and Literature consists of the courses listed above AND five additional courses taken in one or more other departments or programs. All modified majors must be planned as a coherent whole. Students must submit a written statement to the Classics Department explaining their rationale for the courses selected for the modified major, and that statement must be approved by the Department.

Requirements for the Minor in Classical Languages and Literatures

- Any four courses in Greek and/or Latin numbered 10 or higher. These courses enhance students' knowledge of the corpus of ancient Greek and Latin texts, familiarize them with advanced methodologies of literary analysis, and build their research skills. Greek 30, and Latin 22, 24, 26, 30 are topics courses that can be taken more than once when different subjects are offered.
- One course selected from: CLST 2-5, 10; any course in Greek or Latin numbered 10 or higher; Philosophy 11. This course helps establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduces students to the methodologies used in studying that subject matter.
- One course selected from CLST 6, 11, 12, 14-26, 30, 31. This course helps establish a general knowledge of ancient Greek and Roman history and material culture

and introduces students to historical and archaeological methodologies.

The concentration in Ancient History allows the student to focus on the process of continuity and change. Courses in Greek and Roman history provide a chronological overview while also introducing such topics as food security, women's experience and the cultural obsession with masculinity, personal prestige and political identity, power dynamics within slave societies, colonialism and cultural hegemony. Students work closely with a faculty member to develop their understanding of the methods of historical analysis, including hands-on experience with coins and inscriptions.

Requirements for the Major in Ancient History

- Two survey courses that establish a general knowledge of ancient Greek and Roman history: one selected from CLST 14-15 and one selected from CLST 17-18.
- Three additional ancient history courses selected from all remaining relevant offerings: CLST 11.x, 14-15, 17-18, 31. CLST 11 is a topics course that can be taken more than once when different subjects are offered. Students are encouraged to explore modes of historical analysis with varied foci, e.g., gender, slavery, law, sports, regional histories.
- CLST 19, to introduce students to advanced historical methodologies as well as to how research is designed and carried out.
- CLST 6, to provide an overview of the chronology and geography of the Classical world and to introduce students to the methodologies of archaeology.
- One course, to be chosen in consultation with the major advisor, that focuses on other methodologies employed by ancient historians. Such courses are offered by departments such as Anthropology, Classics, Comparative Literature, and History.
- Two Greek or Latin courses numbered 10 or higher (excluding Greek 11), to develop a working knowledge of one or both of the languages essential for research.
- Completion of Culminating Experience Requirement.

Requirements for the Modified Major in Ancient History

- Two survey courses that establish a general knowledge of ancient Greek and Roman history: one selected from CLST 14-15 and one selected from CLST 17-18.
- One additional ancient history course selected from all remaining relevant offerings: CLST 11.x, 14-15, 17-18, 31.
- CLST 19, to introduce students to advanced historical methodologies as well as to how research is designed and carried out.

- One course, to be chosen in consultation with the major advisor, that focuses on other methodologies employed by ancient historians. Such courses are offered by departments such as Anthropology, Classics, Comparative Literature, and History.
- One Greek or Latin course numbered 10 or higher.
- Completion of Culminating Experience Requirement.

A modified major in Ancient History consists of the courses listed above AND five additional courses taken in one or more other departments or programs. All modified majors must be planned as a coherent whole. Students must submit a written statement to the Classics Department explaining their rationale for the courses selected for the modified major, and that statement must be approved by the Department.

Requirements for the Minor in Ancient History

- Two survey courses that establish a general knowledge of ancient Greek and Roman history: one selected from CLST 14-15 and one selected from CLST 17-18.
- Two additional ancient history courses selected from all remaining relevant offerings: CLST 11.x, 14-15, 17-18, 31. CLST 11 is a topics course that can be taken more than once when different subjects are offered. Students are encouraged to explore modes of historical analysis with varied foci, e.g., gender, slavery, law, sports, regional histories.
- CLST 19, to introduce students to advanced historical methodologies as well as to how research is designed and carried out.
- CLST 6, to provide an overview of the chronology and geography of the Classical world and to introduce students to the methodologies of archaeology.
- One course, to be chosen in consultation with the major advisor, that focuses on other methodologies employed by ancient historians. Such courses are offered by departments such as Anthropology, Classics, Comparative Literature, and History.

The concentration in Classical Archaeology provides extensive experience of the material remains of Greek and Roman culture, including major sites and museums in Greece and/or Italy. Coursework supplies training in archaeological methods as well as a chronological overview of material culture from prehistoric Greece through the later Roman Empire. Hands-on work in Dartmouth's Hood Museum is a frequent component of these courses, as well as field trips to other museums in North America. Archaeology concentrators are also encouraged to apply for departmental support for participation in archaeological digs during their off terms.

Requirements for the Major in Classical Archaeology

Prerequisite: CLST 6, to provide an overview of the chronology and geography of the Classical world and to introduce students to the methodologies of archaeology.

Requirements:

- Three courses in Classical archaeology that establish a general knowledge of the material culture of the ancient Mediterranean world and/or explore contemporary issues and methodologies in the study of ancient artifacts (e.g. provenance and repatriation, imaging techniques), selected from CLST 12.x, 20-26. Students are encouraged to study the archaeology of both Greece and Rome. CLST 12 is a topics course that can be taken more than once when different subjects are offered.
- One course in ancient history, selected from CLST 11.x, 14, 15, 17, 18, 19. This course helps establish a general knowledge of ancient Greek and Roman history and introduces students to historical methodologies.
- Two courses from the Greece or Rome Foreign Study Programs (CLST 30, 31) enabling on-location study of sites and artifacts.
- Two courses in ancient Greek or Latin numbered 10 or higher to develop a working knowledge of one or both of the languages essential for research. Greek 30, and Latin 22, 24, 26, 30 are topics courses that can be taken more than once when different subjects are offered.
- Two additional courses, to be chosen in consultation with the major advisor, that can develop skills and methodologies employed by Classical archaeologists, selected from Classical Studies offerings numbered 2 or higher; courses in Greek or Latin numbered 10 or higher; Art History 10.01, 11.01, 11.02 and 12.01.

Requirements for the Modified Major in Classical Archaeology

Prerequisite: CLST 6, to provide an overview of the chronology and geography of the Classical world and to introduce students to the methodologies of archaeology.

Requirements:

- Three courses in Classical archaeology selected from CLST 12.x, 20-26, 30. Students are encouraged to study the archaeology of both Greece and Rome. CLST 12 is a topics course that can be taken more than once when different subjects are offered.
- One course in ancient history, selected from CLST 11.x, 14, 15, 17, 18, 19. This course helps establish a general knowledge of ancient Greek and Roman history and introduces students to historical methodologies.
- One course in ancient Greek or Latin numbered 10 or higher.
- Completion of Culminating Experience requirement.

A modified major in Classical archaeology consists of the courses listed above AND five additional courses taken in one or more other departments or programs. All modified majors must be planned as a coherent whole. Students must submit a written statement to the Classics Department explaining their rationale for the courses selected for the modified major, and that statement must be approved by the Department.

Requirements for the Minor in Classical Archaeology

Prerequisite: CLST 6, to provide an overview of the chronology and geography of the Classical world, and to introduce students to the methodologies of archaeology.

Requirements:

- Four courses in Classical archaeology selected from CLST 12.x, 20-26, 30. Students are encouraged to study the archaeology of both Greece and Rome. CLST 12 is a topics course that can be taken more than once when different subjects are offered.
- One course in ancient history, selected from CLST 11.x, 14, 15, 17, 18, 19. This course helps establish a general knowledge of ancient Greek and Roman history and introduces students to historical methodologies.

The concentration in Classical Studies is a less specialized liberal arts major that combines elements of language and literature, ancient history, classical archaeology, and other topics relating to Greek and Roman culture. Classical Studies concentrators are not required to include the study of Greek or Latin in their program, although such study is certainly encouraged. This concentration is also a good choice for combining with a major in another department and may easily be modified for a more individualized educational program.

Requirements for the Major in Classical Studies

Prerequisites: Two courses selected from CLST 1.x, 4, 6; Latin 3; Greek 3. These courses provide an introduction to ancient Greece and Rome and the methodologies scholars employ in studying these cultures.

Requirements:

- Two courses in ancient history selected from CLST 11.x, 14, 15, 17, 18, 19, 31. These courses establish a general knowledge of ancient Greek and Roman history and introduce students to historical methodologies. CLST 11 is a topics course that can be taken more than once when different subjects are offered.
- Two courses in Classical archaeology selected from CLST 20-26, 30. These courses establish a general knowledge of ancient Greek and Roman material culture and introduce students to archaeological methodologies. CLST 12 is a topics course that can be taken more than once when different subjects are offered.

- Two courses in Classical literature, philosophy, and religion (exclusive of the courses identified as prerequisites), selected from CLST 2-5, 10.x and courses in Greek or Latin numbered 10 or higher. These courses establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduce students to the methodologies used in studying that subject matter. CLST 10 is a topics course that can be taken more than once when different subjects are offered.
- Two additional courses that can extend the student's knowledge, skills and methodologies for the study of Greco-Roman antiquity, selected from all remaining Classical Studies offerings; courses in Greek or Latin numbered 10 or higher; Art History 10.01, 11.01, 11.02 and 12.02; courses in Comparative Literature numbered 10 or higher (when the content of the course focuses on Classical literature); Philosophy 11.
- Completion of Culminating Experience Requirement.

Requirements for the Modified Major in Classical Studies

Prerequisites: Two courses selected from CLST 1.x, 4, 6; Latin 3; Greek 3. These courses provide an introduction to ancient Greece and Rome and the methodologies scholars employ in studying these cultures.

Requirements:

- One course in ancient history selected from CLST 11.x, 14, 15, 17, 18, 19, 31. This course helps establish a general knowledge of ancient Greek and Roman history and introduces students to historical methodologies.
- One course in Classical archaeology selected from CLST 12.x, 20-26, 30. This course helps establish a general knowledge of ancient Greek and Roman material culture and introduces student to archaeological methodologies.
- One course in Classical literature, philosophy, or religion (exclusive of the courses identified as prerequisites), selected from CLST 2 - 5, 10 and courses in Greek or Latin numbered 10 or higher (excluding Greek 11). This course helps establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduces students to the methodologies used in studying that subject matter.
- One additional course selected from all remaining CLST offerings and courses in Greek or Latin numbered 10 or higher; Art History 10.01, 11.01, 11.02, and 12.01; courses in Comparative Literature numbered 10 or higher (when the content of the course focuses on Classical literature); Philosophy 11.
- Completion of the Culminating Experience Requirement.

A modified major in Classical Studies consists of the courses listed above AND five additional courses taken in one or more other departments or programs. All modified majors must be planned as a coherent whole. Students must submit a written statement to the Classics Department explaining their rationale for the courses selected for the modified major, and that statement must be approved by the Department.

Requirements for the Minor in Classical Studies

Prerequisite: One course selected from CLST 1.x, 4, 6; Latin 3; Greek 3. This course provides an introduction to ancient Greece and Rome and the methodologies scholars employ in studying these cultures.

Requirements:

- Two courses in ancient history selected from CLST 11.x, 14, 15, 17, 18, 19, 31. These courses establish a general knowledge of ancient Greek and Roman history and introduce students to historical methodologies. CLST 11 is a topics course that can be taken more than once when different subjects are offered.
- Two courses in Classical archaeology selected from CLST 12.x, 20-26, 30. These courses establish a general knowledge of ancient Greek and Roman material culture and introduce students to archaeological methodologies. CLST 12 is a topics course that can be taken more than once when different subjects are offered.
- Two courses in Classical literature, philosophy, and religion (exclusive of the course identified as the prerequisite), selected from CLST 2-5, 10.x; courses in Greek or Latin numbered 10 or higher; Philosophy 11. These courses establish a general knowledge of languages, literature, and systems of thought in ancient Greece and Rome and introduce students to the methodologies used in studying that subject matter. CLST 10.x is a topics course that can be taken more than once when different subjects are offered.

Culminating Experience Requirement

Students majoring in the Department of Classics may fulfill their Culminating Experience requirement in one of four ways:

1. Complete an Honors Project (requires prior approval from the Classics Department);
2. Complete two different Classics Foreign Study Programs;
3. Complete a relevant internship (for example, at the Hood Museum) during their junior or senior year AND enroll in an independent study class approved by the

Classics Department that includes but is not limited to the work undertaken as part of the internship;

4. Complete during their junior or senior year an additional course from among the offerings designated by the Department of Classics as appropriate for Culminating Experiences. If the course designated as a Culminating Experience does not normally require a substantial paper (c. 20-25 pages in length) or an equivalent project, the student will make arrangements with the faculty member teaching the course to produce such a paper or project as an addition to the standard requirements for the course. Such arrangements should be made no later than the end of the first week of the semester in which the Culminating Experience course is taken. If the course designated as a Culminating Experience normally requires a shorter paper or smaller project, the larger paper or project required to fulfill the Culminating Experience may, at the discretion of the instructor, replace that shorter paper or smaller project. All students must confirm their choice of culminating course with their advisor (or the Chair) not later than May 1 of their junior year; their selection is subject to final approval by the Department.

Requirements for All Modified Major Programs

Students wishing to design a Modified Major in Ancient History, Classical Archaeology, Classical Languages and Literatures, or Classical Studies must submit a written rationale demonstrating the intellectual coherence of their proposed program. The complete proposal must be formally approved by the Department of Classics. The program must include at least five courses offered by other departments and programs in addition to the prerequisites and major courses in Classics. One of these courses in other departments may be identified as prerequisite.

If a student wishes to modify a major in another department with any of the majors offered by the Department of Classics (Ancient History, Classical Archaeology, Classical Languages and Literature, Classical Studies) and wishes the name of that major to be entered on his or her permanent record, the modified major program must be approved by the Department of Classics, as well as by the primary department. The modifying component, which should have demonstrable coherence with the primary major, must consist of at least five courses offered by the Department of Classics.

Study Programs Abroad

The Department of Classics sponsors an Off-Campus Program every year that provides an opportunity for on-site study of the cultures of Ancient Greece and/or Rome. In addition to study and travel within the modern countries of Greece and/or Italy, these programs may include travel to other locations within the wide regions influenced by Greek and/or Roman culture. Programs are designed and led by faculty members in the Department of Classics.

Because specifics of the curriculum and itinerary alternate from year to year, it is possible for a student to participate more than once.

The curriculum embraces architecture, the visual arts, history, religion, literature, and the basic techniques of archaeological analysis. Students engage in a systematic investigation of sites, landscapes, artifacts, and historical and literary sources. Students learn to see and understand the ancient world in its own context through informal lectures and discussion on site, under the open sky. Structured comparisons (Greek vs Roman culture, major cities vs provinces, early Mediterranean cultures vs the cosmopolitan cultures of late antiquity) enable students to develop skills in analytical thinking and writing.

The academic requirements consist of weekly papers, blog posts, oral reports, and in some cases an independent study project.

Students must apply and be admitted to the program via the Guarini Institute's website; the deadline is usually March 1. Registration during the study abroad term is for CLST 30.01, CLST 30.02, and CLST 31, each of which may be taken twice if a student participates in two successive years.

Prerequisites for participation described on the Guarini Institute website; typically, they include two or more of the following:

- A course in classical archaeology: CLST 6, CLST 12.x, or any from CLST 20-26
- A course in ancient history: CLST 11.x or any from CLST 13-19
- Listening and speaking ability in Italian or Modern Greek, or reading ability in Greek or Latin as demonstrated by completion of GRK 3 or above or LAT 3 or above.

Senior Honors Program

Students eligible for the honors program in Ancient History, Classical Archaeology, Classical Languages and Literatures, or Classical Studies are those who (a) have at least a 3.5 average in Classics courses and an overall GPA of 3.3 or better; (b) have demonstrated their capacity to do independent work in their previous writing and/or research; and (c) have an adequate command of the requisite skills and/or methodologies, including language skills.

The Senior Honors Project is a year-long project which in most cases carries two course credits (CLST/GRK/LAT 87 and CLST 88), normally in Fall and Winter of the senior year. Several options are available for students to design an honors project that matches their particular interests and abilities. In many cases, the honors project consists of a thesis or creative project, but it is also possible to design a program of readings leading to a comprehensive

examination, or a combination of a research paper and a written examination.

Those desiring admission to the Senior Honors program should submit a formal project proposal to the chair of the department by May 1st of their junior year, identifying an appropriate faculty advisor with whom they have discussed their intentions in advance. The Department will assign a second reader to each honors student.

Additional information regarding the Honors program in Classics can be found at <https://classics.dartmouth.edu/research/senior-honors-projects>.

Only those students who have made satisfactory progress in the judgment of their advisor in the first term of the project (CLST/GRK/LAT 87) will be allowed to register for CLST 88. Only those students who satisfactorily complete an honors program with a grade of B+ or better will earn Honors in their major or, in appropriate cases, High Honors. High Honors will be granted only by vote of the Department on the basis of outstanding independent work.

Transfer Credit for Majors

Transfer credit in Classical Studies, Greek and Latin is granted by prior arrangement to majors in the Department of Classics. Exceptions to this policy can be made only by petition to the Department.

CLST - Classical Studies Courses

To view Classics requirements, click here (p. 190).

CLST 1 - Introductory Topics in Classical Studies

Which ancient faces and personalities come alive for us when we look back at Greek and Roman antiquity? How does the world of the ancient Mediterranean intrigue, repel, awe, amuse, or disturb us? Designed for students who have not previously taken courses in this area, this special-topics course introduces the different areas and disciplines that contribute to Classical Studies in the twenty-first century. Open to all classes.

Degree Requirement Attributes: WCult:CI

CLST 1.01 - From Jupiter to Jesus: Christianity and the Transformation of the Roman World

Through an introduction of major works of western literature and art from the Classical and Early Christian world students will be able to consider modern Western heritage as an enduring product of Greco-Roman civilization. Inquiry will include an exploration of how humans' understanding of themselves and their role in the

cosmos evolved over the period of the Roman Empire. Students will develop skills in analyzing written texts and works of art. They will be introduced to the intellectual tools used to investigate the transformation of societies impacted by exposure to new ideas and practices.

Cross-Listed as: COCO 027

Degree Requirement Attributes: WCult:W

CLST 1.02 - Foodstuffs and Culinary Culture

One thing all humans share is a relationship with food, but what that food is, who prepares it, how they prepare it, who consumes it, and when and how they consume it, all vary between cultures and within them. This course examines how ancient Greeks and Romans used food to differentiate between themselves and others, and how they used food to differentiate among themselves.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 1.03 - Antiquity Today

The Romans had the Colosseum, the Greeks had the dramatic stage. What does the different ways they staged violence tell us about the Romans and the Greeks? Can this help us understand staged violence in the modern world, such as that in video games? These are the sort of questions that we explore in CLST 1.03. Topics we cover include Greek and Roman attitudes toward violence, their approaches to classifying and evaluating sexual behaviors, their religious beliefs, and the ways they governed their societies. In all cases we will use what we learn about the Greek and Roman ways of doing things to help think about our own practices and predilections.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

CLST 2 - The Tragedy and Comedy of Greece and Rome

The course studies in translation selected works of Aeschylus, Sophocles, Euripides, Seneca (tragedy), Aristophanes and Plautus (comedy), and some of their central themes and questions: law, community, revenge, passion, and justice. We will approach them both as texts and as scripts/librettos, considering their relationship to other types of performance (ritual, rhetoric, music, dance) and genres (history, philosophy) as well as to theatrical space. There will be practical workshop opportunities for those interested. Open to all classes.

Cross-Listed as: THEA 12

Degree Requirement Attributes: Dist:ART; WCult:W

CLST 3 - Reason and the Good Life: Socrates to Epictetus

An introduction to philosophical thought in antiquity, especially that of Socrates, Epicurus, and the Stoics. We will concentrate especially on ethical questions; e.g. what

kind of life is best for humans to pursue, how thoughtful persons should weigh the potentially competing claims of reason, pleasure, and emotion; and on how intellectual activity was perceived at Athens and at Rome. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 4 - Classical Mythology

An introduction to Greek myths and the way in which their use in literature developed, from the use of myths as religious story to the utilization of myth in drama and its exploitation in poetry. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:CI

CLST 5 - Epics of Greece and Rome

Epic poetry was central to the creation of Greek and Roman identity—it was the genre through which these cultures transmitted their most important stories and their most sacred values. In this discussion-based course, we will learn about the defining elements of epic as a genre. We will explore how the tradition of the oral performance created the Homeric epics (*Iliad*, *Odyssey*) and how oral performance is mimicked and adapted in the highly literary epics of Vergil (*Aeneid*) and Apollonius (*Argonautica*). We will end the term by considering the influence this genre has had on the literature and storytelling traditions of today, in such authors such as Anne Carson, C.S. Lewis, Toni Morrison, Vikram Seth, and Simone Weil.

Degree Requirement Attributes: Dist:LIT; WCult:W

CLST 6 - Introduction to Classical Archaeology

This course addresses the basic methods and principles of Classical archaeology through a survey of the sites and artifacts of Greco-Roman antiquity. Approaches useful for the interpretation of material evidence and the problems inherent in such interpretation will be explored. Through the study of major sites in chronological sequence, students will survey the development of material culture in the Mediterranean world from prehistory to the collapse of the Roman Empire. The course thus serves as an introduction both to Greek and Roman civilization and to the goals of the discipline of archaeology. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

CLST 7 - First-Year Seminars in Classical Studies

Offered: Spring.

CLST 10 - Topics in Greek and Roman Literature, Philosophy, and Religion

Courses offered under this rubric explore specific facets of the literature, philosophy, and religion of ancient Greece and Rome.

CLST 10.01 - Rethinking the Divine

While the stories of mythology were the heritage of all Greeks and Romans, some found that the myths of the gods did not express their conception of a divine being. Philosophers as early as the 6th century B.C.E. offered their own explanations for religious thought and their own alternative accounts of the divine nature: some skeptical, some idealistic, some merely peculiar. The class will read and discuss accounts by Plato, Epicurus, Cicero, Plutarch, and others

Cross-Listed as: REL 19.03

Degree Requirement Attributes: TMV

CLST 10.02 - Seing Nature: Aristotle and Darwin

In this class, we will explore how Aristotle (the father of science) and Darwin (the father of modern biology) developed their ideas about the organization of nature and human society. We will analyze the assumptions they made, what facts and knowledge were available to them, and the dominant social views of their time. In addition, we will consider how our own understanding of the world is shaped by the same forces - with its constraints and possibilities

Cross-Listed as: COCO, BIOL 10.01

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.03 - Mind, Heart, Brain

Considers some of the earliest recorded theories of human and animal psychology worked out in Greco-Roman antiquity. What physical substances and/or bodily organs give rise to the characteristic functions of living things, such as sense-perception, self-movement, and self-awareness? How is it that human beings are capable of concept-formation, reasoning, memory, and emotion, and to what extent are these capacities also present in non-human animals? Is the mind-stuff radically distinct from the body and its afflictions, or intimately bound to it? Students work collaboratively to develop their own analyses of these and related issues in a range of philosophical, scientific, and medical texts from both Greece and Rome.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.04 - The Ancient Book: An Introduction to Paleography, Papyrology, Codicology, and Textual Criticism

Paleography is the study of ancient scripts, papyrology the study of scrolls, and codicology the study of ancient books.

You'll get a hands-on introduction by making actual scrolls and codices. You'll also publish blog posts about your experiences and findings. Textual criticism is the art of trying to reconstruct the original text of ancient literary works. As a final project, students will use the skills of textual criticism to reconstruct a lost archetype.

Degree Requirement Attributes: Dist:LIT; WCult:W

CLST 10.05 - Fictions of Sappho

Goddess of poetry, sexual predator, exotic holiday destination, lovelorn suicide, schoolmistress, parchment scrap: these are among the associations clustering around Sappho. From antiquity to the twenty-first century her poems and the legends about her life and loves have fascinated writers, artists and musicians as different as Queen Victoria, Willa Cather, Boccaccio, Jeanette Winterson, Ezra Pound, Gounod, and Ovid. We sample some of the twists and turns in this seemingly endless stream of fantasy and creative reappropriation.

Cross-Listed as: WGSS 21.02; COLT 67.06

Degree Requirement Attributes: Dist:LIT; WCult:CI

CLST 10.06 - The Concept of Love in Roman Literature

This course explores the importance of love as a concept in the ancient Roman literary imagination. Vergil's famous phrase "love conquers all" (*omnia vincit amor*, *Eclogues* 10.69) encapsulates the centrality of *amor* to the poetic genre of elegy. But the notion of love as a conquering force also hints at its ability to overwhelm, subdue, and destroy. The idea of love, broadly conceived, is embedded in the literature, philosophy, scientific thought, religion, and art and archaeology of the Romans. We will explore love in its various forms – devotion, lust, physical sexuality, friendship, and familial bonds – by looking at the central authors and genres of the Latin literary tradition (in English translation). Our discussion of these core texts will be further enriched by an examination of additional ancient sources, including Greek and Roman visual art, monuments and architecture, coins, and inscriptions.

Degree Requirement Attributes: Dist:LIT; WCult:W

CLST 10.07 - Ancient Magic and Religion

Bindings and curses, love charms and healing potions, amulets and talismans – from simple spells to complex group rituals, ancient societies made use of both magic and religion to try to influence the world around them. In this course, we shall examine the roles of magic and religion in the ancient Greek and Roman worlds, paying special attention to their local contexts and to the myths and actual techniques ancient practitioners used to serve their clientele.

In this class, we examine descriptions of religious and magical practices in the multicultural contexts of ancient

Greece and Rome. Our sources include literary accounts, legal documents, and material objects, such as inscriptions, amulets, tablets, magical images, and papyri.

Cross-Listed as: REL 19.24

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

CLST 10.08 - Laughter and Humor in the Ancient World

What made ancient Greeks and Romans laugh? Do we still get their jokes? What was the function of humor in antiquity, and how does this compare to the role of humor in modern societies? In this course we will investigate these questions by reading ancient Greek and Roman jokes, comedies, and satire alongside modern analyses of humor from psychology, sociology, and cognitive theory. Special themes to be discussed will include laughter and power, irony and satire in philosophy, visual humor, gallows humor, humor and horror, and laughing at others in terms of gender, ethnicity, race, and social class.

Degree Requirement Attributes: Dist:SOC; WCult:CI

CLST 10.09 - Quantitative Literary Criticism

Digitization of vast numbers of texts and rapid advances in computational methods are enabling new forms of criticism in all areas of literary study. Classics was an early adopter of digital technologies, and computation is now pervasive throughout the field, as illustrated by flagship projects such as the Perseus Digital Library. Beyond the familiar examples of digitized texts and simple word searches, scholars and students also benefit from an ever-growing array of sophisticated quantitative tools, and from increasing engagement with diverse technical disciplines – natural language processing, data science, even bioinformatics. Through a survey of recent research at the intersection of Latin literature and the digital humanities, this course will introduce you to the state of the art in quantitative literary criticism. To ground our methodological investigations, we will explore a diverse selection of Latin poetry, including epic (Vergil, Lucan, and Catullus), elegy (Catullus), and comedy (Plautus), and sample some less famous later authors, such as Paul the Deacon and Vitalis of Blois, who were influenced by classical antecedents. At each turn, we will examine the interplay between traditional (close reading, philology, theory) and data-driven analyses of Latin literature and consider how quantitative methods can support humanistic inquiry. Along the way, you will gain hands-on experience with powerful computational tools and be introduced to now ubiquitous critical approaches, such as intertextuality and reception studies. Assigned readings will be in English translation using bilingual Latin-English editions; in addition to reading all of the English, students with Latin will be responsible for understanding and translating “micro samples” of the original texts. The course assumes no prior computational background.

Cross-Listed as: QSS 30.12

Degree Requirement Attributes: Dist:TAS

CLST 10.10 - Ancient Medicine

This course will explore the Greek and Roman origins of medicine in the West. We will analyze how disease came to be understood as a natural phenomenon, and we will examine the different procedures, philosophies, and social roles of doctors in the ancient world. In this investigation, we will encounter many questions with which we are still grappling today, such as: What constitutes scientific thinking? How do science and cultural context determine and reflect one another? What is human nature? Is a disease a moral failing? How do we understand gender and sex in medical terms? All readings will be in translation, and no prior knowledge of medicine or Greco-Roman antiquity is necessary.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.11 - Plato's Protagoras

We will read one of Plato's most celebrated dialogues, in which Socrates meets the most famous intellectuals of the day. The dialogue is rich in philosophical content as it focuses on the question of what excellence is, whether it can be taught, and the role of education in a young person's life. Students do not need to know ancient Greek or have any previous knowledge of Plato to take this course.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.12 - The End of the World: Jewish and Christian Apocalyptic Literature in the Hellenistic Era

The Hellenistic era was a period of remarkable theological and literary creativity within the Jewish and Christian communities, including the development of a unique genre, apocalyptic literature. Apocalyptic texts, which portend a catastrophic end to the world, are notoriously difficult to interpret due to their use of fantastical imagery and often cryptic symbolism. In this class we will explore several texts in depth, including portions of *Daniel* from the Hebrew scriptures, the *Book of Enoch* from the Maccabean period, the *Apocalypse of John* (Revelation) from the Christian scriptures, and the 2nd century Christian text *Apocalypse of Peter*. In addition to learning how to read apocalyptic literature, we will examine the socio-historical context of these texts, their relationship to communities under duress and how they have been reimagined by later generations.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.13 - New Testament

Studies the collection of Christian texts now called the “New Testament” for the insights they provide into the

complex cultural interactions in the first-century Mediterranean world. Three primary texts, the *Gospel of Mark*, Paul's letter to the *Colossians*, and Paul's letter to *James*, will be examined in light of their original Jewish context and their embeddedness in Greek thought and Roman socio-political structures. This small-enrollment class is taught conjointly with GRK 29, but with assignments and assessment appropriate for students reading entirely in English

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.14 - Plato's Symposium

A small-enrollment seminar offering an introduction to Plato's thought and to a rich vein of material illustrating Greek attitudes and assumptions on erotic love for both sexes. The primary text is Plato's *Symposium*, which we will study in translation while learning the Greek alphabet and a few key vocabulary items in Greek. As time allows during the term, we will explore some of the rich body of evidence that exists in Greek poetry, oratory, and the visual arts either confirming or contradicting the impression given by Plato.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.15 - Magic and the Occult in the Ancient World

From simple spells designed to meet the needs of the poor and the desperate to the complex theurgies of the philosophers, the people of the Greco-Roman world employed magic to try to influence the world around them. We will study the ancient practitioners of magic, the techniques through which they served their clientele, the bodies of occult knowledge upon which they drew, and the cultural contexts in which they operated or were thought to operate.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 10.16 - Gender and Sexuality in the Ancient Greek World

How did the ancient Greeks think about sex, gender, and sexuality? Which behaviors and relationships were considered socially acceptable, and why? And what does it mean to seek out ancient Greek models for contemporary (queer) identities? This course examines the construction of gender and sexuality in ancient Greece, as well as its modern reception, through the study of written texts, material culture, and feminist and queer theory.

Cross-Listed as: WGSS 66.37

Degree Requirement Attributes: Dist:LIT; WCult:CI

CLST 10.17 - Stolen Histories

The course offers a model for ethically engaged inquiry in the humanities. Guided by a working archaeologist (Julie Hruby) and by a literary historian (Alexandra Schultz), you will take up a series of highly specific cases in which typical methods of investigation and analysis raise questions of proprietary interests, cultural bias, or personal autonomy. At what point do considerations of justice require us to forgo study and analysis? Are there approaches to scholarship that work to counteract the wrongs done by earlier generations of scholars? How can empathy, creativity, and passion give voice to silences in the record and bridge gaps of understanding between communities?

Cross-Listed as: HUM 03.09

Degree Requirement Attributes: Dist:TMV

CLST 11 - Topics in Greek and Roman History

Courses offered under this rubric explore specific facets of the history of ancient Greece and Rome

Degree Requirement Attributes: WCult:W

CLST 11.02 - Rediscovering Sparta: Ancient Remains and Modern Technology

This course gives students the opportunity to learn about the history of Sparta while becoming familiar with technology that is rapidly becoming indispensable in studying ancient Greece. We will use newly available archaeological information, ancient Greek texts, excavation reports and maps from the early 20th century, and GIS software to construct visualizations of the ancient city of Sparta. No prior knowledge of the relevant software or prior coursework in the ancient world is required or expected.

Degree Requirement Attributes: Dist:TAS; WCult:W

CLST 11.03 - Early Sparta and Corinth: A Comparative Approach to the Archaeology of Two Major Greek City-State

This course centers on Sparta and Corinth, two city-states that, despite close geographic proximity, followed notably different developmental trajectories during the Archaic period. Sparta conquered much of the southern Peloponnese and became a militarized society with an economy based almost entirely on agriculture. Corinth's territory was, compared to that of Sparta, minuscule, but it became a powerful and wealthy community through the foundation of numerous colonies and commerce. Sparta was famed for its army, Corinth for its navy. Spartans were known for the simplicity of their lifestyle and the architectural simplicity of their city, whereas Corinthians overtly enjoyed luxuries and erected some of the Greeks' earliest large-scale stone temples. By comparing and

contrasting Sparta and Corinth, we can develop a good sense of the Greek world during the Archaic period.

Cross-Listed as: COCO 019

Degree Requirement Attributes: Dist:ART; WCult:W

CLST 11.04 - Sport and Democratization

(Identical to Sociology 49.19). The relationship between democratization in society and in sports forms the subject matter of this course. We will begin to explore that relationship by looking at the various ways in which democratization in society and in sports influence each other in the modern world. Then we will turn our attention to the past and examine the relationship between democratization in society and in sports in sixth- and fifth-century BCE Greece, in nineteenth-century CE Britain, and in twentieth-century CE America. The course will end with a consideration of the lessons we have learned about democratization in society and in sports for public policy in the United States and elsewhere.

Cross-Listed as: SOCY 49.19

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

CLST 11.06 - Sex, Celibacy, and the Problem of Purity: Asceticism and the Human Body in Late Antiquity

Late Antiquity (c. 300-500 C.E.) was a time when Christians struggled to understand how gender, family life, and religion could intermesh. Did virgins get to heaven faster than those who marry? Can a chaste man and woman live together without succumbing to lust? Were men holier than women? What about women who behaved like men? This course examines the changing understanding of the body, marriage, sexuality, and gender within Christianity through reading saints' lives, letters, polemical essays, and legal texts. Open to all classes

Cross-Listed as: REL 31; WGSS 43.02

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 11.07 - Slave Societies Ancient and Modern: Imperial Rome and Brazil

Although slavery has existed in virtually all cultures, scholars of comparative world slavery have identified only five societies in all of human history as "slave societies": two were in the ancient world (classical Athens, Rome) and three were in the New World (the American South, the Caribbean, Brazil). This course examines slave systems in the ancient and modern worlds comparatively, focusing on Rome and Brazil. In Rome, the emergence of the state, including the development of the concept of the citizen, coincided with the development of the slave society. African slavery in Brazil was introduced soon after the establishment of the colonial government and drew heavily from classical legal definitions. In this course we compare the social and political structures of these two slave

systems (high art, popular culture, institutions). We examine how each slave society was legitimated, perpetuated and ultimately challenged. Specific topics include: the construction of the slave and the emergence of racializing discourse, the slave trade and the commodification of the body, trickster narratives, modern theories of power and domination, resistance and rebellion, and the problem of freedom for previously dominated peoples. Through comparison, students will not only become aware of the similarities between these two slave societies, but will also be better equipped to evaluate their unique qualities and particular achievements.

Cross-Listed as: LACS 30.10

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

CLST 11.11 - War Stories

What is a "true" war story? This course surveys stories of deployment and return from antiquity to the present, to think about the genre of the war story, and especially to think about the self-fashioning narratives of individuals who have witnessed the realities of war and return home. Through close reading we examine the interactions of the returning soldier with his community, and the kinds of stories that soldiers will and will not tell. The historical, cross-cultural study of war stories allows the problem of homecoming to emerge more clearly as problems of the human condition across cultures and political or social organizations, the problem of homecoming emerges as a product of war. Texts may include Homer, *Odyssey*; Remarque, *The Road Back*; S. Ooka, *Fires on the Plain*; Tim O'Brien, *The Things They Carried*; Bao Ninh, *The Sorrow of War: A Novel of North Vietnam*; D. Finkel, *Thank You for Your Service*; P. Klay, *Redeployment*; B. Turner, *Here, Bullet*.

Cross-Listed as: COLT 64.03

Degree Requirement Attributes: Dist:INT or LIT;
WCult:CI

CLST 11.12 - Slaves, Wives, & Concubines: Did Roman Women Have a History?

This course is about the heterogeneous lived experience of women (slaves, freed slaves, lawful wives, daughters, prostitutes) during the Roman Republic and Empire. Roman women built and immortalized themselves and their families in funerary and civic monuments, endowing institutions like schools, and sometimes had coins bearing their portraits. We explore the larger institutional frameworks that gave meaning to their lives, and within this framework we investigate their life choices over time.

Cross-Listed as: WGSS 21.01, HIST 94.13

Degree Requirement Attributes: Dist:SOC; WCult:CI

CLST 11.13 - Democracy: Ancient to Modern

This course comprises four parts. In the first, we will familiarize ourselves with the concept of democracy, as well as the historical context in which democracy first emerged. In part two, we will explore the history of democracy at ancient Athens, with an emphasis on the development and functioning of democratic institutions, democratic ideology, and the exploitation by democracies of women, slaves, and foreigners. In part three, we will consider democracies outside Athens, as well as non-democratic regime types, such as oligarchy, tyranny, and the “Lycurgan” constitution at Sparta. In part four, we will turn our attention to the modern era. More specifically, we will compare Greek democracies to subsequent institutions that have been described as democratic (e.g., New England town hall meetings, the United States of America, and the Democratic Republic of the Congo); examine the impact of Greek democracy on the development of modern political thought.

Cross-Listed as: HIST 90.08

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

CLST 11.14 - Gender and Sexuality in Ancient Greece

In this course we will analyze artifacts (e.g. frescoes and vase paintings, statuary, house interiors) and texts (e.g. love poetry, court cases, philosophical treatises, medical texts, tragedy and comedy) from Greece and its surrounding islands between about 3000 and 300 BCE. In addition to thinking critically about this primary material, allowing us to formulate our own opinions about it, we will read modern scholarly and popular texts focusing on gender and sexuality in prehistoric and ancient Greece.

Cross-Listed as: WGSS 21.03

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 11.15 - Herodotus and Thucydides

The course studies the two Greek writers who invented historical writing. Herodotus and Thucydides both engaged in an intricate intellectual dialogue with earlier Greek poetry and thought and with new, often radical political, religious, and scientific ideas; yet in doing so, they developed diametrically opposite modes of historical thinking. We will examine and compare their groundbreaking works in the context of Greek literary and intellectual history. Attention will also be paid to the later reception, from Plutarch through Marx.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 11.16 - Ancient Medicine

This course will explore the Greek and Roman origins of medicine in the West. We will analyze how disease came

to be understood as a natural phenomenon, and we will examine the different procedures, philosophies, and social roles of doctors in the ancient world. In this investigation, we will encounter many questions with which we are still grappling today, such as: What constitutes scientific thinking? How do science and cultural context determine and reflect one another? What is human nature? Is a disease a moral failing? How do we understand gender and sex in medical terms? All readings will be in translation, and no prior knowledge of medicine or Greco-Roman antiquity is necessary.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 11.17 - Ancient Greek Athletics

Athletics played a pivotal role in the ancient Greek world, and the history of athletics offers insight some of the basic forces shaping ancient Greek society. The topics we will cover include the origins of Greek athletics; the ancient Olympics; the reasons why the Greeks chose to compete in the nude; the connections between athletics and war, athletics and sex, and athletics and art; and the participation of women in athletics.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 11.19 - Before Billboards and Twitter: Ancient Coins as Text

Instructor: Stewart

This hands-on course focuses on ancient coinage, the development and use of money in the ancient Mediterranean, the logistics of coin production, and the methods for studying coinage to write Roman history. Students learn numismatic methodology by handling and studying coins from the collection in Dartmouth’s Hood Museum of Art and prepare material for an installation focusing on the Roman war against Cleopatra and Mark Antony. A final unit treats the ethics of coin-collecting and the role of the modern museum.

Cross-Listed as: HIST 94.16

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 11.20 - Slaves' History of Rome

Instructor: Stewart

This course examines the slave system of ancient Rome from the slaves’ perspective. Topics include the historiography of slavery; the economic roles of slaves and their structural relation to other classes of free and unfree labor; the historical context and political motives for the development of slave societies; slaves’ evolving political, social, and legal roles; the cultural processes that made and un-made the legal definition of the slave as a thing without status or identity.

Cross-Listed as: HIST 94.17

Degree Requirement Attributes: Dist:SOC; WCult:CI

CLST 12 - Topics in Classical Archaeology

Courses offered under this rubric explore specific facets of ancient Greek and Roman material culture, of the methodologies employed by classical archaeologists, and of the preservation and reception of Greek and Roman material culture.

CLST 12.02 - Greek and Roman Engineering and Technology

This special topics course offers an introduction to the most important machines and processes of Greek and Roman technology. Emphasis will be on the practical implications and applications of ancient technologies and engineering. Within the broad range of technologies surveyed, students will focus on specific case studies to provide deeper analysis and understanding of individual topics. Reading will be based on a textbook and selected chapters and articles from secondary sources. Greek and Roman writers will also be read in translation. Open to all students.

Offered: Spring.

Degree Requirement Attributes: Dist:TAS; WCult:W

CLST 12.03 - Who Owns the Past?

Modern archaeology grew out of antiquarianism, imperialism, and the attempts of early collectors and scholars to look to the past for aesthetics, to construct identities, and to satisfy their curiosities. This course examines how these legacies influence contemporary archaeology, museum practices, and policies to manage cultural heritage. The central question will be explored utilizing the perspectives of the relevant actors: archaeologists, collectors, museums, developers, descendant communities, national and local governments, and the tourism industry.

Cross-Listed as: ANTH 13

Degree Requirement Attributes: Dist:SOC; WCult:CI

CLST 12.04 - Mapping Ancient Greece: Pausanias, Digital Humanities, and GIS

Experience the history and archaeology of ancient Greece by following in the footsteps of Pausanias. Pausanias was a scholar from the 2nd century CE who traveled the length and breadth of Roman Greece recording all that was “worth seeing.” We will map Pausanias's itinerary in a Google Earth environment and create archaeological and historical tours that incorporate modern research and multimedia about the history, monuments, and artifacts of these places.

Degree Requirement Attributes: Dist:TAS; WCult:W

CLST 14 - Greek History: Archaic and Classical Greece

Instructor: Christesen

This course is designed to survey the major events in the history of ancient Greece from c.1600 B.C. (the emergence of palatial culture in the Mycenaean World) to 404 B.C. (the end of the Peloponnesian War). During this period, the Greeks formed individual communities and developed unique political structures, spread their culture, language, and religion throughout the Mediterranean, invented democracy (at Athens) and enshrined these values in their art and literature. This course will cover the physical setting of and the archaic legacy to the classical city-state, its economy, its civic and religious institutions, the waging of war between cities, the occurrence and ancient analysis of conflict within the city, and the public and private lives of its citizens and less well-known classes, such as women, children, slaves, etc.

Cross-Listed as: HIST 94.03

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 15 - Alexander the Great and the Macedonian Kings

This course has two aims: (1) to establish a basic understanding of the history of Alexander the Great and of Greek-speaking peoples in the eastern Mediterranean during the fourth through first centuries BCE and (2) to explore the cultural, military, political, and economic innovations of what was a singular age of experimentation.

Cross-Listed as: HIST 94.04

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

CLST 17 - Roman History: The Republic

This course surveys the history of the Roman people from 753 (traditional date of the founding of Rome) to 44 B.C. (the assassination of Julius Caesar). Topics include the development of Roman law, the conquest of all lands bordering on the Mediterranean, and the civil wars that destroyed Republican government. Particular emphasis is placed on the Roman political community: the political, religious and social factors that influenced the definition of the Roman aristocracy in the fourth century, the institutions that maintained the ascendancy of the elite, the military and political values inherent in the citizenship, the social and political mechanisms that militated against civil dissent, and the role of political values in the eventual destruction of Republican government from within.

Cross-Listed as: HIST 94.05

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 18 - History of the Roman Empire: Roman Principate to Christian Empire

This course is designed to survey the major events in the history of Rome from 31 B.C. (Octavian/Augustus' success at the battle of Actium) through the accession and rule of Septimius Severus. During this period, the Roman empire (signifying the territorial extent conquered by Roman armies and administered by Roman officials) became a political community extending throughout the Mediterranean and northwards into Europe as far as Scotland. This course considers the logic of the Roman system: the mechanisms promoting the political identity of diverse peoples as Roman, and the endurance of local traditions within the Roman world; the reasoning whereby the overarching leadership of a single individual was conceived as necessary and good, and the evolving relationship between the princeps and the Roman senatorial aristocracy with a tradition of competitive participation and self identity in politics at Rome; the definition of the Roman frontiers and the role of the army in the assimilation of non-Roman peoples.

Cross-Listed as: HIST 94.06

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

CLST 19 - Methods and Theory in Ancient History: Roman Britain

This course is designed to introduce the student to the various types of documentary evidence available to the ancient historian and to the various perspectives for framing and answering historical questions. We consider the interpretive methodologies for each type of document (coin, inscription, papyrus) as well as the particular historical context in which these documents were produced. Topics include the function of coinage and economic thinking in the ancient world and the political significance of the publication of law. The final weeks of the term allow for in-depth consideration of a specific problem in ancient history.

Cross-Listed as: HIST 94.07

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 20 - Greek Archaeology: First Hominins to Mycenaean Palaces

This course traces the cultural evolution of humanity in the Aegean basin from the era of hunting and gathering (Palaeolithic-Mesolithic) through the early village farming stage (Neolithic) and the formative period of Aegean civilization (Early Bronze Age) into the age of the great palatial cultures of Minoan Crete and Mycenaean Greece. The emphasis in the early part of the course will be on the different economic bases of early life in the Aegean and on regional variation within it. In the latter half of the course, study of the palaces, fortified citadels, and royal tombs at

such sites as Knossos, Mycenae, Tiryns, and Troy will lead to discussions of the Greek myths about Atlantis, King Minos' sea empire, and the Trojan War, and their basis in historical fact. May be taken in partial fulfillment of the major in Art History.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 21 - Greek Archaeology: Early Iron Age and Archaic

Instructor: Hruby

This course examines in detail through archaeology the cultural process whereby Greece evolved from a scattered group of isolated and backward villages in the Dark Ages (ca. 1100-750 B.C.) to a series of independent, often cosmopolitan city-states united against the threat of Xerxes' invasion of Greece in 480 B.C. Where did the Greeks acquire the concept of monumental temple architecture and why did they choose to build temples in only two or three different architectural styles? Where did the Greeks learn to write in an alphabetic script and what did they first write down? Who taught the Greeks the art of sculpture and why did they begin by carving what they did? When and why did the Greeks begin to portray their myths in art? May be taken in partial fulfillment of the major in Art History.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 24 - The Birth of Rome

Why did the Rome emerge as the most powerful city of the Western world? How did later Romans remember and heroize the events that led to their supremacy? We will trace this remarkable transformation through both science and literature: the physical evidence recovered through archaeology, and literary accounts in Greeks' and Romans' prose and poetry that tell stories of Rome's foundation and struggle for survival. Readings include passages from Virgil's *Aeneid* and Livy's *History of Rome*, as well as excerpts from ancient writers that include Dionysius, Strabo, Plutarch, Cicero and Ovid.

Degree Requirement Attributes: Dist:SOC; WCult:W

CLST 25 - Early Roman Imperial Archaeology: The First Emperors

Through archaeological sites and related artifacts, this course examines the Roman empire as it was transformed under the rule of the emperors. This course begins with a close look at the first emperor, Augustus, then continues with an examination of the reigns of the Julio-Claudians, Flavians, and Trajan. Discussion focuses on how ancient Italic traditions were transformed to suit the needs of the Imperial government (for example, the adaptation of the Republican, Hellenized Domus to the Imperial Palatia). The most dramatic change in religious practice is the

development of the Imperial cult. Site analysis will stress the need for an imperial idiom, the accommodation of urban masses and the promotion of a sense of a shared cultural experience. The course will also examine the technological developments that led to Rome's "architectural revolution." May be taken in partial fulfillment of the major in Art History.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

CLST 26 - Later Roman Imperial Archaeology: The Golden Age and Beyond

This course surveys Roman archaeology from Hadrian to Constantine. Emphasis is placed upon the Antonine and Severan emperors, then shifts rapidly over most of the mid-third century to focus on Diocletian and the tetrarchy, Constantine and the move of the capital to Constantinople. The course ends with a look at the great church of Hagia Sophia, and consideration of the debt of early Christianity to pagan religious traditions. A major component of the course is the study of the Romanization of the provinces, and, more specifically, the complex process of cultural hybridization (imported Roman traditions melding with local practices). Such sites as Baalbek, Petra, Dura-Europos, Palmyra, Roman Egypt, Tripolitania, Tunisia and Algeria, Constantinian Jerusalem, Trier, Spalato, etc., may be included. May be taken in partial fulfillment of the major in Art History.

Degree Requirement Attributes: Dist:ART; WCult:W

CLST 29 - Independent Study Project

The independent study project to be completed by a student while a member of the Dartmouth Foreign Study Program in Greece or Italy. Prerequisite membership in the Foreign Study Program.

Under normal circumstances, students participating in the Classics Department's Foreign Study Programs in either Greece or Rome will be enrolled in CLST 30.01, CLST 30.02, and CLST 31.

CLST 30.01 - Classical Art and Archaeology: Study Abroad I

Credit for this course is awarded to students who have successfully completed the work of the Dartmouth Foreign Study Program in Greece or Italy. May be taken in partial fulfillment of the major in Art History.

Prerequisite: membership in the Foreign Study Program.

Offered: Fall.

Degree Requirement Attributes: Dist:TAS; WCult:W

CLST 30.02 - Classical Art and Archaeology: Study Abroad II

Credit for this course is awarded to students who have successfully completed the work of the Dartmouth Foreign Study Program in Greece or Italy. May be taken in partial fulfillment of the major in Art History.

Prerequisite: membership in the Foreign Study Program.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

CLST 31 - Ancient Literature and History: Study Abroad

Credit for this course is awarded to students who have successfully completed the work of the Dartmouth Foreign Study Program in Greece or Italy.

Prerequisite: membership in the Foreign Study Program

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

CLST 40 - Translation: Theory and Practice

Translation is both a basic and highly complicated aspect of our engagement with literature. We often take it for granted; yet the idea of meanings "lost in translation" is commonplace. In this course we work intensively on the craft of translation while exploring its practical, cultural and philosophical implications through readings in theoretical and literary texts. All students complete a variety of translation exercises, and a substantial final project, in their chosen language. Students who wish to use the course for CLST 40 credit must work from Greek or Latin, and should normally have completed at least 2 courses in Greek or Latin above the level of 10, or equivalent.

Prerequisite: Good reading knowledge of a foreign language (usually equivalent to fulfilling the Dartmouth language requirement). Students unsure of their linguistic preparation should consult the instructor.

Cross-Listed as: COLT 19.01

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

CLST 85 - Independent Reading and Research

Instructor: Department Chair

CLST 87 - Thesis I

Instructor: Department Chair

Independent research and writing under supervision of a member of the Classics faculty. Open to honors students in their senior year and to other qualified students by consent of the Department.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for CLST 88, and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both this course and CLST 88 upon completion of CLST 88 at the end of the third term of coursework.

Prerequisite: permission of the instructor.

CLST 88 - Thesis II

Instructor: Department Chair

Independent research and writing under supervision of a member of the Classics faculty. Open to honors students in their senior year and to other qualified students by consent of the Department.

Students who have completed one term of work on an honors thesis or equivalent project with registration for CLST 87, GRK 87, or LAT 87, and who have been recommended by their research advisor to continue, are issued permission to register for CLST 88. At the end of this course, a grade of "ON" is assigned pending final revisions, an oral presentation to the full department, and submission of the final version, all of which normally happens during the spring term. The "ON" is then changed to a final grade.\f

The full honors sequence consists of CLST/LAT/GRK 87 plus CLST 88 and carries two credits. Although work on the project may continue during the spring term, students do not register for a third course.

\f

GRK - Greek Courses

To view Classics requirements, [click here](#) (p. 190).

GRK 1 - Introductory Greek

Study of Greek grammar, syntax, and vocabulary accompanied by reading of simple Greek prose selections. Never serves in partial satisfaction of the Distributive or World Culture Requirement.

Offered: Winter.

GRK 1.02-3.02 - Intensive Greek

This course will introduce students to the fundamentals of Greek grammar in an intensive mode. Students are required to enroll for both time sequences. Through intensive drills and graded readings, the basic features of Greek grammar will be presented rapidly. Completion of this double course will allow a student to enroll in Greek 10 or to read simple Greek prose independently. The

course satisfies the college language requirement. *Never serves in partial satisfaction of the Distributive Requirement.*

Offered: Spring.

GRK 2 - Greek 2

This course picks up where Greek 1 left off in introducing students to Classical Attic Greek, the dialect of ancient Greek spoken in Athens and the surrounding region of Attica during the fifth and fourth centuries BCE. Having previously learned the foundations of the language, students will progress to more complex grammar and vocabulary in this course.

GRK 3 - Intermediate Greek

Continued study of Greek grammar and syntax. Readings in Greek prose authors. Completion of Greek 3 satisfies the College language requirement. Never serves in partial satisfaction of the Distributive or World Culture Requirement.

Prerequisite: GRK 1, or equivalent

Offered: Spring.

GRK 10 - Readings in Greek Prose and Poetry

Readings in Greek prose and poetry at the intermediate level, typically including selections from Plato and/or Euripides.

Prerequisite: GRK 3, or equivalent.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 10.13 - New Testament

Studies the collection of Christian texts now called the "New Testament" for the insights they provide into the complex cultural interactions in the first-century Mediterranean world. Three primary texts, the *Gospel of Mark*, Paul's letter to the *Colossians*, and Paul's letter to *James*, will be examined in light of their original Jewish context and their embeddedness in Greek thought and Roman socio-political structures. This small-enrollment class is taught conjointly with GRK 29, but with assignments and assessment appropriate for students reading entirely in English

Degree Requirement Attributes: Dist:TMV; WCult:W

GRK 11 - Modern Greek I

An introduction to Modern Greek as a spoken and written language. The work includes regular practice in class and scheduled drill-sessions. No previous knowledge of Greek is assumed. Never serves in partial satisfaction of the Distributive or World Culture Requirement.

GRK 20 - Homer's Iliad

In this class, we will read three to four books of the *Iliad* in Greek and the remaining books in translation. We will focus on learning how to read Homeric Greek with accuracy and speed, and we will also learn how to scan hexameter. In addition, we will explore some of the larger interpretive issues surrounding the poem and its composition, and in so doing we will read key contributions of contemporary scholarship. In class, students will practice close readings and literary analysis, especially when considering the *Iliad's* character, style, and narrative structure.

Prerequisite: GRK 10, or equivalent.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 21 - Homer's Odyssey

In this class, we will read four to five books of the *Odyssey* in Greek and the remaining books in translation. We will focus on learning how to read Homeric Greek with accuracy and speed, and we will also learn how to scan hexameter. In addition, we will explore some of the larger interpretive issues surrounding the poem and its composition, and in so doing we will read key contributions of contemporary scholarship. In class, students will practice close readings and literary analysis, especially when considering the *Odyssey's* character, style, and narrative structure.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 24 - Theatre

A study of the tragedy and comedy of Classical Greece through detailed reading of at least one play of Aeschylus, Euripides, Sophocles, or Aristophanes.

Prerequisite: GRK 10, or equivalent.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 25 - Aristophanes' Frogs

In this class, we will read Aristophanes' *Frogs*. The play was performed in 405 BCE, a few months before Athens' defeat at the hands of Sparta and eventual surrender in the Peloponnesian War. Euripides and Sophocles had recently died, and Aeschylus had been dead for fifty years. There was an impending sense of doom in the air at the time of the production – both culturally (the end of tragedy) and historically (the end of the Athenian empire).

The *Frogs* displays a bewildering mix of themes, ranging from bowel humor, literary criticism, education, to notions about salvation and the afterlife. We will explore all of those topics in this class. We will also pay attention to comedy as a genre and the stylistic conventions it employs.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 26 - Intellectual Enquiry in Classical Athens

This course centers on the period of intellectual ferment and enquiry in fifth- and fourth-century Athens, when traditional beliefs came under scrutiny and many different figures laid claim to truth telling, from orators and sophists to poets and the practitioners of philosophy and history. Texts studied will be taken from the following: philosophy (the sophists, the early dialogues of Plato); history (Herodotus and/or Thucydides); the medical writers; dramatists (Euripides, Aristophanes); orators.

Prerequisite: GRK 10 or equivalent.

Degree Requirement Attributes: Dist:TMV; WCult:W

GRK 28 - Philosophy

Our goals are to learn to read Plato's Greek with accuracy and comprehension, and to become engaged with Plato's thought through a close study of one of his dialogues. We will have occasion to consult other Platonic texts in translation and in Greek.

Degree Requirement Attributes: Dist:TMV; WCult:W

GRK 29 - New Testament

A brief introduction to the language, vocabulary, and idiom of New Testament Greek, followed by readings in the Gospels and the Epistles of St. Paul.

Prerequisite: GRK 10, or equivalent.

Degree Requirement Attributes: Dist:TMV; WCult:W

GRK 30 - Special Topics in Greek

Course offerings under this rubric vary from year to year. Emphasis is placed on writing and research skills as well as the development of reading ability in Greek.

GRK 30.04 - Ancient Fiction: The Greek and Roman Novels

Kidnapped lovers, marauding pirates, powerful witches, and the occasional werewolf—this is the world of the ancient novel. In this class, students will focus on one text in the original language and read more broadly in translation. We will pay particular attention to narrative, genre, intertextuality and literary history, cultural context, and reception.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 30.05 - Roman Fiction: The Greek and Roman Novels

Kidnapped lovers, marauding pirates, powerful witches, and the occasional werewolf—this is the world of the ancient novel. In this class, students will focus on one text in the original language and read more broadly in translation. We will pay particular attention to narrative, genre, intertextuality and literary history, cultural context, and reception.

Cross-Listed as: LAT 30.04

Degree Requirement Attributes: Dist:LIT; WCult:CI

GRK 30.06 - Thinking Big: Heroes in Aristophanes and Plautus

In this class we read comic texts produced in Classical Athens and Republican Rome, to consider the literary features of the comic genre and the political significance of comedy in performance. We focus on the comic hero who defies all obstacles to win desirable social goods (food, wine, sex; peace, freedom).

Cross-Listed as: LAT 30.06

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 30.07 - The End of the World: Jewish and Christian Apocalyptic Literature in the Hellenistic Era

The Hellenistic era was a period of remarkable theological and literary creativity within the Jewish and Christian communities, including the development of a unique genre, apocalyptic literature. Apocalyptic texts, which portend a catastrophic end to the world, are notoriously difficult to interpret due to their use of fantastical imagery and often cryptic symbolism. In this class we will explore several texts in depth, including portions of *Daniel* from the Hebrew scriptures, the *Book of Enoch* from the Maccabean period, the *Apocalypse of John* (Revelation) from the Christian scriptures, and the 2nd century Christian text *Apocalypse of Peter*. In addition to learning how to read apocalyptic literature, we will examine the socio-historical context of these texts, their relationship to communities under duress and how they have been reimagined by later generations.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

GRK 30.08 - History and Structure of the Greek Language

This course focuses on the grammar, pronunciation, and writing of ancient Greek, starting from its origin in Proto-Indo-European (c. 4000 BC), proceeding through Homer to classical Attic (1st millennium BC), and ending with the post-classical era. Through analysis of language data and reading of selected ancient texts, students will gain a

greater mastery of synchronic language patterns, and also will understand the diachronic origins of those patterns.

Cross-Listed as: LING 11.15

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP

GRK 30.09 - Demosthenes' On the Crown

In this class, we will read one of the most celebrated speeches of all time: Demosthenes' *On the Crown*. In it, Demosthenes is forced to defend his entire public career – a time during which he saw Athens lose its autonomy and cultural status to the growing power of Macedon under the leadership of Philip II and his son Alexander the Great.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 30.10 - Alcibiades

We will explore the transgressive culture icon Alcibiades through the lens of Plato's dialogue named after him. In it, Socrates approaches the young Alcibiades for the first time and offers to help him achieve his unbridled political ambitions, if he is only willing to spend time with him.

We will pay particular attention to Alcibiades' relationship with Socrates and his role in Platonic philosophy, but we will also focus on his portrayal in a range of ancient authors, such as Aristophanes, Thucydides, Xenophon, and Plutarch.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 30.18 - Lover, Victim, Goddess, Whore: Helen in Ancient Greek Literature

Celebrated as a lover, pitied as a victim, worshipped as a goddess, reviled as a whore—Helen of Troy has captivated people's imaginations from classical antiquity to today. This advanced reading course offers students the opportunity to read select texts in ancient Greek by authors including Homer, Sappho, Herodotus, Euripides, and Plutarch, and learn about one of the most elusive and enchanting figures of Greek antiquity.

Degree Requirement Attributes: Dist:LIT; WCult:W

GRK 85 - Independent Reading and Research

Instructor: Department Chair

GRK 87 - Thesis I

Instructor: Department Chair

Independent research and writing under supervision of a member of the Classics faculty. Open to honors students in their senior year and to other qualified students by consent of the Department. Students register for GRK 87, rather than CLST 87, when their intended thesis or equivalent honors project involves substantial amounts of reading in ancient Greek.

Students pursue the research program laid out in their thesis proposal. By the end of this first term of honors work, they have they will have begun substantive work on a thesis or equivalent project; e.g., a first chapter. Upon the recommendation of the research advisor, the department may, at the end of the first term, give permission for the student to register for CLST 88.

A grade of "ON" is assigned pending completion of the thesis or equivalent project later in the year, at which point the "ON" will be replaced by a final grade. If the advisor does not recommend continuation to CLST 88, the "ON" will be replaced with a letter grade upon completion of a shorter independent paper or project approved by the research advisor, at which point the student may petition the Classics Department for Culminating Experience credit to be assigned.

Prerequisite: permission of the instructor.

LAT - Latin Courses

To view Classics requirements, [click here](#) (p. 190).

LAT 1 - Latin 1

Introduction to Latin grammar, vocabulary, and syntax through prose readings of gradually increasing difficulty. Never serves in partial satisfaction of the Distributive or World Culture Requirement.

Offered: Fall, Winter.

LAT 2 - Latin 2

Continues the study of Latin language and Roman culture begun in Latin 1. The structures of the language are introduced through readings of gradually increasing complexity. The narrative content of the course brings in historical persons and events from the last quarter of the first century A.D, both in the province of Britannia and in the city of Rome. The class will also spend some time studying real inscriptions, curse tablets, and coins, as well as composing in Latin as a means to increasing reading fluency. This course is primarily designed for students who have taken Latin 1 at Dartmouth, but will also be a good fit for those who have had one or more years of high school Latin and want to reinforce their skills before moving on to reading unadapted Latin in Latin 3.

Offered: Spring, Winter.

LAT 3 - Latin 3

Continued study of Latin grammar, vocabulary, and syntax with reading of selected literary texts. Completion of Latin 3 satisfies the College language requirement. Never serves in partial satisfaction of the Distributive or World Culture Requirement.

Prerequisite: LAT 1, or equivalent.

Offered: Fall, Spring.

LAT 10 - Topics in Latin Texts

Latin 10 comprises a series of courses appropriate for students who have completed one year of college study or equivalent coursework in high school. All courses in this series provide review of grammar and syntax as well as practice in reading unadapted passages from Roman authors.

Degree Requirement Attributes: WCult:W

LAT 10.01 - Topics in Latin: The Landscape of Latin Literature

Designed to introduce students to varied aspects of Latin literary culture. Beginning with some physical evidence of literacy and writing materials, we will proceed to study the physical history of ancient books and publication methods, then analyze a series of short works illustrating how the Romans themselves thought about literary production, the functions texts can serve, and the nature of meaning and authorship. Readings are a mixture of poetry and prose taken from a variety of authors including Catullus, Cicero, Tibullus, Ovid, Pliny, Martial, and Juvenal, as well as Tom Stoppard's play *The Invention of Love*, which gives a fresh perspective on the history of classical scholarship at the beginning of the 20th century. Not open to students who have received credit for LAT 015.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 10.02 - Topics in Latin Texts: Clodia Metelli

An introduction to scholarly resources with a study of our original sources for the life of Clodia, wife of Metellus, one of the most interesting female figures of ancient Rome. In addition to reading selections referring to Clodia (or "Lesbia") from the letters and speeches of Cicero and the poems of Catullus, we will consider the ways that these generically different sources were consumed in the first century B.C.E. and how, later, they were (sometimes quite precariously) preserved through the medieval period in the manuscript tradition. This course is designed for students who have completed at least the Latin 1, 2, and 3 sequence at Dartmouth, or who have previously studied all the basics of Latin grammar but are looking for a systematic review of grammar and poetic meter and an introduction to the tools scholars use when reading texts closely. Not open to students who have received credit for LAT 010 without decimal suffix.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 10.03 - Topics in Latin Texts: Petronius's Satyricon and Neronian Rome

An introduction to continuous readings of unadapted Latin prose via the hilariously bizarre novel *Satyricon*, written by a certain Petronius during the reign of Nero. Petronius's work will be supplemented with excerpts from Petronius'

contemporaries or near-contemporaries (Seneca, Lucan, Tacitus) to paint a picture of the carnivalesque madness that was Neronian Rome. The course includes a comprehensive review of Latin grammar and the opportunity to discuss questions of language and interpretation.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 10.04 - Latin Manuscripts and Palaeography

This course is an introduction to the basic skills of Latin paleography, from the scripts of Late Antiquity to the Humanist scripts of the Renaissance. Working closely with manuscriptis in the Dartmouth Collections, supplemented with digital images of the of manuscripts held in other libraries around the world, students will learn to transcribe and translate manuscripts, and to understand them both as transmitters of texts and as material objects that tell their own stories.

Degree Requirement Attributes: Dist:ART; WCult:W

LAT 15 - Literature and the Romans

This course introduces some new ways of thinking about reading and writing in the Roman world. Beginning with the physical history of ancient books and publication methods, we will proceed to examine typical tricks and strategies of Roman writers to inform, move, or amuse their readers. Readings are a mixture of poetry (e.g. Catullus, Vergil's *Eclogues*, short poems of Martial) and prose (e.g. Cicero's personal letters, biographical notices), supported by a structured vocabulary program and review of key grammatical concepts.

Prerequisite: LAT 3 or LAT 10, or equivalent preparation in secondary school.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 18 - Intermediate Topics in Latin

Meets conjointly with an upper-division course and shares much of its content, but with different requirements and assessments. Typically students taking the course at the intermediate level have shorter reading assignments in the original language and a greater emphasis on language development. For instance, they may take a language test instead of writing the research paper at the end of the term.

LAT 18.01 - Intermediate Topics in Latin: Mortality and Immortality in Roman Philosophy

Meets conjointly with LAT 27 (Roman Philosophy) and shares much of its content, but with shorter Latin reading assignments and a greater emphasis on language development.

Degree Requirement Attributes: Dist:TMV; WCult:W

LAT 18.02 - Catullus

The poems of Catullus have been delighting, moving, and frequently shocking readers since he wrote them in the final years of the Roman republic. We will read extensively from this fascinating body of work, paying close attention to language and style. Significant themes will include love, friendship, obscenity, invective, gender, sexuality, poetics, and programmatics. In addition, we will study the literary culture of the late Republic and explore recent critical approaches to Catullus.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 18.03 - Intermediate Topics in Latin: The Italian Countryside

The environmental concerns of our own time find a counterpart in the Roman fascination with the beauty and fragility of the rural landscape and natural world. Readings may come from pastoral poetry, represented especially by Vergil's *Eclogues*; the literature of farming and agriculture, including Vergil's *Georgics*; and related themes in works by Varro, Horace, Tibullus, and others. This course is taught conjointly with LAT 31 The Italian Countryside, but with assignments adjusted for the needs of less-experienced Latinists. Students may not take both LAT 18.03 and LAT 031 for credit.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 20 - Epic Poetry

The summit of achievement for a Roman poet was the epic, written in hexameter verse and combining storytelling with expressions of deeply held cultural values. This class will read portions of one or more Latin epics, such as Vergil's *Aeneid*, Ovid's *Metamorphoses*, Lucan's *Civil War*, and Statius' *Thebaid*. Potential areas of emphasis include the representation of imperial power, gender and sexuality, intertextuality, genre, and reception.

Degree Requirement Attributes: Dist:LIT

LAT 21 - Love Poetry

An exploration of the rich tradition of amatory verse at Rome. Readings may come from the love-elegists Tibullus, Propertius, and Ovid, and/or other poets, including Catullus and Horace. Topics to be considered include the art of persuasion in erotic literature; Roman attitudes towards gender, sexuality, and desire; and the emergence and development of Augustan culture.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 23 - Roman Drama

Reading ancient drama allows us to consider the function of artistic production to engage with challenging political and social questions. The class will read from the comedies of Plautus and Terence and/or the tragedies of Seneca, and will explore features of the comic and/or tragic genre.

Latin readings may be combined with one or more Greek plays read in translation.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 25 - Roman Historical Writing

Readings drawn from the rich tradition of Roman historical writing. Selected readings from the works of Caesar, Sallust, Livy, and/or Tacitus will enable the class to think about the character of Latin prose writing in different periods and about the strategies of historians for offering critique and/or affirmation of those in power.

Degree Requirement Attributes: Dist:SOC; WCult:W

LAT 27 - Roman Philosophy

Educated Romans studied Greek philosophy with enthusiasm and found their own ways to express philosophical ideas in writing. Readings selected from the works of Cicero, Lucretius, Seneca, and others will illustrate how Greek thought was augmented and transformed in the Roman period. Not open to students who have previously received credit for LAT-18.01.

LAT 28 - Literature of the Later Empire and the Middle Ages

Readings from the late Empire to the high Middle Ages that may include selections from the Vulgate, St. Augustine's *Confessions*, the *Passion of Saints Perpetua and Felicity*, Hrotsvitha's *Dulcinius*, and the *Carmina Burana*.

Prerequisite: LAT 10 or equivalent.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 29 - Cicero and Roman Legal Argument

In this class we will read the text of Cicero's speech for Aulus Cluentius (*Pro Cluentio*) as an example of Roman legal argument. In 66 BCE Cicero defended Aulus Cluentius on a charge of murdering his stepfather Statius Albius Oppianicus (*de sicariis et veneficiis*). Both men—as well as many others involved in the case—came from local towns in Roman Italy. The stakes for conviction: loss of civic status, essentially a social death. Cicero's defense of his client provides a masterly example of courtroom defense strategies (the mustering of evidence, witness testimony, manipulation of legal procedures) and the courtroom story-telling that created presumptive realities of “wrong” and “truth,” of “innocence” or “guilt.” The speech thus affords insight into questions of Roman courtroom procedure and judicial integrity, of the assimilation of Italians within the Roman social and political community and access to Roman law, and of the social expectations

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 30 - Topics in Latin Literature

Representative texts and topics that highlight the complex relationship between Greek and Latin literature. Offerings vary from year to year to allow opportunities to study subject matter such as the ancient novels and Roman reinterpretations of Greek myth. Emphasis is placed on writing and research skills as well as the development of reading ability in Latin.

LAT 30.03 - Ancient Fiction: The Greek and Roman Novels

Close reading of Greek and Roman novels in the original in addition to wider-reading in translation, with particular attention to narrative, genre, and literary and cultural context.

Cross-Listed as: GRK 30.04

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 30.04 - Roman Fiction: The Greek and Roman Novels

Kidnapped lovers, marauding pirates, powerful witches, and the occasional werewolf—this is the world of the ancient novel. In this class, students will focus on one text in the original language and read more broadly in translation. We will pay particular attention to narrative, genre, intertextuality and literary history, cultural context, and reception.

Cross-Listed as: GRK 30.05

Degree Requirement Attributes: Dist:LIT; WCult:CI

LAT 30.06 - Thinking Big: Heroes in Aristophanes and Plautus

In this class we read comic texts produced in Classical Athens and Republican Rome, to consider the literary features of the comic genre and the political significance of comedy in performance. We focus on the comic hero who defies all obstacles to win desirable social goods (food, wine, sex; peace, freedom).

Cross-Listed as: GRK 30.06

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 30.07 - Roman Perspectives on Friendship

Studies the ideology and practice of friendship at Rome through personal letters, short poems, and philosophical discussions. In particular, we consider how the relationship called *amicitia* fit into the social hierarchy, whether that relationship entailed personal affection, and how Romans dealt with the ethical problems that sometimes arise in the context of friendship. Readings in Latin include personal and political letters of Cicero, short poems of Catullus to both friends and enemies, and Cicero's essay *De amicitia*.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

LAT 30.08 - History and Structure of the Latin Language

Instructor: Pulju

This course focuses on the grammar, pronunciation, and writing of Latin, starting from its origin in Proto-Indo-European (c. 4000 BC), proceeding through early Latin into the classical period (1st cent. BC to 1st cent. AD), and ending with the post-classical era. Through analysis of language data and reading of selected ancient texts, students will gain a greater mastery of synchronic language patterns, and also will understand the diachronic origins of those patterns.

Cross-Listed as: LING 11.14

Offered: Fall.

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP

LAT 30.09 - Listening to Voices from Slavery

Instructor: Stewart

This course surveys Latin texts that represent or embed slaves' voices. We read inscriptions (including slave testimonies) and excerpts from literary texts (including publicly performed drama, historical narratives, courtroom speech, poetry, novel, and martyr narratives) alongside contemporary theoretical work, in order to explore the voices and the representations of slave experience. Students develop analytical tools to identify and evaluate fragmentary testimonies of slavery, and they gain a sense of the archive--and the particular value of literary sources--for studying the relationships of slavery.

Degree Requirement Attributes: Dist:LIT; WCult:CI

LAT 31 - The Italian Countryside

The environmental concerns of our own time find a counterpart in the Roman fascination with the beauty and fragility of the rural landscape and natural world. Readings may come from pastoral poetry, represented especially by Vergil's *Eclogues*; the literature of farming and agriculture, including Vergil's *Georgics*; and related themes in works by Varro, Horace, Tibullus, and others.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 32 - The Poetry Book

Studies the development of the carefully crafted and deliberately arranged book of poetry at Rome, including one complete *libellus* in Latin with the possibility of additional examples in translation. Authors that may be read include Vergil, Horace, Propertius, Ovid, Statius, and Martial. As time allows, the class will also explore later

examples of book design and artistry, drawing on Dartmouth's collection of rare books.

LAT 33 - The Literature of Science

The ancient Greeks and Romans studied natural phenomena passionately and considered the pursuit of scientific knowledge a mind-transforming experience that was sublime and potentially even sacred. This class will study one or more key texts in the Roman scientific tradition. Readings will be drawn from poets, such as Lucretius and Manilius, and/or prose authors, like Seneca and the Elder Pliny. Potential topics include ancient physics, astronomy, meteorology, and natural history.

Degree Requirement Attributes: Dist:TMV; WCult:W

LAT 34 - Letter-writing in the Roman World

The Romans considered letter-writing an important skill and adapted the letter form to many purposes: maintaining friendship, promoting political ends, consolation, education, artistry, and sheer entertainment. Readings will come from the prose letters of Cicero, Seneca, or Pliny; personal notes and letters recovered from archaeological sites; and/or the verse epistles of Ovid or Horace.

Offered: Spring.

LAT 35 - Satire and Humor

Basically a humorous monologue on contemporary topics, verse satire is the one kind of writing the Romans claimed as entirely their own. The class will read some of the best-known examples by Horace and Juvenal and may also explore other examples of Roman humor: epigrams by Catullus or Martial, Seneca's *Pumpkinification*, Petronius's *Satyricon*.

Degree Requirement Attributes: Dist:LIT; WCult:W

LAT 85 - Independent Reading and Research

Instructor: Graver

LAT 87 - Thesis

Instructor: Graver

Independent research and writing under the supervision of a member of the Classics faculty. Open to honors students in their senior year and to other qualified students by consent of the Department.

Prerequisite: permission of the instructor.

Cognitive Science Program

Chair: David Kraemer (Psychological & Brain Sciences; Education)

Professors: Devin Balkcom (Computer Science), John Kulvicki (PHIL), Thalia Wheatley (PBS); Associate Professors: Valentina Apresyan (Cognitive Science), Luke Chang (Psychological & Brain Sciences), David Kraemer

(PBS; Education); Assistant Professors: Souyoung Jin (Computer Science), Steven Frankland (Cognitive Science), Jonathan Phillips (Cognitive Science); Lecturer: Megan Hillis (Cognitive Science), Dae Houlihan (Cognitive Science), Caleb Kendrick (Cognitive Science), Samantha Wray (Linguistics).

To view Cognitive Science courses, [click here](#). (p. 212)

Cognitive Science Program

Cognitive Science is the study of cognition from an interdisciplinary perspective and is largely informed by models of information processing. Contributing disciplines include cognitive psychology, computer science, neuroscience, philosophy, linguistics, as well as other fields, such as anthropology and sociology. Topics of focus include perception, memory, reasoning and language.

Dartmouth's cognitive science program is issues-oriented and relies on methods drawn from a number of disciplines. Students pursuing a major should become familiar with the basic approaches to cognition of psychology, philosophy, computer science and linguistics. This breadth is complemented by the depth provided by the focus area, elective courses chosen under the guidance of an advisor, which allows students to gain specialized knowledge in a particular topical area of cognitive science.

Cognitive Science Major

1. PREREQUISITES:

- COGS 1: Introduction to Cognitive Science
- One approved course in statistics or quantitative analysis (e.g., PSYC 10). *For a list of currently approved statistics courses, [click here](#).*

2. REQUIREMENTS: Eleven additional courses, including:

- LING 1: Introductory Linguistics
- COSC 1: Introduction to Programming and Computation, or a higher-level course in Computer Science
- COGS 25: Philosophy of Cognitive Science, or one of the following (all courses have prereq of one course in PHIL):
 - PHIL 27 (Phil of Science)
 - PHIL 34 (Lang and Thought)
 - PHIL 35 (Mind and Psychology)
- COGS 02: Cognitive Psychology, or a higher level PSYC course (check courses for a prereq: PSYC 1, COGS 1 etc.)

- One approved course in experimental methodology (e.g., PSYC 11). *For a list of approved methods courses, [click here](#).*
- COGS 80: Senior Seminar in Cognitive Science
- One Culminating Experience: either:
 - a) Senior Honors Thesis (COGS 86, 87)
 - b) 1 or 2 term independent study with advanced term paper (COGS 85)
 - c) COGS 81: (This is a *second* term of the COGS 80 with an advanced term paper)
- Four courses in an approved Focus Area. For currently approved focus areas and associated courses, [click here](#). Examples of focus areas include:
 - Decision Making
 - Language and Thought
 - Learning and Development
 - Consciousness
 - Cognitive Science of Design
 - Social Interaction Networks
 - Intelligence
 - Moral Reasoning

Students who wish to design their own focus area not listed here should contact the chair for further discussion.

Honors Program

The Honors Program in Cognitive Science offers qualified students the opportunity to undertake independent research under the direction of a faculty member. It is important to consult with a prospective advisor as early as possible, preferably during the junior year or earlier.

Applications to the Honors Program may be submitted to the Chair either during the spring of the junior year or the fall of the senior year. The project itself normally lasts two terms. Students will take COGS 86 the first term and COGS 87 the second. The completed thesis is to be submitted during the winter or spring term, and an oral presentation will be given at a special seminar of students and faculty.

COGS - Cognitive Science

To view Cognitive Science Requirements, [click here](#) (p. 211).

COGS 1 - Introduction to Cognitive Science

Instructor: Phillips and Frankland

Cognitive Science aims to understand how the mind works by using tools and insights from a variety of fields including experimental psychology, computer science,

linguistics, vision science, philosophy, anthropology, behavioral economics, and neuroscience. This course will introduce you to many of the major tools and theories from these areas as they relate to the study of the mind. We will tour mental processes such as perception, reasoning, memory, attention, imagery, language, intelligence, decision-making, and morality, and discover many strange and amazing properties of mind.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

COGS 2 - Cognitive Psychology

Instructor: Bharucha

This course provides a comprehensive overview of cognitive psychology, the scientific study of mental processes: how people acquire, store, transform, use, and communicate information. Topics may include perception, attention, language, memory, reasoning, problem solving, decision-making, and creativity.

Prerequisite: PSYC 1 or PSYC 6 or COGS 01

Cross-Listed as: PSYC 028

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

COGS 11.04 - Face Perception

Instructor: Gobbini

Faces are one of the richest sources of information for non-verbal communication. Through faces we recognize identity and infer the emotional and mental states of others, as well as where they are directing their attention. This course will focus on the neural mechanisms for face perception and how these mechanisms facilitate rapid extraction of cues that facilitate social interaction. Particular relevance will be put on the neural systems for representation of person knowledge. In addition to weekly readings, students will have a written exam at the end of the course.

Cross-Listed as: PSYC 51.02

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

COGS 21 - Introduction to Computational Neuroscience

Instructor: Granger

Your brain is composed of low-precision, slow, sparsely-connected computing elements, yet it outperforms any extant computer on tasks ranging from perception to planning. Computational Neuroscience has as its twin goals the scientific understanding of how brains compute thought, and the engineering capability to reconstruct the identified computations. Topics in the class included

anatomical circuit design, physiological operating rules, evolutionary derivation, mathematical analyses, and emergent behavior, as well as development of applications from robotics to medicine.

Cross-Listed as: PSYC 40; COSC 16

Offered: Fall.

Degree Requirement Attributes: SCI

COGS 25 - Philosophy of Cognitive Science

Instructor: Kendrick

What is the mind and how can we model it? Cognitive science offers a distinctive approach to some of the great philosophical questions about the mind. But what does it tell us? This course will cover the classical foundations of cognitive science, and some of the more recent developments in the field. We will study the computational theory of the mind and its implications, connectionism, theories of embodiment, dynamical systems, and recent statistical approaches to cognition. (Not open to students who received credit for PHIL 010/COGS 11.01.)

Prerequisite: One Philosophy course, or permission of the instructor.

Cross-Listed as: PHIL 025

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

COGS 26 - Philosophy and Computers

Instructor: Dominicucci

The accomplishments of artificial intelligence research and the widespread use of computers in our society confront us with many interesting philosophical questions. What are the limits of artificial intelligence? Could computers ever think or feel? Is the Turing test a good test? Are we really computers? Are there decisions computers should never make? Do computers threaten our privacy in special ways? This course will consider such issues in order to explore the philosophical implications of computing. Open to all classes.

Prerequisite: One Philosophy course, one Cognitive Science course, one Computer Science course, or permission of the instructor.

Cross-Listed as: PHIL 026

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

COGS 32 - STEM Learning and Education

Instructor: Kraemer

How do we learn, understand, and teach science, technology, engineering, and math (the STEM disciplines)? In this class, we will explore the nature and

development of the scientific mind; how we formulate theories, design experiments, and understand scientific, technological, and mathematical concepts; and how we learn and teach related skills in the classroom, addressing the debate about the effectiveness of direct instruction and hands-on approaches. Open to all classes.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

COGS 34 - Development in the Exceptional Child

Instructor: Coch

What is an "exceptional" child? How might an exceptional child think about and experience the world? What is happening inside the brain of an exceptional child? We will learn about specific types of exceptionality likely to be encountered in the classroom, including attention deficit/hyperactivity disorder, autism spectrum disorders, depression, dyscalculia, specific language impairment, dyslexia, and dysgraphia. In exploring exceptionality, we will focus on behaviors that define the exceptional child; different approaches to learning, viewing the world, and interacting with others that characterize exceptional children; the brain bases of atypical or exceptional development; and how scientific knowledge affects educational practice. Open to all classes.

Cross-Listed as: EDUC 064

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

COGS 44 - Artificial Intelligence

Instructor: Vosoughi

An introduction to the field of Artificial Intelligence. Topics include games, robotics, motion planning, knowledge representation, logic and theorem proving, probabilistic reasoning over time, understanding of natural languages, and discussions of human intelligence.

Prerequisite: COSC 10. COSC 30 is recommended.

Cross-Listed as: COSC 76

Offered: Fall.

Degree Requirement Attributes: TAS

COGS 45 - Computational Cognitive Science

Instructor: Frankland

Human cognition is characterized by remarkable intellectual feats, but also frustrating failures. What general principles determine what minds can and can't achieve? In this course, we treat cognition as computation and construct artificial systems to model cognitive strengths and weaknesses. Part of each class will be spent in lecture and part will be spent working directly with computational

models in active learning exercises that use neural networks for hands-on exploration.

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

COGS 50.03 - Introduction into Cognitive Linguistics

Instructor: Apresyan

This course provides an introduction to cognitive linguistics, a field that investigates the relationship between language and human cognition. Cognitive linguistics emphasizes the role of our bodies and brains in shaping our understanding and use of language. The course explores how our physical experiences and cognitive abilities affect language structure and use. For instance, our attentional biases add nuances to our word choices in spatial and temporal constructions, and our physical experiences influence our expression of mental and emotional concepts. Throughout the course, we will cover major cognitive linguistic concepts, including metaphor, categorization, frame semantics, goal bias, and prototype theory. Additionally, we will examine how these and other cognitive linguistic concepts can be applied to a variety of real-world phenomena, such as online media, humor, second language learning, and even gesticulation. The course format incorporates lectures, reading discussions, practical exercises, creative assignments, and a research project. Students will employ diverse research methods, including behavioral experiments, linguistic corpora analysis, and interviews.

Offered: Fall.

Degree Requirement Attributes: Dist:TAS

COGS 50.04 - Theories of Consciousness

Instructor: Kendrick

Conscious experience is at once both completely familiar and utterly mysterious: how is it that electrical activity in a lump of grey matter – the brain – gives rise to the Technicolor phenomenology of our conscious experience? If human beings are just biological machines, then how is possible that we have a subjective point of view on the world? Why are we not just mindless robots, that produce behavior in light of stimulations from the environment, but lack any inner awareness or consciousness? In this class we will read, and bring together in conversation, cutting edge work from philosophy, psychology, and the neurosciences on the nature of consciousness.

Prerequisite: One Philosophy course, one Cognitive Science course, or permission of the instructor

Cross-Listed as: PHIL 35.01

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

COGS 50.08 - Modeling Mind and Behavior

Instructor: Hillis

You will actively engage in the scientific process of hypothesis testing that combines the disciplines of neuroscience, behavioral science, statistics/machine learning to understand the mechanisms of mind and behavior. The course will review computational approaches to modeling the mind by walking through the steps of hypothesis formation, experimental design, statistical analysis and theory development requiring skills in research methods, programming and scientific writing.

Offered: Fall.

Degree Requirement Attributes: Dist:TAS

COGS 50.09 - Computational Models of Social Cognition

Instructor: Houlihan

This course explores ways of thinking about models in cognitive science. The course will follow three themes, with the goal of developing your ability to analyze what different modeling approaches reflect about our views of the mind and of the world. The content-theme of the course will be computational models of social cognition, which will involve other topics in cognitive science to build the foundations. The theoretical-theme will be framing models as epistemological expressions, which will emphasize thinking deeply about the philosophy and practice of modeling. The methodological-theme will be probabilistic programming, which will give you a skillset for building cognitive models.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

COGS 50.10 - Information Theory in Cognitive Science

Instructor: Frankland

Cognitive scientists treat thinking as a form of information-processing, regardless of whether that thinking is carried out in biological or artificial systems. But what, exactly, is information? How do we quantify it? And what does it have to do with thinking? In this course, we study the basics of formal information-theory and learn about how these concepts have been utilized to understand cognition in Psychology, Neuroscience, Computer Science, AI, Linguistics, Philosophy, and Design. In doing so, we consider whether information theory offers a general way to understand minds, where it excels, and where it might be lacking.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

COGS 50.11 - Learnability and Semantic Universals

Instructor: Kendrick

Languages universally do not lexicalize certain concepts—no natural language contains a color term meaning "red or green", an operation which expresses logic "NAND" (i.e., a binary operation which returns false when both inputs are true), or a quantifier meaning "between 2 and 7". In recent years, work in developmental psychology, psycholinguistics, and computational linguistics has converged on the hypothesis that languages only lexicalize the expressions which are the easiest to learn. In this course, we will explore this hypothesis, focusing in particular on quantifiers.

Offered: Spring.

COGS 80 - Major Seminar in Cognitive Science

Instructor: Phillips, Kraemer

This seminar is required for majors. Each week a member of Dartmouth's faculty working in diverse areas of cognitive science will present current work in a lunchtime seminar. Prior to the lecture you will work through related papers as a group in preparation, and the day following the lecture you will meet with the professor to discuss the material further. This seminar will prepare you for independent research in Cognitive Science.

Offered: Fall, Spring.

COGS 81 - Major Seminar in Cognitive Science II

Instructor: Phillips, Kraemer

This is the second term of COGS 80. Each week a member of Dartmouth's faculty working in diverse areas of cognitive science will present current work in a lunchtime seminar. Prior to the lecture you will work through related papers as a group in preparation, and the day following the lecture you will meet with the professor to discuss the material further. This seminar will prepare you for independent research in Cognitive Science.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SOC

COGS 85 - Independent Study and Research

Instructor: Kraemer

This course offers qualified students of cognitive science the opportunity to pursue work on a topic of special interest through an individually designed program. Requires permission of the instructor and the Chair.

Offered: Fall, Spring, Winter.

COGS 86 - Honors Research

Instructor: Kraemer

COGS 86 and COGS 87 consist of independent research and writing on a selected topic under the supervision of a Program member who acts as advisor. Open to honors

majors in Cognitive Science. Permission of the thesis advisor and the Chair required.

Students are awarded one course credit for successful completion of this course upon completion of COGS-087. Students register for COGS-086 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for COGS-087 the subsequent term to complete the coursework. A final grade will replace the "ON" in COGS-086 upon completion of COGS-087.

Offered: Fall, Spring, Winter.

COGS 87 - Honors Thesis

Instructor: Kraemer

COGS 86 and COGS 87 consist of independent research and writing on a selected topic under the supervision of a Program member who acts as advisor. Open to honors majors in Cognitive Science. Permission of the thesis advisor and the Chair required.

Students are awarded one course credit for successful completion of this course. Students who have registered for COGS-086 register for COGS-087 to complete the coursework. A final grade will replace the "ON" for COGS-086 upon completion of this course for a total of 2 credits for COGS-086 and COGS-087.

Offered: Fall, Spring, Winter.

College Courses

College Courses, introduced in 1968-1969, are interdisciplinary in nature and are intended to appeal to students of widely differing backgrounds and interests.

To view College Courses courses, click here (p. 216).

COCO - College Courses

To view College Courses information, click here (p. 216).

COCO 21 - What's in Your Shoebox? Unpacking Your Study Abroad Experience

Cultural anthropologist Bruce La Brack uses the term "shoeboxing" to describe what is often done with study abroad experiences: the entire experience is put in a mental "shoebox," tucked away in the closet of the mind, taken out only rarely for periodic show-and-tell reminiscing. When we want to share stories about the time away or how we've changed, it can be hard to find folk who really want to listen. *What's in Your Shoebox?* aims to rectify this. The class has two primary goals; 1) to provide you with the opportunity to revisit, unpack, and deeply reflect upon your recent study abroad experience, and 2) to identify

creative, practical, and meaningful ways to apply this new knowledge and awareness.

Prerequisite: Study abroad 2017/18

Degree Requirement Attributes: Dist:SOC; WCult:CI

COCO 23 - The Language-Music Connection

Instructor: Levin, McPherson, Diabate

Language and music are universal components of human experience, so integral that they are often considered part of what defines us as humans. While we treat them as distinct phenomena, the overlap between the two is immense, structurally, neurologically, and culturally. Such connections have long been recognized, but recent research from diverse fields like linguistics, (ethno)musicology, cognitive psychology, anthropology, and neuroscience continues to reveal just how intertwined the two faculties are. Drawing on this body of research and our respective specialties, we explore the language-music connection from the basic ingredients (pitch, timbre, rhythm, syntax), to cultural expression, to evolution and origins. Running through the course is a hands-on case study of a West African xylophone tradition where language and music are so intimately related that they cannot be separated. Students will be taught by a master of the tradition, Mamadou Diabaté, to feel for themselves what it means to speak through an instrument.

Cross-Listed as: LING 11.13 MUS 17.06

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

COCO 26 - So, You Want to Save the Planet, Be a Global Citizen? What's in Your Toolbox?

Traveling can be transformative. But transformative travel does not happen simply by virtue of hopping on a plane and appearing in another culture someplace on the globe. It happens through reflection and a critical awareness of self and other in the context of place, culture, and systems of power. The Toolbox will prepare you for mindful, ethical travel by equipping you with the research and reflection tools you'll need to maximize your global travel experiences.

Degree Requirement Attributes: Dist:SOC; WCult:CI

COCO 30 - Democracy - A Challenged Concept

Three decades after the end of the cold war resurgent ultra-nationalism, parochial populism, white supremacy, anti-immigrant fervor, xenophobia, anti-Semitism and rabid misogyny undermine the stability and indefeasibility of European and American democracies. Commentators and scholars identify rampant capitalism, neoliberalism, globalization, and the untamed proliferation of new media as causes for the vulnerability democracies. While some consider the establishment of right-wing movements and politicians as expressions of a temporary populist phase or

even the advent of a post-democratic age, others refer to white-supremacist attacks or the recurrence of KKK and neo-Nazi groups worldwide as harbingers of a new fascism. This course will discuss the central terms and concepts such as (illiberal) democracy, republicanism, neoliberalism, populism, or fascism, as well as (counter-) movements on both side such as the Tea Party, Alt-Right, the Brexit, as well as #MeToo, Occupy Wall Street, and Black Lives Matter through a variety of artifacts, documentaries, movies, speeches, literary texts, news articles and theoretical debates.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

COCO 32 - The Art of Adaptation and Storytelling

This theoretical and practice-based course is a study of the conversion of oral, historical and fictional narratives into stage drama, cinema and literary texts. Special attention will be given to the cultural and political implications of cross-generic transformation, formulaic conventions and concepts of “genre,” “crossover appeal” and “adaptation.” Throughout the term, the intersections of race, culture and economics will be regularly questioned. Black cultural storytelling in various mediums and genres will be examined to serve as a point of entry into discussion of cultural worldview and storytelling in order to aid and encourage students to explore the theories, concepts and practice of adaptation from multiple, diverse vantage points and areas of interest. Building upon the adaptations they created in the first half of the quarter, students begin translating their stories visually in the “production” phase of the course. They assess how emotional information is translated in the original form and invent new ways of translating this content in their new visual format. Final projects can be interactive stage pieces, video installations or films.

Cross-Listed as: FILM 44.08

Degree Requirement Attributes: Dist:ART; WCult:CI

COCO 33 - Homelands and Diasporas: Russian Jews on Three Continents

Drawing on a variety of disciplines, such as anthropology, history, sociology, political science, and cultural studies, and sources ranging from academic works to works of fiction and films, the course first explores the history and culture of Russian (pre-1917) and especially Soviet Jews (1917-1991)—a major and significant segment of the world Jewry—prior to the massive immigration of the 1970s-1990s. The rest of the course involves a comparison of the experience of Russian-speaking Jews in the three major countries they have immigrated to—Israel, US, and Germany—as well as those remaining in Russia today.

Cross-Listed as: ANTH 50.41 EEER 38.15 JWST 05.01

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

COCO 34 - Psychoanalysis and Philosophy

This class will stage an encounter between psychoanalysis and philosophy, introducing students to both fields by placing them side by side. Drawing on the complementary expertises of the two-person teaching team, weekly readings will pair at least two texts, including one from each primary field, to illuminate similarities and differences between psychoanalytic theory on the one hand and philosophical concepts on the other, noting where appropriate the mutual influence of the two fields. Because psychoanalysis is also a clinical practice, this interdisciplinary encounter raises the question of the practical dimension of philosophical thought, and we will ask about philosophy’s potential impact on lived experience, as well as whether the practice of psychoanalysis remains a valuable mode of treatment or an aid to everyday living. To help organize the broad questions at the intersections of psychoanalysis and philosophy, we will divide the class loosely into four thematic units, the unconscious, Oedipus, interpretation, and transference. Class will proceed mostly through guided discussion; assignments will include reading responses plus midterm and final papers, with opportunities for additional credit so that students might pursue their own interests within the course subject matters.

Cross-Listed as: ENGL 54.17

Degree Requirement Attributes: Dist:TMV; WCult:W

COCO 36 - Alaska: American Dreams and Native Realities

Since the time United States "purchased" Alaska from Russia, this land has been seen by many as the "last frontier" - a place where tough and adventurous Euro-Americans could strike it rich or get away from the negative consequences of civilized living. Using anthropological and historical works as well as fiction, film and other media, the seminar explores the mythology surrounding the "land of the midnight sun." This myth of the "last frontier" - in its development-driven as well as conservationist versions -- is also contrasted with the ways Native Alaskans' have viewed and lived on their land.

Degree Requirement Attributes: Dist:SOC; WCult:CI

COCO 38 - Transforming the Energy System: Keeping the Lights on While Saving the Planet

This course will explore how transitioning to renewable energy systems is a necessary leverage point for addressing human-caused climate change, with a specific focus on how energy for electricity and heat is generated and used in New England. Through the collaboration of instructors from the Environmental Studies Program, the Irving Institute for Energy and Society, the Department of Earth Sciences and the Sustainability Office, students will gain an interdisciplinary perspective on New England energy systems and human-caused climate change, including 1)

the economic, policy, and regulatory management and distribution of energy, 2) the environmental and societal benefits and impacts of these systems on people and the environment, 3) a scientific understanding of fossil fuel resource formation, extraction, refining and use, and 4) climate change attribution and predictions of future human-caused climate change. The course will culminate in a discussion of Dartmouth's own energy transition as well as regional- and national scale solutions for resolving the urgency of climate action with the current political, economic, and technological constraints governing the renewable energy transition.

Cross-Listed as: EARS 021 ENVS 021

Degree Requirement Attributes: Dist:TLA

COCO 39 - Red Terror: History and Culture of the Stalin Labor Camps

The destruction of human beings in the Soviet labor camps (GULAG) is one of the most tragic chapters in the history of the twentieth century. Between the early 1920s and the early 1950s, some 25 million people were arrested and sent to the so-called "correction-labor" camps to perform back breaking work under the most inhumane conditions. The focus of this course is on the history and culture of the Stalin labor camps. Beginning with the violence inflicted by the young Bolshevik regime on the Russian people, we will examine the creation of a network of camps during the "great terror" of 1937-1938 and the economic, political, and cultural features of the camps, through such topics as work, food, camp administration and guards, the relationship between the "political prisoners" and the common criminals, the special plight of women, the hardening of conditions in the camps during and after World War II and the zenith of the GULAG in the early 1950s. Finally, the course will examine the GULAG's demise and the experience of dissidents in the camps of the 1960s-1980s; the way modern-day Russia deals with the memory of the camps; and GULAG-style camps in several socialist countries.

Cross-Listed as: GOVT 40.31

Degree Requirement Attributes: Dist:SOC; WCult:W

COCO 40 - The American University Athlete in the 21st Century

Sports permeates virtually every aspect of life in the United States, including Dartmouth, where approximately 80% of undergraduates are involved in college-sponsored athletics at the varsity or club sports level. Yet the very nature of athletics, with its emphasis on intense physical effort aimed at achieving a specific goal, does not encourage reflection on larger questions about the long-term impact of sports on individuals and communities. The overarching goal of this course is to equip students with information, concepts, and theories that will help them comprehend how playing sports affects university athletes.

The course material will be divided into four modules, each taught by a different instructor: Physiology (Doug van Citters), Cognition (Sian Beilock), Identity (Paul Christesen), and Economics (Michael Harry).

Computer Science - Undergraduate

Chair: Devin Balkcom

Professors D. Balkcom, S. L. Bratus, A. Breuer, A. T. Campbell, M. Casey, A. Chakrabarti, D. Chakrabarty, H. Chang, C. Hauser, W. Jarosz, P. Jayanti, S. Jayanti, S. Jin, K. Kim, D. F. Kotz, A. Pediredla, B. Plancher, S. Preum, A. Quattrini Li, D. Rockmore, N. Singh, S. W. Smith, Y-W. Tai, S. Vosoughi, T. Vu, P. Winkler, Y. Yan, Y. Yang; Research Professors L. Loeb, T. Pierson, O. Saydjari; Lecturers V. Kommineni, J. Mahoney, T. Tregubov; Adjunct Professors H. Chang, I. Bhattacharya, P. Chin, R. Coto Solano, G. Cybenko, J. Gui, Y. Halchenko, S. Hassanpour, N. Jacobson, I. Khayal, M. D. McIlroy, E. Murnane, J. O'Malley, E. Santos, L. Song, T. Thesen, O. Zhaxybayeva.

To view the Computer Science Undergraduate courses, click here. (p. 221)

To view the Computer Science Graduate requirements, click here. (p. 918)

To view the Computer Science Graduate courses, click here. (p. 923)

Introductory Courses

Students wishing to devote one course to the study of Computer Science may choose COSC 1 or COSC 2, depending on their background and interests. Students wishing to devote two or more courses to the study of Computer Science should begin with COSC 1 and COSC 10. Students wishing to take courses in Digital Arts should start by taking COSC 1 or COSC 2. ENGS 20 may substitute for COSC 1 in any program of study.

Undergraduate Courses

Computer Science undergraduate courses are numbered as follows:

- 1–19: Introductory and non-major courses.
- 20–29: Courses in Digital Arts.
- 30–49: Courses in theory and algorithms.
- 50–69: Courses in systems and hardware.
- 70–89: Courses in applied computer science.

90–99: Reading course and culminating experience courses.

Wherever COSC 1 is listed as a prerequisite, it may be replaced by ENGS 20, or placed out of through either the Computer Science Advanced Placement examination or a local placement examination.

Elective Courses

Many of the majors and minors involving Computer Science allow for one or more elective courses. In all cases, an elective course is any Computer Science course numbered from 30 to 89 that is not used to fulfill another requirement. Any lecture-based graduate course (as determined by the Department Undergraduate Advisor) in Computer Science (courses numbered above 100) may substitute for an elective course, as long as the graduate course is not cross-listed as an undergraduate course that is used to fulfill another requirement.

Computer Science Culminating Experience

Students must choose from one of three options:

Option 1) two consecutive terms of COSC 98.
 Option 2) two consecutive terms of COSC 99 (Thesis Research). A written thesis is required for thesis research, the Honors program, or the High Honors program.
 Option 3) two additional advanced topics courses. Eligible courses include courses in the ranges 49.01 through 49.99, 69.01 through 69.99, and 89.01 through 89.99. Each such course will include components in the faculty member's area of research expertise, and will give the opportunity to students to engage with current research. These two courses will be taken in the senior year, unless an exception is approved by the departmental major advisor. These two courses are in addition to the courses used to satisfy the other requirements of the major, and cannot be used to satisfy any other major requirements.

Major in Computer Science

The major in Computer Science is intended for those students who plan careers in Computer Science or in fields that make use of computing, for those who plan graduate study in Computer Science, and also for those who simply find Computer Science interesting. Undergraduates majoring in Computer Science will have opportunities to participate with faculty in activities outside formal coursework. These activities include assisting in courses, writing a thesis or doing a project under the guidance of a

faculty member, and assisting a faculty member in research or in a programming project.

To fulfill the major in Computer Science, a student must complete the courses prerequisite to the major and satisfy the requirements of the major. For additional requirements for the Honors Program see the section 'The Honors Program in Computer Science' below.

Requirements for the Computer Science Major

Prerequisite courses: COSC 1 or ENGS 20; COSC 10.

Requirements: A student who wishes to major in Computer Science must obtain approval of her or his program of study from the Departmental Undergraduate Advisor. To complete the major, it is necessary to pass at least eleven courses in addition to passing the two prerequisite courses. Among these eleven courses must be the following:

1. Two Computer Science courses numbered 30 to 49;
2. Two Computer Science courses numbered 50 to 69;
3. Two Computer Science courses numbered 70 to 89;
4. Three additional courses, of which two are electives (see 'Elective Courses' above) and the third is an elective, or COSC 94, or a Mathematics course numbered 20 or greater that is not a prerequisite to the Mathematics major and is not a seminar or a reading course.
5. Computer Science culminating experience, as described above.

Minors in Computer Science

The Computer Science minor is available to all students who are not majoring in Computer Science and who do not have a modified major with Computer Science. The Digital Arts minor is available to all students, including those majoring in Computer Science. For each minor, the prerequisites and required courses are listed below. Approval of a minor in Computer Science can be obtained through the Departmental Undergraduate Advisor. Approval of a minor in Digital Arts can be obtained through the Director of the Digital Arts Minor.

I. Computer Science

Prerequisites: COSC 1 or ENGS 20; COSC 10.

Courses: Any five elective courses (see 'Elective Courses' above) drawn from at least two of the following three sets of courses: COSC 30 to COSC 49; COSC 50 to COSC 69; COSC 70 to COSC 89.

II. Digital Arts

Prerequisites: COSC 1, COSC 2, or ENGS 20.

Courses: Any three courses between COSC 20 and COSC 29. Consultation with the DA Advisor is recommended for choosing three courses that build on each other.

Two other courses, at most one of which is COSC, from the following list of approved additional courses for the

Digital Arts Minor: FILM 30, FILM 31, FILM 32, FILM 35, FILM 36, FILM 38, FILM 39, FILM 51, MUS 14, MUS 34, SART 15, SART 16, SART 20, SART 21, SART 22, SART 23, SART 25, SART 29, SART 30, SART 31, SART 65, SART 66, ENGS 12, ENGS 75, THEA 26, THEA 27, THEA 30, THEA 31, THEA 34, THEA 42, THEA 43, THEA 44, THEA 45, COSC 20, COSC 22, COSC 23.01, COSC 24, COSC 25.01, COSC 25.02, COSC 29, COSC 77, COSC 83.

If students aren't counting them as one of the courses in Section 2 above, students can take COSC 23.01 or COSC 24 as one of the courses meeting this requirement.

Use of other courses towards the Digital Arts Minor requires the approval of the Director of the Digital Arts Minor.

The Honors Program in Computer Science

To be eligible for departmental Honors or High Honors, a student must:

1. Be either a Computer Science Major or a Modified Major with Computer Science as the primary part;
2. Have a GPA of at least 3.33 overall and in the major, at the time of graduation;
3. Have an average grade of at least B+ in COSC 98 or 99;
4. Complete a written thesis; and
5. Meet College requirements for Honors, presented in the Regulations section of this catalog.

The GPA in the major is determined as follows: course prerequisites to the major are not counted, COSC 98, 99 are not counted, but all other courses used as part of the major (which might include courses in other departments) are counted, as are all courses titled Computer Science or cross-listed with Computer Science.

The written thesis is typically completed as part of the requirements for COSC 99 (Thesis Research), but at the recommendation of the instructor for COSC 98, students doing work in COSC 98 with a substantial independent component may also complete a written thesis based on that work. The subject of the thesis is often motivated by the content of an advanced course of the student's major, though a variety of activities can lead to a thesis. Student suggestions for theses are welcome. A student interested in pursuing thesis research should consult with his or her prospective adviser and get their approval for the thesis advising arrangement, along with the approval of the Departmental Undergraduate Advisor before enrolling in COSC 99. Honors are awarded only if the work is of high quality and was done substantially independently. High Honors additionally requires presentation to a thesis committee of three Computer Science faculty members and the work should be deemed publishable or, if it is a project, useful. The recommendation of the thesis adviser to award

Honors or High Honors must be ratified by a departmental vote.

Modified Majors

Many students have created modified majors with Computer Science as either the primary or the secondary part. Particularly common modified majors are with engineering, mathematics, or economics, but modified majors with philosophy, music, film studies, psychology, physics, geography, studio art, and many other subjects have been approved.

Modified Major with Computer Science as the Primary Part

A modified major with Computer Science as the primary part must satisfy the following requirements, and it must be approved by the Departmental Undergraduate Advisor to ensure a coherent major.

Prerequisites: COSC 1 or ENGS 20; COSC 10.

Requirements: Along with at least four modifying courses, as approved by the Departmental Undergraduate Advisor, the requirements are as follows:

1. Two Computer Science course numbered 30 to 49;
2. Two Computer Science course numbered 50 to 69;
3. Two Computer Science course numbered 70 to 89;
4. Computer Science culminating experience, as described above.

Modified Major with Computer Science as the Secondary Part

Prerequisites: COSC 1 or ENGS 20; COSC 10.

Requirements: Four electives (see 'Elective Courses' above) that complement the primary part of the modified major, subject to the approval of the Departmental Undergraduate Advisor.

Modified Major with Digital Arts as the Secondary Part

Prerequisites: COSC 1 or COSC 2, or ENGS 20.

Requirements:

Courses: Any three courses between COSC 20 and COSC 29. Consultation with the DA Advisor is recommended for choosing three courses that build on each other.

Two other courses, at most one of which is COSC, from the following list of approved additional courses for the Digital Arts Minor: FILM 30, FILM 31, FILM 32, FILM 35, FILM 36, FILM 38, FILM 39, FILM 51, MUS 14, MUS 34, SART 15, SART 16, SART 20, SART 21, SART 22, SART 23, SART 25, SART 29, SART 30, SART 31, SART 65, SART 66, ENGS 12, ENGS 75, THEA 26, THEA 27, THEA 30, THEA 31, THEA 34, THEA 42, THEA 43, THEA 44, THEA 45, COSC 20, COSC 22,

COSC 23.01, COSC 24, COSC 25.01, COSC 25.02, COSC 29, COSC 77, COSC 83.

If students aren't counting them as one of the courses in Section 2 above, students can take COSC 23.01 or COSC 24 as one of the courses meeting this requirement.

Use of other courses towards the Digital Arts Minor requires the approval of the Director of the Digital Arts Minor.

The Computer Science Major Modified with Engineering Sciences

Prerequisites are COSC 1 or ENGS 20; COSC 10; MATH 3, MATH 8, MATH 13; and PHYS 13, PHYS 14.

Requirements:

1. One Computer Science course numbered 30 to 49;
2. One Computer Science course numbered 50 to 69, but not including COSC 56, which is identical to ENGS 31;
3. One Computer Science course numbered 70 to 89;
4. Three elective courses (see 'Elective Courses' above), not including COSC 56;
5. ENGS 22;
6. ENGS 31;
7. ENGS 62;
8. ENGS 26, ENGS 32, ENGS 61, or ENGS 91;
9. Computer Science culminating experience, as described above.

The Computer Science Major Modified with Digital Arts

Prerequisites: COSC 1 or ENGS 20, and COSC 10.

Requirements:

CS Portion:

1. Two Computer Science courses, either both from the range COSC 30 to 49 or both from the range COSC 50 to 69;
2. COSC 70;
3. Computer Science Breadth: Two additional computer science courses, one from the range COSC 30 to 69, and one from the range COSC 71 to 89;
4. Visual computing courses: Two from COSC 73, 77, 87, 89.18, 89.19, 89.22. With the approval of the Director of the Digital Arts Minor, other courses from COSC 70-89 related to visual computing may substitute;
5. Computer Science culminating experience, as described above.

Digital Arts Portion:

1. Any three courses between COSC 20 and 29

2. Digital Arts elective: One Digital Arts elective outside the Computer Science department, listed above as additional courses under the description of the Digital Arts Minor

COSC - Computer Science - Undergraduate Courses

To view the Computer Science Undergraduate requirements, click here. (p. 218)

To view the Computer Science Graduate requirements, (p. 918)click here.

To view the Computer Science Graduate courses, click here. (p. 221)

COSC 1 - Introduction to Programming and Computation

This course introduces computational concepts that are fundamental to computer science and are useful for the sciences, social sciences, engineering, and digital arts. Students will write their own interactive programs to analyze data, process text, draw graphics, manipulate images, and simulate physical systems. Problem decomposition, program efficiency, and good programming style are emphasized throughout the course. No prior programming experience is assumed.

Degree Requirement Attributes: Dist:TLA

COSC 2 - Programming for Interactive Audio-Visual Arts

This course presents topics related to interactive visual art generated on a computer. Although it briefly covers computer-generated media art, the course focuses on the programming skills required for creating interactive works. Rather than using commercial software, students write their own programs, using the Processing language, to create interactive visuals and compositions. The course introduces fundamental concepts of how to represent and manipulate color, two-dimensional shapes, images, motion, and video. Coursework includes short programming assignments to practice the concepts introduced during lectures and projects to explore visual compositions. The course assumes no prior knowledge of programming. This course is not open to students who have passed COSC 1 or ENGS 20 or who have received credit for one of these courses via the Advanced Placement exam or the local placement exam.

Cross-Listed as: MUS 008

Degree Requirement Attributes: Dist:TLA

COSC 10 - Problem Solving via Object-Oriented Programming

Motivated by problems that arise in a variety of disciplines, this course examines concepts and develops skills in solving computational problems. Topics covered include abstraction (how to hide details), modularity (how to decompose problems), data structures (how to efficiently organize data), and algorithms (procedures for solving problems). Laboratory assignments are implemented using object-oriented programming techniques.

Prerequisite: COSC 1 or ENGS 20 or placement through AP or local placement.

Degree Requirement Attributes: Dist:TLA

COSC 16 - Introduction to Computational Neuroscience

Your brain is composed of low-precision, slow, sparsely-connected computing elements, yet it outperforms any extant computer on tasks ranging from perception to planning. Computational Neuroscience has as its twin goals the scientific understanding of how brains compute thought, and the engineering capability to reconstruct the identified computations. Topics in the class included anatomical circuit design, physiological operating rules, evolutionary derivation, mathematical analyses, and emergent behavior, as well as development of applications from robotics to medicine.

Prerequisite: One of PSYC 1, PSYC 6, COSC 1, or ENGS 20.

Cross-Listed as: COGS 021 PSYC 040

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

COSC 19.01 - Writing about Technology

This course serves as an introduction to both the theory and practice of writing effectively about technology. Designed specifically for students with a technical background, the course will mix readings and discussion, drawing from a wide variety of canonical examples of this type of prose, with writing assignments oriented toward improving the students' craft.

Prerequisite: COSC 1

COSC 19.02 - Security Engineering

This course covers cybersecurity systems engineering principles of design. Students will learn the foundational and timeless principles of cybersecurity design and engineering. They will learn why theories of security come from theories of insecurity, the important role of failure and reliability in security, the fundamentals of cybersecurity risk assessment, the building blocks of cybersecurity, intrusion detection design, and advanced

topics like cybersecurity situational understanding and command and control. The course develops the student's ability to understand the nature and source of risk to a system, prioritize those risks, and then develop a security architecture that addresses those risks in a holistic manner, effectively employing the building blocks of cybersecurity systems—prevention, detection, reaction, and attack-tolerance. The student will learn to think like a cyberattacker so that they can better design and operate cybersecurity systems. Students will attain the skill of systematically approaching cybersecurity from the top down and the bottom up and have confidence that their system designs will be effective at addressing the full spectrum of the cyberattack space. The course also addresses how the cybersecurity attack and defense landscape will evolve so that the student is not simply ready to address today's problems, but can quickly adapt and prepare for tomorrow's. The course is important at any stage in a student's curriculum: whether at the beginning to enable the student to grok the big picture before diving into the details, at the end as a capstone, or in the middle to help integrate the skills learned so far.

Prerequisite: COSC 1

Degree Requirement Attributes: Dist:TAS

COSC 20 - Motion Study: Using Motion Analysis for Science, Art and Medicine

Motion Capture is the process of recording movement in physical space and transforming that information into a digital form that can be analyzed and adapted. Recent technological advances have increased the use of motion capture in movies, cartoon animation, and scientific applications. In this class, students will learn the foundations of this new field from basic anatomical principles of motion to how motions express a variety of human qualities (e.g., status, emotion). Students will work with a motion capture system to record and analyze their own movement to gain a hands-on understanding of how motion capture can enhance art and science.

Degree Requirement Attributes: Dist:TAS

COSC 29.07 - Digital Game Studio

This projects-based lab course teaches the foundational principles of digital game design and development. If you're interested in learning how to design and build game prototypes from scratch this class is for you. In this class you will work in Unity 3D to develop an array of original video games, starting with a simple 2.5D platformer/side-scroller, a 3D puzzle/strategy game, 3D environment escape-room type of game and a final project of your choosing. Students will learn all main aspects of game design and development. Work is evaluated on both artistic and technical merit. There will be five major assignments and in-class sprints.

Degree Requirement Attributes: Dist:ART

COSC 30 - Discrete Mathematics in Computer Science

This course develops the mathematical foundations of computer science that are not calculus-based. It covers basic set theory, logic, mathematical proof techniques, and a selection of discrete mathematics topics such as combinatorics (counting), discrete probability, number theory, and graph theory. The mathematics is frequently motivated using computer science applications.

Prerequisite: Math 3 and COSC 10; or Math 3, Instructor Permission, and either COSC 1 or ENGS 20.

Cross-Listed as: ENGS 066

Degree Requirement Attributes: Dist:QDS

COSC 31 - Algorithms

A survey of fundamental algorithms and algorithmic techniques, including divide-and-conquer algorithms, dynamic programming, randomized algorithms, greedy algorithms, and graph algorithms. Presentation, implementation and formal analysis, including space/time complexity and proofs of correctness, are all emphasized.

Prerequisite: COSC 10 and COSC 30. Students who have not taken COSC 30 but have a strong mathematical background may take COSC 31 with the instructor's permission.

Degree Requirement Attributes: Dist:QDS

COSC 32 - Advanced Algorithms

This course follows up on our basic undergraduate-level algorithms course, covering a number of advanced topics and ideas in algorithm design and analysis. You will learn about the use of advanced data structures, amortized analysis, randomization, linear programming, and approximation. The focus will be on methodology and broadly-applicable fundamental principles, rather than specific problem domains.

Prerequisite: An undergraduate-level course in Algorithms (such as COSC 31) and strong mathematics background.

Degree Requirement Attributes: Dist:QDS

COSC 34 - Randomized Algorithms

Randomness is one of the key resources in algorithm design. Many problems have faster algorithms if randomization is allowed, and indeed, for certain problems randomness is essential. The course will introduce the probability basics, the fundamental tools, and provide multiple applications in machine learning, big data, optimization, etc. Not open to students who have received credit for COSC 49.10.

Prerequisite: COSC 31, COSC 30.

Degree Requirement Attributes: Dist:QDS

COSC 35 - Data Stream Algorithms

This course studies algorithms that process massive amounts of data; so massive that they will not fit in a computer's storage. The course will cover a wide variety of techniques for summarizing such large amounts of data into succinct "sketches" that nevertheless retain important and useful information. The course starts from the basics, assuming only a basic knowledge of algorithms, and builds up to advanced techniques from recent research. The necessary mathematical tools are developed within the course.

Prerequisite: COSC 31 or permission of the instructor.

COSC 36 - Approximation Algorithms

Many problems arising in computer science are NP-hard and therefore we do not expect efficient algorithms for solving them exactly. This has led to the study of approximation algorithms where algorithms are supposed to run fast but can return approximate solutions. This course provides a broad overview of the main techniques involved in designing and analyzing such algorithms. It also explores connections between algorithms and mathematical fields such as algebra, geometry, and probability.

Prerequisite: A first course on algorithms and mathematical maturity to read and write proofs will be assumed. Prerequisite Courses: COSC 31, COSC 30.

Degree Requirement Attributes: Dist:QDS

COSC 37 - Information Theory in Computer Science

This course introduces students to information theory, a mathematical formalism for quantifying and reasoning about communication. While traditionally a part of electrical engineering, it has found several powerful applications in the theory of algorithms and complexity and adjacent fields such as combinatorics and game theory. The first third of the course will teach students the basics of information theory (Shannon entropy, mutual information, Kullback-Liebler divergence). The rest of the course will sample topics from error correcting codes, communication complexity, data structures, and optimization, in each case highlighting applications of information theory.

Prerequisite: COSC 31 or COSC 30 plus permission of the instructor (based on strong mathematical background)

Degree Requirement Attributes: Dist:QDS

COSC 39 - Theory of Computation

This course serves as an introduction to formal models of languages and computation. Topics covered include finite automata, regular languages, context-free languages, pushdown automata, Turing machines, computability, and NP-completeness.

Prerequisite: COSC 30 and/or COSC 31. Students who have not taken COSC 30 and/or 31, but have a strong mathematical background, may take COSC 39 with the instructor's permission.

Degree Requirement Attributes: Dist:QDS

COSC 40 - Computational Complexity

This course covers the basics of computational complexity, whose broad goal is to classify computational problems into classes based on their inherent resource requirements. Five key computational resources are studied: time, space, nondeterminism, randomness, and interaction. Key concepts studied include reductions, the polynomial hierarchy, Boolean circuits, pseudorandomness and one-way functions, probabilistic proof systems, and hardness of approximation.

Prerequisite: COSC 39 or equivalent. Students need to be familiar with the formalism of the Turing Machine and with the notion of NP-completeness.

COSC 49 - Topics in Algorithms and Complexity

This course studies an advanced topic in algorithms and complexity that is not covered in the regular curriculum. Students may take courses under this rubric multiple times, subject to the restriction that the topics are distinct. The subject material under this rubric differs from course to course depending on the instructor. Please refer to individual courses for detailed instruction.

Prerequisite: Vary according to the topic. Consult with the instructor.

Degree Requirement Attributes: Dist:QDS

COSC 49.04 - Concurrent Algorithms

We consider problems where multiple processes have to coordinate their activities to accomplish a task. For an example, suppose that there are many sensing agents on an aircraft and each agent, based on its reading of the environment, has a recommendation on whether the aircraft should keep straight, turn left, or turn right. Since different agents can have different recommendations, we would want a protocol by which they can arrive at an "agreement" on whether the plane should go left, right, or straight. How hard is it to design such a protocol? It turns out that if you want the protocol to be fault-tolerant, i.e., the protocol works correctly even if one of the agents stops communicating, it is impossible to design a correct protocol (under certain reasonable assumptions about the system).

In the course, we will look at several fascinating coordination problems and solve them for several models of distributed computing: shared-memory versus message passing, synchronous versus asynchronous, fault-free versus fault-tolerant. We design algorithms, and prove lower bounds or even impossibility results.

There will be weekly homework and a final exam.

Prerequisite: COSC 31 (Undergraduate Algorithms) or equivalent, and an interest in algorithms/theory.

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Degree Requirement Attributes: Dist:TAS

COSC 49.06 - Approximation Algorithms

Many problems arising in computer science are NP-hard and therefore we do not expect polynomial time algorithms solving them exactly. This has led to the study of approximation algorithms where one relaxes the goal to return approximate solutions. Over the past three decades, a beautiful theory of approximation algorithms has emerged. This course will provide a broad overview of the main techniques and will often deep dive into the state-of-the-art.

Prerequisite: COSC 31

Degree Requirement Attributes: Dist:QDS

COSC 49.07 - 21st Century Algorithms

The new century has brought us a new class of computational problems and paradigms, and to tackle them a suite of new algorithmic ideas have emerged. In this course, we will look at a collection of such ideas which are fundamental and yet not covered in a first course in undergraduate algorithms. (For instance, in fact, almost all algorithms covered in CS 31 are from last century). A rough set of problems and ideas are: random sampling algorithms, sketching algorithms, streaming algorithms, clustering algorithms, learning algorithms, etc, etc.

Degree Requirement Attributes: Dist:TAS

COSC 49.08 - Information Theory in Computer Science

This course introduces students to information theory, a mathematical formalism for quantifying and reasoning about communication. While traditionally a part of electrical engineering, it has found several powerful applications in the theory of algorithms and complexity and adjacent fields such as combinatorics and game theory. The first third of the course will teach students the basics of information theory (Shannon entropy, mutual information, Kullback-Liebler divergence). The rest of the course will sample topics from error correcting codes, communication complexity, data structures, and optimization, in each case highlighting applications of information theory.

Prerequisite: COSC 31 or COSC 30 plus permission of the instructor (based on strong mathematical background)

COSC 49.09 - Introduction to Computational Topology

Topology is the art of studying shapes without precise measurements. It is not surprising then that topology has found many applications in computer science, both in theoretical and applied research including algorithms and complexity theory, data analysis, robotics, computer graphics, etc., where often the input data is geometrically constrained, or noisy due to measurement errors. The course serves as an introduction to the rapidly growing area(s) of computational topology.

Prerequisite: CS30 and CS31 and (MATH22 or MATH24 or Instructor Permission)

Degree Requirement Attributes: Dist:QDS

COSC 49.10 - Randomized Algorithms

Randomness is one of the key resources in algorithm design. Many problems have faster algorithms if randomization is allowed, and indeed, for certain problems randomness is essential. The course will introduce the probability basics, the fundamental tools, and provide multiple applications in machine learning, big data, optimization, etc.

Prerequisite: A first course on algorithms and mathematical maturity to read and write proofs will be assumed. Prerequisite Courses: COSC 31, COSC 30.

Degree Requirement Attributes: Dist:TAS

COSC 49.11 - Metric Embedding and Sketching

In data analysis we can often assume the input is drawn from a metric space associated with some well-behaved distance function. In such scenario one can hope to find an alternative representation — an embedding — of the input data without sacrificing the distance information too much. To our surprise, not only this is possible, but often times one can also perform a sketching to reduce the size and amount of the data required. This seminar-style course is aimed to introduce the various ways to encode metric spaces in a succinct fashion with minimal distortion, suitable for their algorithmic purposes. Naturally, due to the vast amount of work and literature in the area, the topics covered in this class will be biased towards the interest and expertise of the instructor.

Prerequisite: COSC 30, COSC 31, and at least one course in probability (i.e. Math 20 or COSC 49.10). COSC 36 is recommended.

Degree Requirement Attributes: Dist:QDS

COSC 49.12 - Topics in Computational Topology

Planar graphs are among the most well-studied graph classes since the beginning of graph theory and algorithm design. Planar graphs can manifest in computational problems as networks, meshes, or terrains that are geometric and low-dimension in nature, which

unsurprisingly find many applications in computer graphics, visualization, vehicle routing, and shape analysis. This graduate-level seminar-style course is aimed to introduce a vast array of tools for planar graphs, ranging from combinatorial to geometric to spectral to algorithmic and beyond. Naturally, due to the sheer amount of work and literature in the area, the topics covered in this class will be biased towards the interest and expertise of the instructor.

Prerequisite: COSC 30 or Math 38 and Math 22, Math 24 or COSC 70 or Instructor Permission. Knowledge in algorithms (COSC 31) is strongly recommended.

Degree Requirement Attributes: Dist:QDS

COSC 49.13 - Distributed Computing: Algorithms and Verification

Distributed systems are everywhere—from the shared-memory multiprocessors in our phones and laptops to cloud computing data centers and the internet itself. These systems need to safely and efficiently compute while overcoming the myriad challenges posed by asynchrony, non-determinism, and faulty or adversarial peers.

In this course, we study algorithms for distributed systems and understand how to mathematically reason about these algorithms. We will learn how to formally model distributed systems and distributed problems, how to design distributed and multiprocessor algorithms, and how to formally verify the correctness of such algorithms. We will also learn how to show that certain problems cannot be solved efficiently or are even impossible to solve. Topics include: distributed algorithms, shared-memory algorithms, fault-tolerance, and verification.

Prerequisite: COSC 31, COSC 30, and COSC 50 (or equivalents).

Degree Requirement Attributes: Dist:QDS

COSC 50 - Software Design and Implementation

Techniques for building large, reliable, maintainable, and understandable software systems. Topics include UNIX tools and filters, programming in C, software testing, debugging, and teamwork in software development. Concepts are reinforced through a small number of medium-scale programs and one team programming project.

Prerequisite: COSC 10

Cross-Listed as: ENGS 050

Degree Requirement Attributes: Dist:TLA

COSC 51 - Computer Architecture

The architecture and organization of a simple computer system is studied. Topics covered include how information is represented in memory, machine-language instructions and how they can be implemented at the digital logic level

and microcode level, assembly language programming, and input/output operations. Speedup techniques, such as pipelining and caching, are also covered.

Prerequisite: COSC 1, ENGS 20, or placement through the Advanced Placement exam or the local placement exam.

Degree Requirement Attributes: Dist:TAS

COSC 52 - Full-Stack Web Development

The Web is a powerful delivery tool for complex real-time applications. This is an introduction to full stack Web application development — the approach of integrating numerous techniques and technologies to build modern Web applications. Topics include: static pages, Internet protocols, layout, markup, event-driven asynchronous programming, deployment, security, scalability, and user experience. Projects include building real-time Web applications with front-end UIs and server-side APIs.

Prerequisite: COSC 10

Degree Requirement Attributes: Dist:TAS

COSC 55 - Security and Privacy

The migration of important social processes to distributed, electronic systems raises critical security and privacy issues. Precisely defining security and privacy is difficult; designing and deploying systems that provide these properties is even harder. This course examines what security and privacy mean in these settings, the techniques that might help, and how to use these techniques effectively. Our intention is to equip computer professionals with the breadth of knowledge necessary to navigate this emerging area.

Prerequisite: COSC 50 or instructor permission. COSC 51 and COSC 30 are recommended.

Degree Requirement Attributes: Dist:TAS

COSC 55.02 - Security Engineering

This course explores the foundational principles of cybersecurity systems engineering, equipping students with timeless design concepts essential for building secure systems. Students will examine how security theory arises from understanding insecurity, the interplay between failure, reliability, and security, and the fundamentals of cybersecurity risk assessment. Core topics include the building blocks of cybersecurity—prevention, detection, reaction, and attack tolerance—as well as intrusion detection architecture, situational awareness, and command and control. Through a structured top-down and bottom-up approach, students will develop the ability to identify and prioritize system risks, and design holistic architectures that effectively address the full spectrum of cyber threats. By learning to think like attackers, students will enhance their capacity to anticipate and defend against evolving threats with agility and foresight. This course prepares students not only to address today's cybersecurity

challenges, but to adapt quickly to future landscapes. Not open to students who have received credit for COSC 19.02.

Prerequisite: COSC 50

Degree Requirement Attributes: Dist:TAS

COSC 56 - Digital Electronics

This course teaches classical switching theory including Boolean algebra, logic minimization, algorithmic state machine abstractions, and synchronous system design. This theory is then applied to digital electronic design. Techniques of logic implementation, from Small Scale Integration (SSI) through Application-Specific Integrated Circuits (ASICs), are encountered. There are weekly laboratory exercises for the first part of the course followed by a digital design project in which the student designs and builds a large system of his or her choice. In the process, Computer-Aided Design (CAD) and construction techniques for digital systems are learned.

Prerequisite: ENGS 20 or COSC 1 and COSC 10

Cross-Listed as: ENGS 031

Degree Requirement Attributes: Dist:TLA

COSC 57 - Compilers

Techniques for automatic translation of programming languages are discussed. The course includes a brief survey of various techniques and formalisms that can be used for describing the syntax and semantics of programming languages, for describing abstract and concrete machine architectures, and for describing program translation and transformation. This course includes a project to construct a compiler that will translate a program written in a high-level language into machine code for a conventional-architecture machine.

Prerequisite: COSC 50. COSC 51 is recommended.

Degree Requirement Attributes: Dist:TAS

COSC 58 - Operating Systems

This course studies how computer operating systems allocate resources and create virtual machines for the execution of user jobs. Topics covered include storage management, scheduling, concurrent processing, shared access to files, synchronization, and data protection. Both abstract models and actual examples of operating systems will be studied.

Prerequisite: COSC 50 and COSC 51

Degree Requirement Attributes: Dist:TAS

COSC 59 - Principles of Programming Languages

This course provides a study of the principles of programming languages. The course will focus on the similarities and differences among imperative, functional, logical, and object-oriented programming languages.

Topics include formal definitions of languages and tools for automatic program translation, control structures, parameter passing, scoping, types, and functions as first-class objects. For each language category, implementation issues will be discussed, and program development strategies illustrated through programming exercises.

Prerequisite: COSC 10, COSC 30 and COSC 51 are recommended.

Degree Requirement Attributes: Dist:TAS

COSC 60 - Computer Networks

This course focuses on the communications protocols used in computer networks: their functionality, specification, verification, implementation, and performance; and how protocols work together to provide more complex services. Aspects of network architectures are also considered. Laboratory projects are an integral part of the course in which networking concepts are explored in depth.

Prerequisite: COSC 30 and COSC 50; COSC 51 is recommended

Degree Requirement Attributes: Dist:TAS

COSC 61 - Database Systems

This course studies the management of large bodies of data or information. This includes schemes for the representation, manipulation, and storage of complex information structures as well as algorithms for processing these structures efficiently and for retrieving the information they contain. This course will teach the student techniques for storage allocation and deallocation, retrieval (query formulation), and manipulation of large amounts of heterogeneous data. Students are expected to program and become involved in a project in which they study important aspects of a database system: ways to organize a distributed database shared by several computers; transactions that are processed locally and globally; robustness guarantees of the stored data against failure; security and data integrity guarantees from unauthorized access; privacy; object-oriented schemes for multimedia data; indexing, hashing, concurrency control, data mining, data warehousing, mobile databases and storage file structures.

Prerequisite: COSC 50 or equivalent, as approved by instructor.

Degree Requirement Attributes: Dist:TAS

COSC 62 - Applied Cryptography

Cryptography is the fundamental building block for establishing and maintaining trustworthy connections and communications in the Internet; it's the first line of defense for keeping adversaries from spying on credit card numbers being sent to Amazon or on whistleblower reports sent to journalists. This course will examine what's in this toolkit: symmetric ciphers, public-key cryptography, hash

functions, pseudorandomness. To enable the well-cultured computer scientist to understand how these tools are used in the real world, this course will cover these topics from multiple perspectives: theoretical foundations, use in practical computing, implementation and management challenges, weaknesses and attacks, censorship circumvention, public policy questions, and prospects for the future.

Prerequisite: COSC 30, COSC 50. COSC 51 and COSC 55 are recommended.

Degree Requirement Attributes: Dist:TAS

COSC 63 - Programming Parallel Systems

Multi-core processors are now ubiquitous in most personal computers. These are the fundamental computer-engineering building blocks for high-performance servers, blade farms, and cloud computing. In order to utilize these devices in large systems they must be interconnected through networking and collectively programmed. This hands-on system-engineering course offers students the opportunity to explore problem-solving techniques on a high-performance multi-computer containing quad-core processors. The course involves weekly programming laboratories that teach POSIX thread, UDP and TCP network, and MPI style programming techniques. These techniques are explored in the context of scalable problem solving methods applied to typical problems in science and engineering ranging from client-server sensing and data repositories, to numerical methods, gaming and decision support. All laboratories will be conducted in the C programming language and proficiency in C is required. Enrollment is limited to 30 students.

Prerequisite: ENGS 20 or COSC 50.

Cross-Listed as: ENGS 067

Degree Requirement Attributes: Dist:TLA

COSC 63.01 - Augmented and Virtual Reality Development

This hands-on projects-based course is for developers who have completed COSC 10. It covers the technical, aesthetic, and societal issues surrounding the emerging frontiers of digitally mediated realities. Students learn the fundamentals of augmented and virtual reality development, while working in small interdisciplinary teams with digital arts students who are concurrently enrolled in COSC 23.01. COSC 63.01 and COSC 23.01 have class together and work together on teams. Developers in this course build interactive digital tools, games, and visualizations, while designers create assets and the interface. This course will also address the sociological implications of the technology. This course is not open to students who have received credit for COSC 29.22 or COSC 89.22.

Prerequisite: COSC 10

Degree Requirement Attributes: Dist:TAS

COSC 65 - Smartphone Programming

This course teaches students how to design, implement, test, debug and publish smartphone applications. Topics include development environment, phone emulator, key programming paradigms, UI design including views and activities, data persistence, messaging and networking, embedded sensors, location based services (e.g., Google Maps), cloud programming, and publishing applications. Concepts are reinforced through a set of weekly programming assignments and group projects.

Prerequisite: COSC 10

Cross-Listed as: ENGS 069

Degree Requirement Attributes: Dist:TAS

COSC 66 - Game Development Principles Applied In Educational/Serious Games

Digital games are a growing platform for education, entertainment, and visualization with a myriad of technological and theoretical challenges. This course explores the concepts and techniques involved in developing real-time 2D and 3D games, as well as the opportunities and constraints when applied to the field of serious games in areas such as education, healthcare, scientific visualization, emergency planning and response, government, and engineering. Topics include: 2d and 3d game engines, game ai, procedural generation, real-time rendering pipelines, game physics, shaders, game programming patterns, networked games, state synchronization, and game mechanics. Projects include building games from scratch such as an online multiplayer game with a server-side component.

Prerequisite: COSC 10 or permission of the Instructor

Degree Requirement Attributes: Dist:TAS

COSC 67 - Introduction to Human-Computer Interaction

This course provides the fundamentals of human-computer interaction, including human factors, usability, user-centered design, prototyping, and usability evaluation. Students will learn the skills and knowledge to identify users' needs and limitations through observations and interviews. They will experience rapid prototyping and will learn common HCI evaluation techniques, such as qualitative and quantitative methods, to evaluate their designs and implementations. Additionally, students will be exposed to the state-of-the-art research within HCI.

Prerequisite: COSC 10

Degree Requirement Attributes: Dist:TAS

COSC 68 - Advanced Operating Systems

This course covers advanced topics in operating systems, including issues such as the hardware/software interface, operating-system structure, CPU scheduling, concurrency, virtual memory, interprocess communication, file systems, protection, security, fault tolerance, and transaction processing. The course also considers many of these topics in the context of distributed systems.

Prerequisite: A grade of B+ or better in COSC 58/258, or passing an examination administered by the department to demonstrate competency in the material of COSC 58/258.

Degree Requirement Attributes: Dist:TAS

COSC 69 - Topics in Computer Systems

This course studies an advanced topic in computer systems that is not covered in the regular curriculum. Students may take courses under this rubric multiple times, subject to the restriction that the topics are distinct. The subject material under this rubric differs from course to course depending on the instructor. Please refer to individual courses for detailed instruction.

Prerequisite: Vary according to the topic. Consult with the instructor.

Cross-Listed as: COSC 169

COSC 69.08 - All Things Wireless

This is a topics course about use and development of wireless devices.

Prerequisite: COSC 60.

Degree Requirement Attributes: Dist:TAS

COSC 69.11 - Mobile X

Instructor:

Mobile X is an upper-level course on mobile computing and ubiquitous systems, covering a broad range of advanced and interdisciplinary topics in mobile systems, networking, and applications. All these topics focus on tackling unique challenges faced on bringing computation, networking, and applications to the mobile computing platform -- a platform that is constrained in form factor, energy, and computation power. Example topics include mobile communication and networking, mobile human-to-computer interaction (HCI), mobile learning/AI, mobile health, and mobile security.

Degree Requirement Attributes: Dist:TAS

COSC 69.13 - Multirobot Systems

Multirobot Systems is a seminar-course that will explore why multirobot systems are important, the extra challenges that need to be addressed, and the current state of the art in deploying multiple robots.

Students will learn the computational aspects of multiagent and multirobot systems, including sensing, coordination, and communication, and will have the opportunity to develop and evaluate a behavior on a real multirobot system.

Degree Requirement Attributes: Dist:TAS

COSC 69.14 - Functional Programming in Haskell

This course teaches a different approach to programming. In functional programming, we treat programs like values. The type of that value tells you what the program might do and restricts the possible buggy programs that don't do what you want them to do. In Haskell, you direct the type system to help improve your productivity, and your code's maintainability, by ensuring that certain bugs yield uncompileable code. Haskell programming is a recommended skill, regardless of whether you have a direct need for it. Programming in Haskell is not difficult, but has a steep learning curve when attempting to learn it on your own. Hence this course won't be easy, but it will help you through the difficult part. We use the latest GHC compiler, which is the most commonly used Haskell compiler in industry.

Prerequisite: COSC 10. COSC 30 is recommended.

COSC 69.15 - Robotics Perception Systems

This seminar course focuses on the issues and approaches to process and fuse data from robotics perception systems to enable robot autonomy, e.g., self-driving cars. The course will be very hands-on: some preliminary assignments will immerse you in the robotics world and how to process the sensor data for situational awareness. Through selected papers taken from the literature, students will learn different aspects of robotics perception systems, including computer vision, simultaneous localization and mapping, and machine learning. In addition, students will learn how to critically analyze a paper and how to effectively communicate a research work, by writing a summary on each paper, and presenting and discussing papers in class. Towards the end, students will work in a team on a final project that involves the use of a mobile robot with an RGBD camera and LIDAR. The professor will draw from his experiences in robotic research to enrich the material with aspects of active research problems, such as robot exploration for search and rescue and environmental coral reef monitoring using underwater robots.

Prerequisite: COSC 70/70.01 (formerly COSC 11). COSC 50 is recommended.

COSC 69.16 - Basics of Reverse Engineering

Frequently, the source code for an important operating system component, malware, or piece of commercial software is not available. This course explores the art and science of reverse engineering such systems to discover how they work, how they connect to other systems, and

how they may be controlled. In this course, you will develop an understanding of how systems and development tool chains are built "under the hood". You will learn to read compiled binaries without available source code, to recover program logic, and to modify (de)compiled binaries. We will seek to understand the challenges of reverse engineering larger programs, and of automating reverse engineering.

COSC 69.17 - Software Security

While software forms the backbone of modern computer systems, it is a prime target for cyberattacks. Cybercriminals are constantly exploring their vulnerabilities and deploying illegitimate code to accomplish their malicious goals. This course is designed to provide students with the comprehensive understanding of software security, both fundamental principles and low-level details of real-world offense and defense within software systems. Topics span vulnerability detection, exploitation mitigation, malware analysis, reverse engineering, and more.

Prerequisite: COSC 50, 51, familiarity with C language and system programming (e.g., system calls), and linux-based operating systems and programming environment is recommended.

Degree Requirement Attributes: Dist:TAS

COSC 69.18 - HackLab: Binary Program Analysis for Software Attacks and Defenses

Modern software keeps expanding in terms of size, application domains, users, and quantity of processed information. As a result of this, the attack surface and range of vulnerabilities targeted by attackers increases on a constant basis. Simultaneously, while humans reason about programs at the source-code level, a set of abstractions designed by humans for humans, computers execute machine code: a translation of source code into low-level instructions. This course sheds light on the discrepancies between source code and what computers actually execute, and examines some of the root causes and inner-workings of several common classes of software vulnerability, how these can be exploited to take control of remote systems, how those can be addressed and how to scale their detection and mitigation by leveraging automated program analysis techniques. Students will learn the practice and theory of ethical hacking through hands-on program analysis problems, Capture-The-Flag (CTF) competition challenges, exploitation and defense techniques as well as state-of-the-art research models. By studying the attack surface of modern software, students will learn how to build stronger, more sophisticated and more adequate defense strategies.

Prerequisite: Students must complete COSC 50 or obtain instructor permission before taking this course.

Degree Requirement Attributes: Dist:TAS

COSC 69.19 - Basics of Exploitation

Understanding the nature of unintended, unexpected computation emergent in today's most popular computing environments. Exposing the students to state-of-the-art cyber-attack and exploit analysis techniques. Exposing the students to the national cybersecurity challenges arising from exploitation of computing systems and orienting them for careers in cybersecurity research and technical leadership.

Prerequisite: COSC 51 or equivalent knowledge of a CPU instruction set or assembly. For example, a COSC 69 HackLab or Basics of Reverse Engineering is sufficient.

Degree Requirement Attributes: Dist:TAS

COSC 69.20 - Cybersecurity's Bleeding Edge

This course is a seminar of leading cybersecurity thinkers across the country presenting their latest research. Each will present the broad cybersecurity hard problem that they are investigating, summarize their most recent work, and explore the additional hard problems that need to be addressed in their subspecialty area. We expect to have between 5 and 10 presenters from across the spectrum of academia, government, and industry. Students will actively engage in the seminar by reading published papers by the presenter prior to their talks, actively asking questions about the nature of the problem and alternate solution paths. This course is intended primarily for undergraduates and graduate students interested in doing cybersecurity research at Dartmouth or in preparation for a career in cybersecurity.

Prerequisite: COSC 50, and either COSC 55 or COSC 19.02

Degree Requirement Attributes: Dist:TAS

COSC 69.21 - Building Reliable And Secure Software (BRASS)

Modern society depends on software. Telecommunications, commerce, medical systems, transportation, energy production and distribution, government, and operation and management of critical infrastructures are a few examples where lives and livelihoods depend on the reliable operation of software. For something so vital to everyday lives around the world, software is often fragile, resulting in unexpected results or complete failures. This also makes software a target of those hoping to capitalize on this fragility for criminal activities, influence or notoriety, or disruption. This course will explore modern techniques for building software systems that are reliable, resilient, and secure. The Rust programming language is covered, along with software build systems and the DevOps and DevSecOps methodologies.

Prerequisite: COSC 1, COSC 10, and COSC 50, or their equivalents. Prior completion of COSC 19.02 or 55 is highly recommended.

Degree Requirement Attributes: Dist:TAS

COSC 69.22 - Topics in Architecture and Security

Computer security requires that computation happens correctly despite action by a malicious adversary. However, computation doesn't occur in some magical ether, but on electrical machines in the physical world. Thinking about security in terms of these electrical machines gives rise to techniques for both attack and defense. This course will survey many of these techniques, and will reinforce this survey via hands-on exercises.

Prerequisite: COSC 051 or COSC 050, or instructor permission.

Degree Requirement Attributes: Dist:TAS

COSC 69.23 - Parallel Optimization for Robotics

Many stages of state-of-the-art robotics pipelines rely on the solutions of underlying optimization algorithms. Unfortunately, many of these approaches rely on simplifications and conservative approximations in order to reduce their computational complexity and support online operation. At the same time, parallelism has been used to significantly increase the throughput of computationally expensive algorithms across the field of computer science. And, with the widespread adoption of parallel computing platforms such as GPUs, it is natural to consider whether these architectures can benefit robotics researchers interested in solving computationally constrained problems online. This course will provide students with an introduction to both parallel programming on GPUs as well as numerical optimization. It will then dive into the intersection of those fields through case studies of recent state-of-the-art research and culminate in a team-based final project.

Prerequisite: MATH 8 and COSC 50.

Degree Requirement Attributes: Dist:TAS

COSC 70 - Foundations of Applied Computer Science

This course introduces core computational and mathematical techniques for data analysis and physical modeling, foundational to applications including computational biology, computer vision, graphics, machine learning, and robotics. The approaches covered include modeling and optimizing both linear and nonlinear systems, representing and computing with uncertainty, analyzing multi-dimensional data, and sampling from complex domains. The techniques are both grounded in mathematical principles and practically applied to problems from a broad range of areas. Not open to students who have received credit for COSC 70.01.

Prerequisite: MATH 3, COSC1 required, COSC 10 recommended

Degree Requirement Attributes: Dist:QDS

COSC 71 - Numerical Methods in Computation

A study and analysis of important numerical and computational methods for solving engineering and scientific problems. The course will include methods for solving linear and nonlinear equations, doing polynomial interpolation, evaluating integrals, solving ordinary differential equations, and determining eigenvalues and eigenvectors of matrices. The student will be required to write and run computer programs.

Prerequisite: COSC 1 and COSC 10, or ENGS 20; ENGS 22 or MATH 23, or equivalent.

Cross-Listed as: ENGS 091 MATH 026

Degree Requirement Attributes: Dist:QDS

COSC 72 - Accelerated Computational Linguistics

The study of human language from a computational perspective. This accelerated course has programming background equivalent to that provided by COSC 1 as a prerequisite. This course will survey formal models for representing linguistic objects, and statistical approaches to learning from natural language data. We will pay attention to the use of computational techniques to understand the structure of language, as well as practical engineering applications like speech recognition and machine translation. Students will implement simple algorithms for several key tasks in language processing and learning.

Prerequisite: COSC 01

Cross-Listed as: LING 048

Degree Requirement Attributes: Dist:TAS

COSC 73 - Computational Aspects of Digital Photography

Computational photography lies at the intersection of photography, computer vision, image processing, and computer graphics. At its essence, it is about leveraging the power of digital computation to overcome limitations of traditional photography. The course will cover the optics of cameras and sensors, how cameras form images, and how we can represent them digitally on a computer. We will focus on software techniques like image processing algorithms for photography, high-dynamic-range photography and tone mapping, and the math and algorithms behind popular image manipulation tools like Photoshop. Coursework will include taking some photos and implementing several algorithms to manipulate those photos in weekly programming assignments (in C). We will also read, present and discuss recent research papers in the field. By the end of the term, students should have an understanding of the capabilities and limitations of

photography today, and have sufficient background to implement new solutions to photography challenges.

Prerequisite: COSC 10 and COSC 70; COSC 50 is recommended or instructor permission

Degree Requirement Attributes: Dist:TAS

COSC 74 - Machine Learning and Statistical Data Analysis

This course provides an introduction to statistical modeling and machine learning. Topics include learning theory, supervised and unsupervised machine learning, statistical inference and prediction, and data mining. Applications of these techniques to a wide variety of data sets will be described.

Prerequisite: COSC 1 or ENGS 20; COSC 70/70.1(formerly COSC 11), or MATH 22, or MATH 24.

Degree Requirement Attributes: Dist:QDS

COSC 75 - Introduction to Bioinformatics

Bioinformatics is broadly defined as the study of molecular biological information, and this course introduces computational techniques for the analysis of biomolecular sequence, structure, and function. While the course is application-driven, it focuses on the underlying algorithms and information processing techniques, employing approaches from search, optimization, pattern recognition, and so forth. The course is hands-on: programming lab assignments provide the opportunity to implement and study key algorithms.

Prerequisite: COSC 10; COSC 70/70.01 (formerly COSC 11), or MATH 22, or MATH 24. COSC 30 is recommended.

Degree Requirement Attributes: Dist:TLA

COSC 76 - Artificial Intelligence

An introduction to the field of Artificial Intelligence. Topics include games, robotics, motion planning, knowledge representation, logic and theorem proving, probabilistic reasoning over time, understanding of natural languages, and discussions of human intelligence.

Prerequisite: COSC 10. COSC 30 is recommended.

Degree Requirement Attributes: Dist:TAS

COSC 77 - Computer Graphics

This course provides a broad introduction to the mathematical and programmatic foundations of computer graphics, including modeling, rendering (drawing), and animating three-dimensional scenes. Topics include digital image representation, two- and three-dimensional shape representations (e.g. parametric curves and surfaces, meshes, subdivision surfaces), geometrical transformations (e.g. rotations, scales, translations, and perspective projection), rigging and skinning, the rasterization pipeline,

ray tracing, illumination and shading models, texturing, and light & visual perception. Coursework typically includes a mix of programming assignments, quizzes/hand-written work, assigned readings, and a final project. Knowledge of basic linear algebra and programming skills are assumed.

Prerequisite: COSC 50; COSC 70/70.01 (formerly COSC 11) or MATH 22/24; or instructor permission if the above two prereqs not fulfilled.

Degree Requirement Attributes: Dist:TAS

COSC 78 - Deep Learning

This course provides an introduction to deep learning, a methodology to train hierarchical machine learning models using large collections of examples. Deep learning is a special form of machine learning where rich data representations are simultaneously learned with the model, thus eliminating the need to engineer features by hand.

The course begins with a comprehensive study of feedforward neural networks, which are the model of choice for most hierarchical representation learning algorithms. Other models covered in this course include convolutional neural networks, restricted Boltzmann machines, autoencoders, sparse codes. Several lectures are devoted to discuss strategies to improve the bias-variance tradeoff, such as regularization, data augmentation, pre-training, dropout, and multi-task learning. The course also studies modern applications of deep learning, such as image categorization, speech recognition, and natural language processing.

Prerequisite: COSC 74

Degree Requirement Attributes: Dist:TAS

COSC 81 - Principles of Robot Design and Programming

This course is a hands-on introduction to robotics. Students will build robots, program robots, and learn to mathematically model and analyze manipulation and locomotion tasks. Topics include kinematics and dynamics of rigid-body motion, motion planning, control, mechanics of friction and contact, grasping, sensing, uncertainty in robotics, and applications of robots.

Prerequisite: COSC 70/70.01 (formerly COSC 11), or COSC 01 and Math 22/24. COSC 10 and COSC 50 are recommended.

Degree Requirement Attributes: Dist:TLA

COSC 83 - Computer Vision

This course provides an introduction to computer vision, the art of teaching computers to see. Topics include image formation, feature detection, segmentation, 3D reconstruction from multiple views, motion estimation, and object recognition.

Prerequisite: COSC 1 or ENGS 20; COSC 70/70.01 (formerly COSC 11), or MATH 22, or MATH 24.

Degree Requirement Attributes: Dist:TAS

COSC 84 - Mathematical Optimization and Modeling

Planning, scheduling, and design problems in large organizations, economic or engineering systems can often be modeled mathematically using variables satisfying linear equations and inequalities. This course explores these models: the types of problems that can be handled, their formulation, solution, and interpretation. It introduces the theory underlying linear programming, a natural extension of linear algebra that captures these types of models, and also studies the process of modeling concrete problems, the algorithms to solve these models, and the solution and analysis of these problems using a modeling language. It also discusses the relation of linear programming to the more complex frameworks of nonlinear programming and integer programming. These paradigms broaden linear programming to respectively allow for nonlinear equations and inequalities, or for variables to be constrained to be integers.

Prerequisite: COSC 1 or ENGS 20; COSC 70/70.01 (formerly COSC 11), or MATH 22 or MATH 24; or permission of the instructor.

Degree Requirement Attributes: Dist:TAS

COSC 86 - Computational Structural Biology

Computational methods are helping provide an understanding of how the molecules of life function through their atomic-level structures, and how those structures and functions can be applied and controlled. This course will introduce the wide range of complex and fascinating challenges and approaches in computational structural biology, and will give hands-on experience applying and implementing some important methods.

Prerequisite: COSC 10 or permission of the instructor.

Degree Requirement Attributes: Dist:TAS

COSC 87 - Rendering Algorithms

This class is intended for students interested in obtaining a deep technical understanding of the physically based rendering techniques used to produce photorealistic images in animated films, visual effects, or architectural and product visualizations.

Students will learn how light behaves and interacts with objects in the real world and how to translate the underlying math and physics into practical algorithms for creating photorealistic images. The course will provide a detailed treatment of the industry-standard Monte Carlo methods for light transport simulation, such as path tracing, bidirectional path tracing, and photon mapping.

Each major topic will also be accompanied by a programming assignment where students implement these algorithms within their own software framework to obtain practical experience. Additional coursework includes quizzes/handwritten exercises and assigned readings. At the end of the term, each student will work on a self-directed final project that extends their rendering software with additional features of their own choosing with the goal of creating a photorealistic image.

Prerequisite: COSC 70/70.01 (formerly COSC 11) and COSC 50; or Instructor's Permission.

Degree Requirement Attributes: Dist:TAS

COSC 89 - Topics in Applied Computer Science

This course studies an advanced topic in applied Computer Science that is not covered in the regular curriculum. Students may take courses under this rubric multiple times, subject to the restriction that the topics are distinct. The subject material under this rubric differs from course to course depending on the instructor. Please refer to individual courses for detailed instruction.

Prerequisite: Vary according to the topic. Consult with the instructor.

Cross-Listed as: COSC 189

COSC 89.13 - Robot Motion Planning

This is a small advanced seminar course in robotic motion planning. Topics to be covered include configuration space, forwards and inverse kinematics, differential kinematics, representations for motion planning, and classical planning algorithms including cell-decomposition and probabilistic methods.

Prerequisite: COSC 1, COSC 10, MATH 8

Cross-Listed as: COSC 189

Degree Requirement Attributes: Dist:TAS

COSC 89.14 - Research Topics in Human-Computer Interaction

This is a topics course in Human-computer Interaction. The course is designed to introduce students to advanced HCI research methods and techniques, including observation, design, implementation, and evaluation. It will also expose students to state-of-the-art research topics in HCI, including interaction techniques, actuated interfaces, ubiquitous computing, context-aware computing, tangible interfaces, mobile interfaces, and wearable interfaces. This course involves a mix of lectures given by professor and students with a major focus on the discussion of selected papers from ACM SIGCHI or ACM UIST Conference Proceedings.

Prerequisite: COSC 67, COSC 167

Degree Requirement Attributes: Dist:TAS

COSC 89.17 - Health Informatics

Our health is everywhere. It is affected by how, where, and who we live, work & play with (i.e. biological, behavioral, social, and environmental factors). The explosion of data digitization {captured both outside 'in the wild' and within the healthcare delivery system, allows us to understand and address the many factors affecting the complexity of our health. Today, health & healthcare data is continuously being generated by healthcare delivery systems, organizations, or users and can be accessed through devices, databases, or the web (e.g., APIs). Deriving information and knowledge to improve and support health requires health informatics. Data science plays an active role as a profession and within its research efforts in informing and developing all aspects of health informatics: data capture, data storage, and data analytics.

Degree Requirement Attributes: Dist:TAS

COSC 89.18 - Computational Methods for Physical Systems

The Physical Computing course introduces students to mathematical concepts and algorithmic techniques for developing computational approaches to simulate, optimize, design, and control various physical systems. Course topics cover fundamental numerical approaches for modeling and simulating rigid body, soft body, and cloth, as well as design and optimization algorithms for drones and soft robots. The materials will be illustrated using examples and applications from physics-based animation, robot design, fashion design, and 3D printing.

Prerequisite: COSC 10

Degree Requirement Attributes: Dist:TAS

COSC 89.19 - Machine Learning for Robotics

Machine Learning for Robotics is a course mixed with lectures, students' presentations, and assignments that explore machine learning techniques for robotics applications. After a review of some supervised and unsupervised machine learning techniques, we will focus on some specific ones, currently popular in robotics, including reinforcement and deep learning. Students will have the opportunity to use machine learning frameworks for some robotics problems.

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Prerequisite: COSC 11 and COSC 50

Degree Requirement Attributes: Dist:QDS

COSC 89.20 - Data Science for Health

Data science is being employed across diverse fields to improve human sensing and health. However, there are still many untapped opportunities. This course will cover

state-of-the-art methods for data acquisition and analysis, with an emphasis on interpretation of behavioral and physiological data. Students will develop their skills by reading, presenting, and critiquing seminal research papers in the health space. The course will also include assignments and a group project to reinforce concepts and methods widely used in data science.

Prerequisite: COSC 74 or instructor permission

Degree Requirement Attributes: Dist:QDS

COSC 89.21 - Data Mining and Knowledge Discovery

This course introduces the basic concepts, principles, methods, implementation techniques, and applications of data mining. The course covers all the steps required to turn raw data into meaningful insights, including: obtaining and cleaning data, pattern discovery, and data visualisation. Throughout the course, students will work on data mining projects using real-world data to gather hands-on experience. The course will be taught in Python.

Prerequisite: COSC 10; adequate knowledge of probability and statistics through a course such as COSC 74 or Math 10, or the permission of the instructor.

Degree Requirement Attributes: Dist:TAS

COSC 89.23 - Network Science and Complex Systems

Many of the systems that surround us are complex. These systems span almost every scientific field of inquiry, from biological to social, and computational sciences. To understand the behavior of complex systems, we must study not only the parts but the emergent behavior that arises from such systems when the parts act together. Complex systems are by definitions highly interconnected, therefore, at the core of studying complex systems is understanding networks. This seminar is an introduction to the main concepts of networks and complex systems, and their applications. The topics covered in this course will include: network topologies, network dynamics, motifs, dynamic systems, attractors, and chaos. The seminar mainly involves reading and discussing seminal, and ongoing, works in this field, but we will also be doing hands-on modeling and studying toy and real networks using Python.

Prerequisite: COSC 10; Math 3, adequate knowledge of probability and statistics through a course such as COSC 74 or Math 10.

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

COSC 89.24 - Logic and Artificial Intelligence

The goal of this topics course is to study the foundations of different types of logic used commonly in artificial intelligence. Logic forms the basis for many types of reasoning used by humans – researchers in AI have

extended classical logic over the years to numerous more “exotic” logics. This course will cover the foundations of a host of classical and non-classical logics, a number of interesting logics developed by AI researchers for common-sense reasoning, and applications of those logics.

Prerequisite: COSC 76, COSC 176, or permission of the instructor.

COSC 89.25 - GPU Programming and High Performance Computing

The GPU Computing course introduces students to the basic programming and algorithmic techniques for developing the modern parallel computer code for high-performance computing applications. Course topics will cover the fundamentals for GPU (CUDA) and CPU (multi-threading) parallel programming, parallel computer architecture, parallel data structures, parallelizable linear algebra, conjugate gradient and multigrid solvers, particle systems and N-body problems, and vectorization. The materials will be illustrated using large-scale computing examples and applications from computer graphics, computational physics, and machine learning.

Prerequisite: This course assumes an understanding of multi-variable calculus and linear algebra and proficiency in C++ programming. Students are recommended to take COSC 70 as a prerequisite or to show equivalent understanding and comfortableness with the associated materials.

Degree Requirement Attributes: Dist:QDS

COSC 89.26 - Security and Privacy in the Lifecycle of IoT for Consumer Environments

We are entering an era of Smart Things, in which everyday objects become imbued with computational capabilities and the ability to communicate with each other and with services across the Internet. Indeed, the Internet of Things now involves the deployment of Smart Things in everyday residential environments – houses, apartments, hotels, senior-living facilities – resulting in Smart Homes. Although Smart Things offer many potential benefits, they can also create unsafe conditions and increase risk of harm to persons and property. This course explores the key security and privacy challenges required for the vision of Smart Homes to be safely realized, with an explicit focus on consumer-facing “things” where end-user privacy and usability are essential. It will take a holistic approach to the entire lifecycle of security, privacy, and usability challenges from the perspective of the everyday consumer who interacts with Smart Things (intentionally or unintentionally) in a residential setting. Students will read, present, and discuss papers from the research literature; write a survey paper about a subset of the research literature; and conduct a security analysis of a current commercial “smart thing”. Guest lecturers will join the class, weekly, to share expertise from both industry and research.

Prerequisite: Required: COSC 50, and experience or willingness to read technical research literature. Useful: COSC 55, 58, 60, 62, 67, 91.

COSC 89.27 - Security and Privacy of Machine Learning

Today we see applications of machine learning almost everywhere we look – in the domains of autonomous driving, medical diagnosis, fraud detection, etc. While the use of machine learning is increasing in our day-to-day lives, these techniques also pose significant threats to security and data privacy. This course will explore recent academic research at the intersection of machine learning, security, and data privacy that demonstrates the risks adversaries pose to machine learning systems. The research papers explored in this course would cover attacks on machine learning systems as well as defense techniques to mitigate such attacks. Students will read, analyze, and discuss research papers, write summaries, take notes, and undertake a term-long research project.

Prerequisite: COSC 74. Assumes that students understand basics of machine learning. Knowledge of security & privacy useful but not required if students are willing/able to learn background materials on their own.

COSC 89.28 - Computational Healthcare

Machine Learning (ML) lies at the core of a wide range of healthcare applications spanning from diagnosis to delivery of care. This course gives an overview of challenges and opportunities for ML in the era of digital health. We will explore advanced ML methods for healthcare and medicine through research papers. Specifically, we will cover recent successes of natural language processing, time-series analysis, and transfer learning to advance healthcare research. Students will choose and complete a course project, write a project report, and make project presentations at the end of the course. The course also requires the students to analyze, present, and discuss research papers.

The course is open to graduate and ambitious undergraduate students who are interested to gain hands-on experience in applied ML research. The course is designed to enable students to improve their technical communication and review skills and explore new research directions. It is important to note that this course will be conducted like a seminar (i.e. there are no formal lectures). We assume students are willing and able to learn some necessary background materials on their own. There will be office hours outside of scheduled class lectures.

Prerequisite: COSC 74 or instructor's permission. This course assumes that the students are familiar with the basics of machine learning and deep learning.

COSC 89.29 - Music and Artificial Intelligence

This course explores artificial intelligence (AI) for creating and consuming music. Through weekly readings and exercises, students will create music and art with AI-based systems and develop the critical skills to evaluate the outputs of creative AI. Starting with the history of algorithmic art and music, students will explore issues of digital music representation, generative music, computational creativity, and AI-based music production. The goal is to generate original works using algorithms, such as neural networks.

Prerequisite: MUS008, CS001 or CS002

Cross-Listed as: MUS 14.05

Degree Requirement Attributes: DIST:TAS; WCult:WC

COSC 89.30 - Topics in Video Understanding

Video understanding is an area of research that helps machines understand video content by recognizing and localizing different actions or events appearing in a video. Videos have multiple sensory information, including visual, acoustic, and meta information. This class is designed to help students better understand recent trends in video understanding. In particular, we will explore the state of the arts in deep learning for video understanding, especially with multimodality. Students will learn by reading, presenting, and discussing recently published papers. Students will also propose and complete a term project to solve a video understanding problem.

Prerequisite: COSC 78

Degree Requirement Attributes: Dist:TAS

COSC 89.31 - Deep Learning Generalization and Robustness

This course will be an extended version of COSC 78/278 Deep Learning. It is mostly project-based, and it aims to bridge the gap between machine learning course materials and recent developments in machine learning research. The course begins by covering the basics of model training and inference. From there, the course proceeds to discuss various concepts of generalization, different types of robustness issues associated with generalization (e.g., adversarial robustness, out-of-distribution robustness, model poisoning, etc.), and the connections between (robust) generalization to the design of multiple regularization and normalization strategies.

Prerequisite: COSC 74/274

Degree Requirement Attributes: Dist:TAS

COSC 89.32 - Multi-modalities Generative AI

This advanced course delves into the exciting field of Multi-modalities Generative AI, where students will explore the convergence of multiple data modalities such as text, image, and audio to create sophisticated and

expressive AI models. This course is divided into two equally important components. The first half will consist of a lecture series that systematically covers fundamental concepts and technologies in generative AI. This segment aims to establish a solid theoretical foundation while facilitating hands-on learning through practical demonstrations with open-source examples. The second half of the course will be an interactive reading group, where students delve into influential papers and engage in in-depth discussions. This segment is designed to foster critical thinking, encourage exploration of the latest research in multi-modal generative AI.

Students will undertake a term project directly related to Multi-modalities Generative AI. This project will provide an opportunity to apply the acquired knowledge and skills, fostering creativity and innovation in the development of multi-modal generative models. By combining a lecture series, engaging reading group discussions, and a practical term project, this course aims to equip students with a well-rounded understanding of multi-modal generative AI and the ability to contribute meaningfully to this rapidly evolving field.

Prerequisite: COSC 78/278. This course assumes students have basic knowledge in Deep Learning, being able to build, modify and train a deep learning model.

Degree Requirement Attributes: Dist:TAS

COSC 89.33 - The Dark Side of AI/ML: Machine Learning Security, Privacy, Fairness, and Interpretability

The goal of this course is to equip students to responsibly deploy machine learning tools in an unfair and adversarial world. We will survey the vulnerabilities of mainstream machine learning models and algorithms to manipulation, privacy leakage, and unfairness. We will then assess the conditions under which we can understand, interpret, or measure our models' predictions with respect to each of these vulnerabilities. Finally, we will address the feasibility and limitations of appropriate countermeasures. Our course will build towards a final project assignment where students are given the opportunity to develop their own research projects in this emerging field.

Prerequisite: Before taking this course, all students are expected to have completed an advanced undergraduate machine learning course such as COSC 74, 78, 83 or the graduate course equivalent.

Degree Requirement Attributes: Dist:TAS

COSC 89.34 - Human-Centered Generative AI

Generative AI systems capable of producing text, images, sounds, code, and more are becoming ubiquitous in our everyday devices and interactions. This course explores the design, development, and evaluation of such systems. Students will investigate how AI can augment, rather than

replace, human effort, with a focus on *co-creation*: situations in which humans and AI systems work together to produce novel artifacts. Through reading and discussing seminal papers across AI, HCI, and related areas, the course will address questions like: How do we design systems that align with human strengths and needs? How can we evaluate the usability and utility of these systems? What opportunities and challenges arise when humans work with GenAI systems?

Course activities will include reading, design exercises, in-class discussions, student-led presentations, and a term length research project. Students will work in groups to design and/or evaluate novel human-AI systems, with a focus on generative models and their applications. The goal of this course is to prepare students to design and evaluate new Generative AI-powered technologies that meaningfully extend the capabilities of human users.

Degree Requirement Attributes: Dist:TAS

COSC 89.35 - Human-Centered Approaches to Large Language Models: Design, Methods, and Evaluation

The goal of this course is to prepare students to critically assess and design LLMs for real-world applications by combining technical and human-centered perspectives. This course explores the foundations, design, and evaluation of large language models (LLMs) through a human-centered lens. The course covers core concepts such as pretraining, fine-tuning, and instruction tuning, as well as the role and implications of data sources. Additionally, the course examines inference methods, including in-context learning, retrieval-augmented generation (RAG), and using LLMs as agents. A key focus is on evaluating LLMs for alignment, hallucination, fairness, bias, toxicity, reliability, stability, safety, and robustness. Students will analyze how considering human-centered approaches in the design, development and evaluation of LLM-based solutions are essential for responsible and ethical AI. Course activities will include reviewing research articles, student-led presentations, in-class and canvas discussions, writing short reaction papers, and a course project.

Prerequisite: COSC 78 or COSC 72/Ling 48

Degree Requirement Attributes: Dist:TAS

COSC 89.36 - Applied AI for Wearable Neurotech

This course explores the potential of AI-driven neurotechnology, a field at the intersection of machine learning, neuroscience, and wearable systems. By leveraging real-time brain data through EEG-based devices, students will gain hands-on experience designing and developing digital health solutions. These solutions aim to enhance cognitive performance, monitor mental health, and facilitate applications like lucid dream induction and cognitive state classification. Combining foundational research, practical coding assignments, and a

capstone project, this course equips students with cutting-edge skills to innovate in the rapidly evolving landscape of neurotechnology.

Prerequisite: COSC 31, 58, and 76.

Degree Requirement Attributes: Dist:TAS

COSC 89.37 - Visual Computing Seminar

A seminar course in which research topics of special interest in visual computing (computer graphics, computer vision, computational imaging, and adjacent sub-fields) will be presented and discussed by students under faculty direction. Topics and structure will vary from quarter to quarter, but coursework will typically involve some combination of presentations of (in-progress) visual computing research being conducted by the enrolled students; and instruction, practice and refinement of essential skills for research (ideation, pitching, reading, writing, reviewing, presenting, and generally communicating about research).

Only counts once towards COSC degree credit.

Prerequisite: Students should have completed or be currently enrolled in: 1) a visual computing course such as COSC 73, 77, 83, 87, and 2) be actively engaged in visual computing research via COSC 94, 99.

COSC 91 - Writing, Presenting, and Evaluating Technical Papers in Computer Science

Students will learn how to write technical papers in computer science, how to present technical papers in a conference-talk setting, and how program committees and journal editors evaluate technical papers. Writing topics include the proper use of technical typesetting software, organization of technical papers, and English usage. Students will write technical papers, produce official course notes, and give oral presentations. Enrollment limited.

Prerequisite: Each student must submit a short expository piece to be evaluated by the instructor at the start of the course; only those students meeting a required level of competence will be permitted to take the course for a grade. Students should also have a Computer Science background sufficient to understand research papers.

COSC 94 - Reading Course

Advanced undergraduates occasionally arrange with a faculty member a reading course in a subject not occurring in regular courses.

COSC 98.01 - Senior Design and Implementation Project I

Participation in a software engineering group project to meet a real-world need. Group members are responsible for all aspects of a software system, including iterative requirements analysis, design, implementation, and testing.

The course also stresses customer interactions, documentation, process, and teamwork. The result is a software product of significant scope and significant benefit to a user base.

Open only to students pursuing a major in Computer Science or a modified major with Computer Science as the primary part. 98.01 and 98.02 constitute a two course sequence, and they must be taken in consecutive terms, either fall/winter or winter/spring, normally in the senior year.

Students are awarded one course credit for successful completion of this course upon completion of COSC-98.02. Students register for COSC-98.01 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for COSC-98.02 the subsequent term to complete the coursework. A final grade will replace the "ON" in COSC-98.01 upon completion of COSC-98.02.

Prerequisite: At least two courses from COSC 50-69 or at least three courses from COSC 50-89, or permission of instructor.

COSC 98.02 - Senior Design and Implementation Project II

Participation in a software engineering group project to meet a real-world need. Group members are responsible for all aspects of a software system, including iterative requirements analysis, design, implementation, and testing. The course also stresses customer interactions, documentation, process, and teamwork. The result is a software product of significant scope and significant benefit to a user base.

Open only to students pursuing a major in Computer Science or a modified major with Computer Science as the primary part. 98.01 and 98.02 constitute a two course sequence, and they must be taken in consecutive terms, either fall/winter or winter/spring, normally in the senior year.

Students are awarded one course credit for successful completion of this course. Students who have registered for COSC-98.01 register for COSC-98.02 to complete the coursework. A final grade will replace the "ON" for COSC-98.01 upon completion of this course for a total of 2 credits for COSC-98.01 and COSC-98.02.

Prerequisite: COSC 98.01

COSC 99.01 - Thesis Research I

Individual research on a topic along with a thesis advisor. Permission of the Undergraduate Program Director and thesis advisor required. Open only to students pursuing a major in Computer Science or a modified major with Computer Science as the primary part. COSC 99.01 and 99.02 constitute a two-course sequence and must be taken in two consecutive terms, either fall/winter or winter/spring, normally in the senior year. In order to

receive credit for COSC 99.01 and 99.02, a written thesis must be approved by the thesis advisor. A final grade will replace any 'ON' for COSC 99.01 and COSC 99.02 after the faculty vote in the spring term.

COSC 99.02 - Thesis Research II

Individual research on a topic along with a thesis advisor. Permission of the Undergraduate Program Director and thesis advisor required. Open only to students pursuing a major in Computer Science or a modified major with Computer Science as the primary part. COSC 99.01 and 99.02 constitute a two-course sequence and must be taken in two consecutive terms, either fall/winter or winter/spring, normally in the senior year. In order to receive credit for COSC 99.01 and 99.02, a written thesis must be approved by the thesis advisor. A final grade will replace any 'ON' for COSC 99.01 and COSC 99.02 after the faculty vote in the spring term.

Prerequisite: COSC 99.01

CSDA - Digital Arts

CSDA 21 - Foundations of Digital Design

This projects-based course will familiarize students with the fundamentals of digital design, including layout, typography, composition, color theory, and process. Foundational concepts and the universal principles of design will be explored through extensive analyses and a series of design projects. No previous art or technical experience is required. Work is evaluated on a set of technical and aesthetic criteria and class participation. Plan to meet during every X-Hour.

Degree Requirement Attributes: Dist:ART

CSDA 22 - 3D Digital Modeling

This projects-based lab course teaches the principles and practices of 3D modeling. Anyone with an interest in learning how models and environments in film, games, and VR applications are made, this course is for you. We focus on modeling, shading, textures, lighting, and rendering, along with some dynamics, special effects, and animation. Students create environments and a fully rigged character model while learning their way around a state-of-the-art 3D animation program. Work will be evaluated on a set of technical and aesthetic criteria. Assignments are given weekly. Plan to meet every X-Hour. No prior experience, coding or drawing skills needed. CSDA 22 and CSDA 24 can be taken in any order.

Degree Requirement Attributes: Dist:TLA

CSDA 23 - Augmented and Virtual Reality Design

This hands-on projects-based course exposes students to the aesthetic, technical, and societal issues surrounding the emerging frontiers of digitally mediated realities. Students learn the fundamentals of augmented and virtual reality

design and are introduced to interactive development for VR/AR. CSDA 023 and COSC 63.01 have class together and work together on teams. Designers in this course create assets and design the UI/UX while developers build interactive digital tools, games, and visualizations. This course is not open to students who have received credit for COSC 29.22 or COSC 89.22.

Prerequisite: CSDA 22

Degree Requirement Attributes: Dist:TAS

CSDA 24 - Computer Animation: The State of the Art

This hands-on course focuses on state-of-the-art computer animation, presenting techniques and principles of traditional animation and how they apply to 3D computer animation, motion capture, and dynamic simulations. Facial and full-body animation are covered through projects, readings, and presentations. Students will complete weekly assignments and create short animation of their choosing. Students are given models and add weight, force, timing, and spacing to bring the models to life and simulate real-world physics. No prior experience needed. CSDA 22 and CSDA 24 can be taken in any order.

Degree Requirement Attributes: Dist:ART

CSDA 25.01 - Intro to UI/UX Design I

CSDA 25.01 is a hands-on projects-based course that teaches the concepts, principles, and practice of User Interface (UI) and User Experience (UX) Design. It is designed for students with an interest in any form of design, although we focus on the UI/UX of digital tools (e.g. mobile, web, tablets). No previous experience or coding skills needed. Grading is based on weekly assignments, reflections, readings, and in-class exercises that build on each other and are intended to teach the foundational skills and thinking of UI/UX design. This team-based course requires a significant amount of time outside class. Students are encouraged (but not required) to take ENGS 12 prior to taking this course.

Degree Requirement Attributes: Dist:ART

CSDA 25.02 - Intro to UI/UX Design II

This Independent Study course offers students who have taken CSDA 25.01 a chance to put what they learned in the classroom into practice. Students might work as a designer in the DALI Lab or on another project. In addition to completing a project as a designer, students design and build an online portfolio.

Prerequisite: CSDA 25.01 and Instructor Permission is required.

Degree Requirement Attributes: Dist:ART

CSDA 27 - Projects in Digital Arts

This is the culminating course for the Digital Arts Minor. Students complete projects in digital arts, including:

computer animations; games, VR/AR applications, interactive digital installations and media. Students work in small teams to complete work of a high production quality or work that incorporates innovations in technology. Grades are based on aesthetic and technical criteria along with teamwork and adherence to weekly milestones.

Prerequisite: CSDA 22 and either CSDA 24 or CSDA 23

Degree Requirement Attributes: Dist:ART

CSDA 28 - Advanced Projects in Digital Arts

This independent study course is for students who have completed all the courses in the Digital Arts minor and want to continue working on projects in digital arts or for students who want to stretch their skills in a new way. Projects may include computer animations, interactive digital arts, installations, or research projects. Students work alone or in teams. This course may be taken twice.

Prerequisite: CSDA 27 and permission of the instructor is required.

CSDA 29 - Topics in Digital Arts

This course studies an advanced topic in Digital Arts that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct.

Prerequisite: Vary according to the topic. Consult with the instructor.

CSDA 29.04 - Impact Design

This innovative, team-based, project course is about impact--what it is, how you experience it, how you create it, how you measure it. We focus on designing products and experiences for community partners as part of the Social Impact Practicum program. Rather than looking at how we can solve a problem, we look at how we can create delight for users. Students will learn how to combine core principles from human psychology with the tools of design to create products and user experiences that promote engagement, adoption, and learning. Past community partners have included the Hartford Autism Regional Program (HARP) and the Aging Resource Center.

Degree Requirement Attributes: Dist:TMV

CSDA 29.05 - Digital Fabrication

Artists, designers, creators, and makers increasingly use digital fabrication methods in both two and three dimensions as a means of designing, rapid prototyping and manufacturing. This class uses digital fabrication tools in a studio setting. Students learn digital fabrication through a series of 2D and 3D design projects and through critical discussions of the aesthetic, sociological and practical implications of integrating digital tools and materiality into the design and build process.

Students will have hands-on training in the process of creating and converting computer generated drawings and models into physical objects through the use of 2D and 3D scanners, laser-cutters, wire benders, cnc routers and 3D printers. No previous experience needed.

CSDA 29.06 - Digital Tangible User Interfaces

As computation becomes ubiquitous, we find interactive digital devices scattered around our homes, as integral parts of our living environments, including smart appliances, interactive architectural elements, toys, and interactive artworks. Digital Tangible User Interfaces (TUIs) are an approach to Human-Computer Interaction (HCI) where computation is embedded into objects we can interact with. One challenge of the TUIs is how to create a seamless interface between users and digital information so that the user can naturally interact with the daily product and their living environment. This course will focus on the theory, process, and practice of building intelligent objects and spaces. Students will be required to design and implement tangible user interface projects by using physical computing tools (Arduino) and computer languages such as Processing.

Prerequisite: COSC 1 or COSC 2

Degree Requirement Attributes: Dist:TLA

Comparative Literature - Undergraduate

Program Chair: Veronika Fuechtner

M.A. Director: Miya Qiong Xie

Faculty with joint appointments: A. Coly (African and African American Studies), J. Dorsey (Asian Societies, Cultures and Languages), V. Fuechtner (German), G. Gemünden (German), A. Gomez-Quiñones (Spanish and Portuguese), L. D. Kritzman (French and Italian), E. S. Morsi (Comparative Literature), G. Parati (French and Italian), R. Risham (Film), M. R. Warren (Comparative Literature), D. Washburn (Asian Societies, Cultures and Languages, Film);

Faculty with joint titles: R. E. Biron (Spanish and Portuguese), D. P. LaGuardia (French and Italian), A. Martín (Spanish and Portuguese), K. Mladek (German), I. Reyes (Spanish and Portuguese), A. Tarnowski (French and Italian);

Associated faculty: Y. Komska (German), M. McGillen (German); R. Stewart (Classics), Miya Qiong Xie (ASCL);

Affiliated faculty: T. Aquado (Spanish and Portuguese), J. Baron (Library), J. Beckman (English), M. Broner (Spanish and Portuguese), N. Canepa (French and Italian), M. Caplan (COLT), M. Chaney (English), W. Cheng (Music), H. Denzel (German), T. El-Ariss (Middle Eastern Studies), Y. Elhariry (French and Italian), M. Gilebbi (French and Italian), L. Hollister (French and Italian), E.

Kane (French and Italian), L. Kolomiyets (EEER), M. Larose (French and Italian), A. McCann (English), S. Mefoude Obiono (French and Italian), K. Milich (MALS), C. C. Minchillo (Spanish and Portuguese) C. Richter-Nilsson (COLT), J. Smolin (Middle Eastern Studies), J. Smolin (COLT), P. Stuelke (English), N. Tanoukhi (English and Creative Writing), M. Wyatt (French and Italian), Y. Zheng (COLT);

*Courses in Comparative Literature are designed to meet the needs of students whose literary interests are broader than those that can be met by the curriculum of any single department.

To view Comparative Literature Undergraduate courses, click here. (p. 240)

To view Comparative Literature Graduate requirements, click here. (p. 916)

To view Comparative Literature Graduate courses, click here. (p. 917)

Requirements for the Major in Comparative Literature

Each student's major plan is designed individually around a particular focus of interest. Students planning to major in Comparative Literature will normally enroll in an Honors Program, which entails writing a thesis (60 to 80 pages) during their senior year in COLT 85 and COLT 87. Students not writing a thesis will write a senior essay in COLT 85.

The major is administered by the Comparative Literature Steering Committee. Students design their major plan in consultation with an advisor and the Chair, and must fill out an application form, available on the COLT website, describing their major, as well as the online declaration on DartWorks. All applications to the major must be approved by the Steering Committee. Major cards can be signed only by the Chair. Students interested in becoming majors should consult the Chair well in advance of their intended declaration of a major.

Prerequisite for the major: COLT 01 or any from among the COLT 10's.

Required courses: any from among the COLT 72's, COLT 85, and, for honors majors writing a thesis only, COLT 87.

COLT 85 (Senior Seminar) is required to fulfill the culminating experience requirement for all COLT majors. COLT 85 and COLT 87 (Thesis Tutorial) are required students writing honors theses.

Major Requirements:

COLT offers two major options

A. Comparative study of literature and culture in two languages. Students must demonstrate fluency in one language beyond English and competence in another language beyond English. This typically involves 3-4 upper-level courses in one language and 1-2 upper level courses in another language or other evidence of advanced work in the respective languages. Furthermore students take 2-4 Comparative Literature courses above COLT10.

B. Comparative study of literature and culture in one language (normally not English) and one other non-literary discipline (e.g. music, film, art, history, geography, physics, etc.).

Students must demonstrate fluency in one language beyond English. This typically involves 3-4 upper-level courses or other evidence of advanced work in the respective language. Furthermore students take 2-4 Comparative Literature courses above COLT10, and demonstrates substantive preparation in a non-literary discipline (3-4 upper level courses).

Requirements for the Minor in Translation

Translation Studies combines the practice of bringing texts from one language to another with theories of meaning and comparison. Translation is central to many literary traditions as well as to daily communications in a globalized world. Students in the Translation Studies Minor examine translation from multiple perspectives, learning practical skills applicable to many working environments. Students also gain broader analytic insights into language, culture, and literary genres. The Translation Studies Minor offers all students who study at least one language in addition to English the training to engage pragmatically and creatively with multilingual environments.

The Minor in Translation consists of six courses:

Prerequisite course: COLT 1 or COLT 10

Three courses focused on translation: COLT 19 and two others in COLT or other departments as approved

Two upper-level courses in one language (other than English)

Coursework in this Minor may not duplicate work counted towards other majors or minors. Only grades of 'B' and above may count toward the minor.

COLT - Comparative Literature - Undergraduate Courses

To view Comparative Literature Undergraduate requirements, click here. (p. 239)

To view *Comparative Literature Graduate requirements*, [click here](#). (p. 916)

To view *Comparative Literature Graduate courses*, [click here](#). (p. 917)

COLT 1 - Read the World

Instructor: Tarnowski, Parati

Do you know how to read? Faces. Words. Pictures. Bodies. Games. Books. People. What are you really doing when you *read the world*? This course teaches comparative methods designed to confront the (mis)understandings and (mis)translations that constitute reading across the world's languages, locations, cultures, historical periods, and expressive forms. Classwork consists of hands-on exercises that engage ancient and modern myths and materials drawn from various media: text, movies, video games, anime, and digital arts.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

7 - First Year Seminars

Instructor: Morsi, Aquado

Offered: Spring, Winter.

COLT 19 - Translation: Theory and Practice

Each course in the designated COLT 19 rubric addresses translation and the transfer of literary meaning as well and form across languages; it trains the students to notice and interrogate the political, historical, and cultural forces that hinder or facilitate such transfer. In addition, each COLT 19 course may offer guided practice of translation in the language(s) in which the student demonstrates competence (home languages or languages studied at Dartmouth).

Degree Requirement Attributes: Dist:INT or LIT; W; Lang: LRP; WCult:

COLT 19.01 - Translation: Theory and Practice (in English)

Instructor: Morsi, Canepa

Translation is both a basic and highly complicated aspect of our engagement with literature. We often take it for granted; yet the idea of meanings "lost in translation" is commonplace. In this course we work intensively on the craft of translation while exploring its practical, cultural and philosophical implications through readings in theoretical and literary texts. All students will complete a variety of translation exercises, and a substantial final project, in their chosen language.

Cross-Listed as: GERM 82.06

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:INT or LIT; Lang:LRP; WCult:W

COLT 19.06 - Decolonizing Translation

Instructor: Kolomiyets

The course takes a panoramic view of translation as an ambivalent reflection of the (post)colonial condition. As a "channel of colonization," translation has relied on legal and linguistic manipulations and prohibitions to unleash epistemicide and linguicide. As a form of resistance, translation has channeled emancipatory postcolonial struggles. In this course, we will survey both functions between the 18th to the early 21st century. We will draw on case studies from around the globe, including the Middle East, South, Southeast and Western Asia, South and Central America, Mexico and the islands of the Caribbean, as well as North America, Europe and Eurasia. We'll revisit the relationship between translation, orientalism, world literature, have a closer look at border identities across geographical regions and historical circumstances, reconsider translational imagination and the art of self-translation, and reflect on the gains, losses, misses, and un/translatables in translation.

Cross-Listed as: EEER 38.27

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; Lang:LRP; WCult:NW

COLT 19.07 - Translating East Asian Languages: Theory and Practice

Instructor: Dorsey

Translation is an ancient practice tied intimately to interpretation, cross-cultural understanding, colonization, proselytization, and business. When it crosses vast cultural divides such as between Asia and the West, the challenges are amplified, the issues complicated, and the stakes raised. What are the practical, cultural, and philosophical issues involved? This course explores these questions by studying theories of translation and the history of it the East Asian context while also offering an experiential component in the form of various translation assignments ranging from technical manuals, fiction, and religious texts to poetry, song lyrics, and humor. The focus will be on Chinese, Korean, and Japanese; students hoping to work with other Asian languages should consult the instructor before enrolling.

Cross-Listed as: ASCL 70.25

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; Lang:LRP; WCult:NW

COLT 40.01 - History of the Book

Instructor: Beckman

This course examines the book as a material and cultural object. We'll consider various practical and theoretical models for understanding the book form and investigating the materials, technologies, institutions, and practices of its production, dissemination, and reception. We'll focus primarily on the printed book in Western Europe and North America, but we'll also discuss the emergence of the codex (book), medieval manuscript books, twentieth and twenty-first century artist's books and the challenges posed by digitality to the book form. The readings for the course will be balanced by frequent use of exemplars drawn from Rauner Library and practical experience setting type in the Book Arts workshop.

Cross-Listed as: ENGL 54.15

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

COLT 40.07 - Video Games and the Meaning of Life

Instructor: Cheng

Video Games and the Meaning of Life is an interdisciplinary course that explores the modern human condition through the stories, designs, and soundscapes of digital games—from the perils of obedience (Hannah Arendt and *The Stanley Parable*) to the metaphors of illness (Susan Sontag and *That Dragon, Cancer*), from the deathless dreams of pacifism (*Undertale*) to the transnational rise of today's billion-dollar e-Sports industry (*League of Legends*). All students are welcome; no gaming or musical experience needed.

Cross-Listed as: FILM 50.04 MUS 046

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:CI

COLT 52.02 - New Latin American Cinema

Instructor: Gemunden

With emergence of filmmakers such as Alejandro Inarritu (Mexico), Lucrecia Martel (Argentina), and Jose Padilha (Brazil), the last decade has seen a creative boom in Latin American cinema that includes art house cinema, blockbusters, documentary, and experimental film. Beginning with a quick overview of key forerunners, this course will focus on the major directors, genres and aesthetic trends that characterize the new Latin American cinema. On the one hand, we will pay special attention to the distinct national cinemas: the different historical and cultural contexts out of which they emerge; and the different aesthetics that this gives rise to.

Cross-Listed as: FILM 42.03 INTS 17.12 LACS 35.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT

COLT 52.08 - Literature and Culture of the Americas

Instructor: Stuelke

This course surveys a series of critical paradigms for studying the literature and culture of the Americas. We'll explore a variety of approaches to hemispheric literary and cultural studies, which may involve analyzing comparative and shared romantic and revolutionary discourses; border cultures; state-sponsored literary institutions that cross national borders; inter-American attempts to imagine solidarity; and hemispheric aesthetic strategies and genres for mapping US empire, global capitalism, and settler colonialism. Authors may include Leonora Sansay, Martin Delany, Carmen Lyra, Gabriel García Márquez, Jamaica Kincaid, Valeria Luiselli, Fernanda Melchor, and Silvia Moreno-Garcia. All texts are available in English or in translation.

Cross-Listed as: ENGL 53.32 LACS 45.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

COLT 53.06 - Arab Feminisms

Instructor: Morsi

This course is an introduction to the history of feminism in the Arab world from the 19th century to the present. It examines some of the most important socioeconomic and political issues as well as aesthetic trends that were or continue to be central to feminist activism and cultural production in the region. Throughout the term students will engage with a wide range of primary sources (newspaper articles and op-eds, memoirs, novels, poems, photographs and films) that will help them develop a nuanced and critical understanding of the diverse and dynamic experiences of women in the Arab world.

Cross-Listed as: MES 19.03 WGSS 24.01

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

COLT 55.03 - Eco-Fiction: Stories of Ghosts and Other Beings from Premodern China

Instructor: Zheng

In this class, we will read a selection of Chinese literary texts (anecdotes, full-fledged tales, poetry) from the third to the nineteenth centuries that feature ghosts. We will consider these ghost stories as a means by which premodern Chinese literary authors explored the ecological connections between the natural and human worlds, and reflected on the relations among humans and between humans and other beings, both animate and inanimate. We will see that ghosts are not just metaphors in these stories. Interaction with ghosts enable human authors to

contemplate and unlearn conditions of being and becoming human.

Because close reading is the key skill that students will learn and practice throughout the quarter, the class will also incorporate creative writing exercises and creative assignments to help students better understand techniques of storytelling. Towards this goal, we will read selected theoretical texts on ecocriticism and narratology and discuss how premodern Chinese literary texts can respond to questions and propositions raised by modern and contemporary theorists in creative ways.

Cross-Listed as: ASCL 60.10

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

COLT 57.02 - From Dagos to Sopranos

Instructor: Parati

Are Italians white? Where does the word “dago” come from? What is “dago red”? Can Italians be “Afrocentrists”? Are Italians racist? What do you know about the mafia? These and other questions will be at the center of this course. We will also work on the portrayal of ItalianAmericanness in “The Sopranos,” “The Godfather,” and Jim Jarmush’s “Ghost Dog.” The last week of the course will be devoted to the music by Italian Americans such as Sinatra and Madonna.

Open to all students. Text, lectures and discussion in English. Students taking the course for major or minor credit in Italian will attend a weekly x-hour and do all written work in Italian.

Cross-Listed as: ITAL 35.01

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

COLT 57.09 - How to Be a Fascist

Instructor: Parati

How do people become fascists? How do they rise to power? Why did people support fascism? We will focus initially on the original model for fascist dictatorships, that is Italian fascism, but we will also have in-class presentations by Dartmouth professors on German, Spanish, French and Japanese forms of fascism. This is a course that will concentrate on history, film, literature, and fashion in order to talk about the slippery definitions of fascism.

Cross-Listed as: INTS 17.10 ITAL 35.02

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:W

COLT 66.01 - What is Psychoanalysis?

Instructor: Kritzman

This course aims to explore the relationship between literature and the theoretical and clinical writings of psychoanalysis. Through readings representing a range of psychoanalytic and literary traditions, we will examine the connections that can be made between psychic structures and literary structures, between the language of the mind and the emotions and the language of the literary, cultural or cinematic text. What is the relationship between “literary” works and the theoretical and clinical writings of psychoanalysis? How do they inform one another? This large question will be examined through readings of essays and case histories by theorists such as Freud, Lacan, Kristeva, Butler, Phillips, Bersani and Zizek. The course will focus on the theme of the family romance and its relationship to the question of gender in works by authors such as Sophocles, Shakespeare, Montaigne, Kafka, Woolf, Mann, Proust, Duras, and Almadovar.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

COLT 70.08 - Media and Environment

Instructor: Broner

At a time of increasing reliance on technology to enhance and even transform the environment, how do media shape our perception of the world around us? This course introduces students to environmental media studies methods and concepts through a focus on contemporary Latin America. As we work comparatively across a range of media—including film, photography, visual art, and virtual reality—we will consider the specific ways in which each can reveal or reformulate conceptions of the environmental. Among key topics, we will discuss the stakes of defining nature as media, the ecological materiality of media formats, and the role of environmentalist media in present-day Latin America. The course culminates in a project that asks students to simultaneously analyze and create media.

Conducted in English; no previous media experience required.

Cross-Listed as: SPAN 65.17

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

COLT 72.01 - Global Literary and Cultural Theory

Instructor: Morsi

Comparative Literature entails conscious engagements with theories of literature, language, and culture from throughout the world. This course ranges across some of the ideas that have been influential in shaping scholarly

questions in a variety of languages. It also addresses the global dimensions of theory: rhetorics and ethics of comparison, world literature, and indigenous knowledges.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

COLT 79 - Independent Study

Instructor: Program Chair

A tutorial course designed by the student with the assistance of a member of the Comparative Literature faculty who is willing to supervise it. Offers the student an opportunity to pursue a subject of special interest through a distinctive program of readings and reports. During the term prior to the course, applicants must submit a course outline to the Chair for written approval.

Offered: Fall, Spring, Summer, Winter.

COLT 85 - Senior Seminar in Research and Methodology

Instructor: Fuechtner

CoLt 85 is a seminar/workshop designed to support the preparation of the honors thesis or culminating project. The work done in this course supplements the independent research and writing students will be undertaking with their academic advisor. The main tasks for this seminar include: a consideration of possible ways to frame analysis within chosen field; a review of basic research protocols; and practice in how to make use of theory, historical documents, and translation in developing the thesis/culminating project.

Offered: Winter.

COLT 87 - Honors Thesis in Comparative Literature

Instructor: Fuechtner

Permission of the Chair is required.

Offered: Spring.

Divisional Courses

Arts and Humanities

AHUM 095 - Internship Reflection and Analysis in the Arts and Humanities

This course requires an internship related to the student's major in the Arts and Humanities division. Students apply academic principles and skills outside the classroom and submit required written work reflecting on their experience and how it enhances and advances the student's academic program of study.

Students receive a pass/fail (CT/NC) grade based on a final report and, when possible, from an evaluation from an on-

site, internship supervisor. This course may be taken in fall, winter, spring, or summer term, but can only be taken twice during the student's degree program. To be eligible for course enrollment, a student must have declared a major and must submit an application that briefly describes the internship project and explains how the experience is integral to their course of study. Applications are due at least two weeks prior to the start of the internship term. No late applications will be accepted.

International students with immigration sponsorship from Dartmouth College should consult the Office of Visa and Immigration (OVIS) about the application process and eligibility for employment authorization to complete the internship. F-1 students may participate in an internship during an earned leave term following a minimum of three consecutive enrolled terms of R, O, or X based on the student's D-Plan.

Instructor permission require to enroll. To receive permission, students must submit a written proposal which articulates the rationale for participating in an internship as part of their academic trajectory.

Offered: Fall, Spring, Summer, Winter.

Interdisciplinary Studies

ACAD 095 - Internship Reflection and Analysis in Interdisciplinary Studies

This course requires an internship related to the student's major in the Interdisciplinary Studies division. Students apply academic principles and skills outside the classroom and submit required written work reflecting on their experience and how it enhances and advances the student's academic program of study.

Students receive a pass/fail (CT/NC) grade based on a final report and, when possible, from an evaluation from an on-site, internship supervisor. This course may be taken in fall, winter, spring, or summer term, but can only be taken twice during the student's degree program. To be eligible for course enrollment, a student must have declared a major and must submit an application that briefly describes the internship project and explains how the experience is integral to their course of study. Applications are due at least two weeks prior to the start of the internship term. No late applications will be accepted.

International students with immigration sponsorship from Dartmouth College should consult the Office of Visa and Immigration (OVIS) about the application process and eligibility for employment authorization to complete the internship. F-1 students may participate in an internship during an earned leave term following a minimum of three consecutive enrolled terms of R, O, or X based on the student's D-Plan.

Instructor permission require to enroll. To receive permission, students must submit a written proposal which

articulates the rationale for participating in an internship as part of their academic trajectory.

Offered: Fall, Spring, Summer, Winter.

Sciences

SCI 095 - Internship Reflection and Analysis in the Sciences

This course requires an internship related to the student's major in the Sciences division. Students apply academic principles and skills outside the classroom and submit required written work reflecting on their experience and how it enhances and advances the student's academic program of study.

Students receive a pass/fail (CT/NC) grade based on a final report and, when possible, from an evaluation from an on-site, internship supervisor. This course may be taken in fall, winter, spring, or summer term, but can only be taken twice during the student's degree program. To be eligible for course enrollment, a student must have declared a major and must submit an application that briefly describes the internship project and explains how the experience is integral to their course of study. Applications are due at least two weeks prior to the start of the internship term. No late applications will be accepted.

International students with immigration sponsorship from Dartmouth College should consult the Office of Visa and Immigration (OVIS) about the application process and eligibility for employment authorization to complete the internship. F-1 students may participate in an internship during an earned leave term following a minimum of three consecutive enrolled terms of R, O, or X based on the student's D-Plan.

Instructor permission require to enroll. To receive permission, students must submit a written proposal which articulates the rationale for participating in an internship as part of their academic trajectory.

Offered: Fall, Spring, Summer, Winter.

Social Sciences

SOC 095 - Internship Reflection and Analysis in the Social Sciences

This course requires an internship related to the student's major in the Social Sciences division. Students apply academic principles and skills outside the classroom and submit required written work reflecting on their experience and how it enhances and advances the student's academic program of study.

Students receive a pass/fail (CT/NC) grade based on a final report and, when possible, from an evaluation from an on-site, internship supervisor. This course may be taken in fall, winter, spring, or summer term, but can only be taken twice during the student's degree program. To be eligible

for course enrollment, a student must have declared a major and must submit an application that briefly describes the internship project and explains how the experience is integral to their course of study. Applications are due at least two weeks prior to the start of the internship term. No late applications will be accepted.

International students with immigration sponsorship from Dartmouth College should consult the Office of Visa and Immigration (OVIS) about the application process and eligibility for employment authorization to complete the internship. F-1 students may participate in an internship during an earned leave term following a minimum of three consecutive enrolled terms of R, O, or X based on the student's D-Plan.

Instructor permission require to enroll. To receive permission, students must submit a written proposal which articulates the rationale for participating in an internship as part of their academic trajectory.

Offered: Fall, Spring, Summer, Winter.

The John Sloan Dickey Center For International Understanding

Director: Victoria K. Holt

The John Sloan Dickey Center for International Understanding unites the many strengths of Dartmouth — its students, faculty, undergraduate and professional schools — in addressing the world's challenges, ensuring that a rigorous understanding of the world is an essential part of the Dartmouth experience. The Center honors the commitment to international understanding and social responsibility exemplified by President John Sloan Dickey's lifetime devotion to liberal arts education, scholarship, and values.

The Dickey Center offers students opportunities to expand their knowledge of international issues through international internships, research grants, and the opportunity to join student organizations and publications focused on foreign affairs. Students may choose to pursue the International Studies Minor (ISM), supported by the Dickey Center, and/or further refine their international studies with courses and activities in global security and conflict (Institute for Global Security), polar science, cultures, and climate change (Institute of Arctic Studies), and global health (Global Health and Development). A focus on global issues of gender are cross-cutting throughout these activities.

Through symposia, conferences, public events, the Rosenwald Fellows program in US Foreign Policy and International Security, and extended visits by practitioners and scholars, the Center brings leaders working on the vital issues of the day to campus. It enhances the intellectual life of the Dartmouth community, supports faculty research and publications, and brings new opportunities to students through international studies.

The Center's multidisciplinary approach to complex issues is exemplified by its research areas and special initiatives. The Institute of Arctic Studies promotes interdisciplinary scholarship in polar environmental science and engages the work of scientists, humanists, Indigenous communities, and policy makers. Global Health and Development is a collaborative enterprise with Geisel School of Medicine that marshals the talents of the entire campus and international partners to address global health and human development concerns. In its quest to understand the phenomenon of collective violence, the Institute for Global Security, focusing on issues of global peace and security, incorporates the study of both the global state system as well as the varieties of human conflict, drawing on a range of fields and disciplines. Special initiatives include Dissent + Democracy (a speaker series with international dissidents), Powering Peace (a research collaboration looking at renewable energy in fragile states), and the Middle East Policy Initiative (supporting dialogue and engagement), among others.

The Center benefits from the advice of a distinguished Board of Visitors. The offices of the Dickey Center are located on the first, second, and third floors of the Haldeman Center.

- International Studies Minor
- The Institute of Arctic Studies
- Global Health and Development
- Initiative for Global Security

International Studies Minor

Coordinator: Casey Aldrich, Ed.D.

ISM Steering Committee: G. Parati (Chair), L. V. Adams, M. B. Burkins, C. Cortez Minchillo, M. E. Greenleaf, V. K. Holt, P. Novosad, W. C. Wohlforth.

To view International Studies courses, click here

To view information on the John Sloan Dickey Center, click here

The International Studies Minor is open to students from all majors seeking to better understand the cross-cutting global forces that shape the vital issues of our day.

The Minor is coordinated by the John Sloan Dickey Center for International Understanding and draws upon faculty expertise from across the College. Students graduating with a Minor in International Studies will be able to demonstrate that they are cognizant of the interplay between local and global-level processes, human and environmental interactions, and place, identity, and culture. They will further be able to apply this understanding to the complex global issues of our time in order to better understand their causes and consequences, and to assume the mantle of responsibility that comes with global citizenship. Application for the Minor should ideally be made by the student's sixth term of study. No course in the minor may be taken under the Non-Recording Option. For the most up-to-date information on course offerings, please visit the Dickey Center's website: <https://dickey.dartmouth.edu/student-opportunities/international-studies-minor>

Prerequisite: None.

Requirements: A total of six (6) courses, to include the following:

Six (6) *thematic* courses (one from each theme):

International Development; International Security; Global Health; Global Environment; World Language & Culture; Great Issues Seminar.

Thematic Courses / Pre-Approved Thematic Courses for 2025-26:

International Development: INTS 16 / GEOG 8.01 (Intro to International Development); ECON 24 (Development Economics); GEOG 22.02 (Global Poverty and Care); GEOG 33.01 (Geopolitics and Third World Development); GOVT 44 (Power and Development in the Global Economy); ECON 29 (International Finance and open-economy macroeconomics); ECON 39 (International Trade); ECON 64 (Topics in Developing Economics); SOCY 22 (The Sociology of International Development); ENV55 (Ecological Economics)

International Security: INTS 15 (Violence & Security); GOVT 4 (Politics of the World); GOVT 5 (International Politics); GOVT 53 (International Security); ANTH 28 / AAAS 88.08 (Ethnography of Violence); GOVT 50.02 (Civil War, Insurgency, and the International Response); GOVT 50.04 (War and Peace in the Modern Age); GOV 50.19 (Development Under Fire); GOV 59 (Foreign Policy and Decision Making); HIST 08.10 (World War II: Ideology, experience, legacy); HIST 62 (The First World War)

Global Health: INTS 18 / GEOG 21.01 (Global Health & Society); ANTH 06 (Intro to Biological Anthropology); ANTH 55 (Anthropology of Global Health); ANTH 26 (Gender & Global Health); ENGS 16 (Biomedical Engineering for Global Health); ENVS 28 (Global Environmental Health); HIST 8 (Body Parts, Body Wholes: An introduction to the comparative history of medicine)

Global Environment: ENVS 2 (Introduction to Environmental Studies); ENVS 3 (Environment & Society); ENVS 62 (Science Policy & Diplomacy); ENVS 30 (Global Environmental Science); ENVS 15 (Environmental Issues of the Earth's Cold Regions); ENVS 60 (Environmental Law); ENVS 65 (Global Environmental Politics); EARS 18 Environmental Earth Sciences; GEOG 15.01 (Global Climate Change); GEOG 16.01 (Climate for Human Security); EARS 6 (Environmental Change); INTS 80.05 / GEOG 70.04 (Imagining Polar Geographies)

World Languages and Culture: One advanced foreign language or literature course (above 1, 2, 3 introductory sequence); INTS17.09 / COLT 49.06 (Multilingualism); SPEE 27 (Intercultural Communication); ANTH 3 (Intro to Cultural Anthropology); ANTH 9 (Language and Culture); COLT 1 (Read the World); WGSS 3 (Global Race x Global Migration); WGSS 41.06 (Transnational Feminisms); COCO 21 (What's in Your Shoebox?); COCO 26 (What's in Your Toolbox?)

Great Issues Seminar: INTS 19 (Dissent and Democracy); INTS 80.04 / GOVT 85.50 (Diplomacy in a Complex World: Meeting Challenges, Creating Opportunity, and Pushing for Peace); INTS 80.06 (Multilateralism and US Leadership)

Note: if a Great Issues Seminar is not available for your D-plan, please select a second course from one of the other five Thematic Course categories.

INTS - International Studies Courses

To view International Studies requirements, click here.

To view information on the John Sloan Dickey Center, click here.

INTS 15 - Violence and Security

Instructor: E. Shackelford

Violence and Security is a multidisciplinary introduction to scholarship on the causes, consequences, and possible prevention of armed violence between groups. Using multiple social science disciplines, we will examine armed violence within, between, and across states, ranging from civil war, "ethnic" conflict, insurgency, and inter-state war. The course addresses the trade-offs created by different political solutions to the problem of security, and features a group simulation exercise to explore the challenges faced by governments and non-governmental organizations when they seek to ameliorate it.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC

INTS 16 - Introduction to International Development

Instructor: Smith (X25), Fox (W26)

Why are some countries rich and others so persistently poor? What can and should be done about this global inequity and by whom? We address these development questions from the perspective of critical human geography. Focusing on the regions of Latin America, Africa and Asia, we examine how development meanings and practices have varied over time and place, and how they have been influenced by the colonial history, contemporary globalization and international aid organizations.

Cross-Listed as: GEOG 08.01

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

INTS 17.10 - How to Be a Fascist

Instructor: G. Parati

How do people become fascists? How do they rise to power? Why did people support fascism? We will focus initially on the original model for fascist dictatorships, that is Italian fascism, but we will also have in-class presentations by Dartmouth professors on German, Spanish, French and Japanese forms of fascism. This is a course that will concentrate on history, film, literature, and fashion in order to talk about the slippery definitions of fascism.

Cross-Listed as: COLT 57.09 ITAL 35.02

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:W

INTS 18 - Global Health and Society

Instructor: Adams/Carey (W26), Sosin (S26)

Only a few decades ago, we were ready to declare a victory over infectious diseases. Today, infectious diseases are responsible for the majority of morbidity and mortality experienced throughout the world. Even developed countries are plagued by resistant "super-bugs" and antibiotic misuse. This course will examine the epidemiology and social impact of past and present infectious disease epidemics in the developing and developed world. The introduction of drugs to treat HIV/AIDS in sub-Saharan Africa will be considered from political, ethical, medical, legal and economic perspectives. Lessons from past and current efforts to control global infectious diseases will guide our examination of the high-profile infectious disease pathogens poised to threaten our health in the future. Open to all students. Limited to 35 students.

Cross-Listed as: GEOG 21.01

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC

INTS 19 - Dissent and Democracy in the World

Instructor: E. Shackelford

A multi-disciplinary introduction to the role of dissent and its relationship to democracy around the world, from the colonial era to modern day with a focus on 20th and 21st century examples. Learn about what distinguishes dissent from simple disagreement or grievance. Understand how and why authoritarian governments stifle dissent and democratic institutions facilitate it. Study the risks and benefits of dissent for individuals and dissidents, the role of dissent under different regime types, and how stifling dissent harms institutions and societies. Discuss the psychology behind dissent (and conformity), historical case studies from around the globe, methods of dissent, and modern political debates around them and the political freedoms that make them possible.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

INTS 80.04 - Diplomacy in a Complex World: Meeting Challenges, Creating Opportunity, and Pushing for Peace

Instructor: E. Barks Ruggles

This course is a broad view of how states, societies, and institutions manage complex global challenges including climate change, increasing inequality, emerging technologies, and challenges to the global order that has supported the rapid democratization of over half the world. The course will center on the role of diplomacy in

addressing these challenges, creating opportunities, and preserving a rules-based international order that upholds democratic institutions that reinforce human rights and freedoms.

Cross-Listed as: GOVT 85.50

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

INTS 80.05 - Imaging Polar Geographies

Instructor: J. Kerby

The polar regions are in transition as they undergo rapid climate and environmental changes that in turn have cascading consequences for society, both locally and across the globe. But how do we conceptualize and then measure environmental change in polar systems, particularly in areas with sparse population densities and/or challenging climatic conditions that make monitoring difficult?

Cross-Listed as: GEOG 70.04

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

INTS 80.06 - Multilateralism and U.S. Leadership: How should U.S. engage with the Int'l System it Helped Create?

Instructor: J. DeLaurentis

Explore the principal components of the so-called rules-based international order. Study the origin, roles and competencies of the multilateral organizations which underpin the order, including the UN Security Council, and assess their impact and utility. Should these institutions be reformed or is a new construct required for countries to manage the borderless crises that will inevitably come?

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

The Institute of Arctic Studies

Director: Melody B. Burkins, PhD

Founded in 1989, the Institute of Arctic Studies (IAS) at the Dickey Center is Dartmouth's crossroads for multidisciplinary Arctic Scholarship and global policy dialogs that center inclusion, justice, equity, and Indigenous Knowledge in solutions to Arctic and global challenges. We connect Dartmouth faculty from the College and professional schools with colleagues throughout the circumpolar north and maintain longstanding and valuable partnerships with the University of the Arctic (UArctic), the Stefansson Institute in Iceland, the U.S. Cold Regions Research and Engineering Lab (CRREL), Arctic Indigenous Peoples' leadership, Canada

Fulbright and the U.S. State Department Fulbright Arctic Initiative, the University of Greenland, the U.S. National Academies Polar Research Board, and many more.

The Institute's annual programmatic offerings include ongoing education, research, and policy-engaged scholarship opportunities for students hoping to advance work with our partners in scholarship and practice in Canada, Greenland, the Nordic countries, and the polar region of the south, Antarctica. We also connect Dartmouth communities to UArctic, a network of over 200 Arctic-engaged institutions around the world, where we currently support engagement and leadership in UArctic "thematic networks" ranging from insect ecology to science diplomacy, climate, and gender studies. Since 2008, we have also hosted the UArctic Institute for Arctic Policy, a forum for connecting scientists, policymakers and Indigenous leaders on issues of climate, health, security, and development. Recognized as a trusted and inclusive convener of Arctic education, research, and policy-engaged dialog, we also host and cosponsor a diversity of seminars, conferences, and workshops highlighting the importance of the Arctic region, and Arctic Peoples, in world affairs.

Global Health and Development

Director: Dawn Carey, MPH
Faculty Affiliates: Lisa V. Adams, MD, Sienna R. Craig, PhD, Kendall Hoyt, PhD, Margaret Karagas, PhD, Michael Zegans, MD

Global Health and Development at Dickey (GHAD) is a Dartmouth-wide program dedicated to improving the health of the world's population through multidisciplinary research, education and service. The Dickey Center GHAD works across Dartmouth College and the professional schools, the Dartmouth-Hitchcock Medical Center, and a network of partners around the world to pursue solutions to critical challenges in global health as we help train the next generation of global health leaders.

Global partnerships and the advancement of global health equity are central to all Dickey Center GHAD programming and activities. Our GHAD partners beyond campus include national global health leaders, international ministries of health, academic institutions, research institutes, and local and international non-governmental organizations (NGOs) around the world. Our work to inform policy and advance impact consists of joint research, knowledge sharing, capacity building, and education programs with global health colleagues around the world, all informed and driven by co-created priorities.

Wherever possible, our educational activities provide opportunities for Dartmouth students and trainees to work with counterparts outside of the US in a co-learning environment and/or advance bi-directional exchanges with partner institutions and countries.

Each year, GHAD hosts multiple partnered internships and fellowships supporting students working with faculty and practitioners with diverse experience in global health. Students may apply to a formal Global Health Fellows program, where - through regular meetings, workshops, simulations, and service projects as a cohort - they will learn foundational global health research and practice methods and host conversations with experts in a diversity of global health fields, from health systems and data science to leaders in healthcare policy, infectious disease research, global health security, health and development, health diplomacy, and more.

Institute for Global Security

Faculty Director: Professor Daryl Press

Staff Director: Thomas Candon
Great Issues Fellow: TBA

The Davidson Institute for Global Security at the Dickey Center advances Dartmouth's contributions to international security through research designed to improve policymaking, promoting direct engagement with foreign policymakers, and inspiring students to explore careers in international affairs. The Davidson Institute pursues this mission with two guiding intentions: to generate and disseminate new knowledge of critical importance to global peace and to prepare the next generation of leaders to create policy impact in a complex security environment, marked by a return to great power competition, civil wars, and novel emerging threats. The Institute oversees several programmatic areas. The problems of peace and war demand multifaceted solutions that require the study of such diverse fields as government, history, literature, languages, sociology, environmental studies, geography, anthropology, psychology, and economics.

The Jean Monnet Fund for War and Peace Studies, which is part of the Dickey Center's endowment, was established in 1985 by John C. Baker and Elizabeth Baker to honor the Dartmouth trustees who had the vision in 1961 to award Jean Monnet an honorary degree. It was also to honor the three founders of War and Peace Studies at Dartmouth College: Leonard Reiser, Elise Boulding, and Peter Bien.

The Davidson Institute administers the War and Peace Fellows program for students and presents a series of public speakers, hosts simulations, coordinates trips to

Washington, DC and abroad, and organizes other events. The faculty coordinator for the Fellowship program is Associate Professor of Government Kathleen Powers.

In 2021, the U.S. Foreign Policy and International Security Postdoctoral Fellowship program was named in honor of E. John Rosenwald, Jr. '52 TU'53 for his contributions to Dartmouth and the Fellowship program. The Fellows are selected to spend a minimum of ten months, and up to one or two years, in-residence at Dartmouth researching and writing about issues of international security and foreign policy. The program hosts 5-7 Fellows annually and has over 100 alumni. The faculty coordinator for the Rosenwald Postdoctoral Fellows program is Associate Professor of Government Jeffrey Friedman.

The Davidson Institute also provides support to the Political Violence FieldLab, which is overseen by the James Wright Chair in Transnational Studies and Associate Professor of Government Jason Lyall, provides funding for internships focused on peace and security and for faculty research, hosts an annual security conference in Washington, DC, and brings distinguished visiting practitioners to campus for extended periods. In the 2022-23 year, the Initiative launched a Distinguished Visiting Fellows program, which welcomes accomplished faculty whose research focuses on issues of international security for periods of time ranging from a few weeks to a full academic year.

Earth Sciences - Undergraduate

Chair: Meredith A. Kelly

Undergraduate Major Coordinator Leslie J. Sonder

Professors R. L. Hawley, M. A. Kelly, M. Morlighem, E. C. Osterberg, C. E. Renshaw, M. Sharma; Professors Emeriti J. L. Aronson, X. Feng, G. D. Johnson; Research Professors B. P. Jackson, W. C. McClelland; Associate Professors M.C. Palucis, L. J. Sonder; J. V. Strauss; Associate Professor Emeritus W. B. Dade; Research Associate Professor V. F. Taylor; Assistant Professors C. B. Keller, E. M., Lacroix, S. P. Slotznick; Senior Lecturers E. E. Meyer, M. A. Poage; Lecturers B. D. Barnes, T. Chaffee, A. Koeppel, S. B. Penprase, J. S. Stroup; Adjunct Professor K. J. Peterson; Adjunct Emeritus Professor F. J. Magilligan; Adjunct Associate Professors C. Hicks-Pries, J. Mankin, C. Meyer, H. E. Seroussi, J. M. Winter; Adjunct Assistant Professors E. Newton, Y. Nakayama; Adjunct Senior Lecturer J. W. Chipman

To view Earth Sciences Undergraduate courses, click here. (p. 252)

To view Earth Sciences Graduate requirements, click here. (p. 929)

To view Earth Sciences Graduate courses, click here. (p. 930)

Prerequisites for all majors and minors including the modified majors

- One introductory Earth Science course (EARS 1-9, exclusive of EARS 7)
- EARS 40 (not required for the Environmental Earth Sciences Minor)
- CHEM 5 (or CHEM 10) (for the Environmental Earth Sciences Minor, any one of the following courses: CHEM 5 (or CHEM 10), PHYS 13 (or PHYS 3 or PHYS 15), or BIOL 16).
- Any one of the following courses taken at Dartmouth: MATH 3, MATH 8, MATH 9, MATH 11, MATH 12, MATH 13, MATH 14, MATH 23, or MATH 46.

Field studies requirement for all majors except modified majors with EARS as the secondary department

- Successfully complete *one* of the following three options:
 - EARS 45, EARS 46, AND EARS 47 (the Stretch)
 - Any *three* of the following courses having significant field components: EARS 33, EARS 38, EARS 52, EARS 58, EARS 59, EARS 71, or other course(s) approved by the Chair. None of these courses may also be used to satisfy another requirement for the major.
 - Transfer course credit from an accredited geology field studies program (including accessible programs).

The Department of Earth Sciences is committed to making the earth sciences accessible to all and encourages students interested in an immersive field experience but unable to complete the Stretch to consider, as appropriate, summer field courses offered by other universities or the alternative accessible field course listed on the International Association for Geoscience Diversity website. Substitute field methods courses offered by other institutions must be approved in advance by the Chair. Since substitute courses will likely receive one or two Dartmouth course transfer credit(s), a student will usually need one or two additional Earth Sciences courses numbered 30 or above to meet Dartmouth's eight course major requirement. Be advised that the Registrar may charge a fee to transfer course credits to Dartmouth. Contact the Registrar's Office for more information regarding the transfer fee.

Culminating experience requirement for all majors except modified majors with EARS as the secondary department

- Majors must complete one of three options to fulfill the College's culminating experience requirement:
- Honors Thesis, as described below (EARS 89 and, optionally, EARS 90 or 91 but not both).
- Independent research project, generally of one term duration, under the supervision of a faculty member (EARS 87).
- Senior Seminar, EARS 88 (Fall term only).
- In addition, to fulfill the College's culminating experience requirement, all students must attend the weekly research seminar during Winter and Spring of their senior year.

Relevant courses outside the department for the Environmental Earth Science majors and minor that may satisfy some of the required course requirements

The Environmental Earth Science major and minor, including modified majors, permit qualifying courses above the introductory level in Geography, Environmental Studies, Engineering, Chemistry or Biology to satisfy some of the course requirements. The following courses are recommended but others are permitted subject to the permission of the Chair: CHEM 63 (Environmental Chemistry); ENVS 20 (Conservation of Biodiversity), ENVS 25 (Ecological Agriculture), or ENVS 30 (Global Environmental Science); BIOL 21 (Population Ecology), BIOL 25 (Introductory Marine Biology and Ecology), or BIOL 51 (Advanced Population Ecology); ENGS 37 (Introduction to Environmental Engineering), or ENGS 41 (Sustainability and Natural Resource Management); GEOG 31 (The Local and Global Biosphere).

The Earth Sciences Major

Prerequisites: As described above

Required courses:

- One Data Analysis course (EARS 10-19)
- Field requirement as described above
- Two Core Methods and Concepts courses (EARS 30-59, exclusive of 45-47). At least one of these must be an Advanced Core Methods and Concepts course (EARS 50-59).
- One Quantitative Analysis course (EARS 60-69)
- One Advanced Topics course (EARS 70-79)
- Culminating experience as described above

The Environmental Earth Sciences Major

Prerequisites: As described above

Required courses:

- One Data Analysis course (EARS 10-19)
- Field requirement as described above
- One Quantitative Analysis course (EARS 60-69)
- One Advanced Topics course (EARS 70-79)
- At least two additional courses that are either Earth Sciences courses numbered 30 or higher or relevant courses in Geography, Environmental Studies, Engineering, Chemistry or Biology as described above.

Culminating experience as described above

****Advisories for Majors****

First-year students planning a major in Earth Sciences or Environmental Earth Sciences are advised to complete the prerequisite courses, exclusive of EARS 40, by the end of their sophomore year.

Students contemplating a professional career in earth sciences are advised that:

1. Training at the Master's level or above is becoming increasingly necessary.
2. Most graduate schools have minimum entrance requirements equivalent to MATH 3 and MATH 8, CHEM 5-6, and PHYS 3-4 or PHYS 13-14. Minimal expectations for Earth Sciences preparation include material taught in EARS 40, EARS 51, EARS 52, EARS 58, and EARS 59.

The Earth Sciences Minor

Prerequisites: As described above

Required courses: Four Earth Sciences courses numbered above 10, of which three must be numbered 30 or higher.

The Environmental Earth Sciences Minor

Prerequisites: As described above except EARS 40 not required

Required courses: A total of 5 courses in addition to the prerequisite courses is required for the Environmental Earth Sciences minor. Three or more of these must be in Earth Sciences. The Earth Sciences courses must be numbered greater than 10; of these, two courses must be Core Methods and Concepts (EARS 30-59) and one must be numbered 60 or above (Quantitative Analysis of Earth Systems or Advanced Topics). Up to two of the five

required courses may be relevant courses in Geography, Environmental Studies, Engineering, Chemistry or Biology as described above.

The Modified Major

Modified Major with Earth Sciences as the primary department (in addition to the general rules in the Regulations section of this catalog.)

Prerequisites: As described above

Required Courses: six courses, of which three satisfy the Field requirement listed above. Of the other three, all must be above the introductory level (numbered above 10) and two must be numbered above 30 (Core Methods and Concepts, Quantitative Analysis, or Advanced Topics courses).

In addition, fulfill the culminating experience requirement as described above.

Modified Major with Earth Sciences as the secondary department(in addition to the general rules in the Regulations section of this catalog.)

Prerequisites: As described above

Required Courses: Four courses numbered 10 or above, at least one of which must be a Core Methods and Concepts course (EARS 30-59) and at least one of which must be a Quantitative Analysis or Advanced Topics course (EARS 60-79).

Modified Major with Environmental Earth Sciences as the primary department (in addition to the general rules in the Regulations section of this catalog.)

Prerequisites: As described above

Required Courses: six, of which three satisfy the Field requirement listed above. Of the other three, all must be above the introductory level and one may come from a third department (neither the primary nor secondary department); relevant courses in Geography, Environmental Studies, Engineering, Chemistry or Biology are described above.

In addition, fulfill the culminating experience requirement as described above.

Modified Major with Environmental Earth Sciences as the secondary department(in addition to the general rules in the Regulations section of this catalog.)

Prerequisites: As described above

Required Courses: four courses numbered 10 or above, at least one of which must be a Core Methods and Concepts course (EARS 30-59) and at least one of which must be a Quantitative Analysis or Advanced Topics course (EARS 60-79). At most one of these courses may come from a third department (neither the primary nor the secondary

department); relevant courses in Geography, Environmental Studies, Engineering, Chemistry or Biology are described above.

Earth Sciences Honors Program

A candidate for the Honors Program in Earth Sciences must satisfy the College requirements of at least a 3.0 (B) overall grade point average and at least a 3.0 (B) grade point average in the major at the beginning of senior year. Those students who a) enroll in and satisfactorily complete Earth Sciences 89, b) satisfactorily complete and submit a written senior thesis and c) have a 3.3 (B+) average or higher in the 8 courses constituting their major will earn Honors or, in appropriate cases, High Honors, in Earth Sciences at the end of senior year. High Honors will be granted only by vote of the Department faculty on the basis of overall academic performance including both classroom and independent work. Note: enrollment in Earth Sciences 89 in and of itself does not constitute admission to the Honors Program, nor does completion of a senior thesis guarantee the awarding of Honors.

EARS - Earth Sciences - Undergraduate Courses

To view Earth Sciences Undergraduate requirements, click here. (p. 250)

To view Earth Sciences Graduate requirements, click here. (p. 929)

To view Earth Sciences Graduate courses, click here. (p. 930)

EARS 1 - How the Earth Works

Instructor: Meyer, Stroup

This course introduces the principles of physical geology by describing the Earth's components and analyzing the processes that control its evolution. Mountain ranges and deep sea trenches, volcanism and earthquakes, surficial and deep-seated geologic processes provide the evidence we will use to interpret the Earth's makeup and history. Earth resources, geologic hazards, and environmental protection will be discussed in connection with a variety of general geologic topics.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SLA

EARS 2 - Evolution of Earth and Life

Instructor: Barnes

The presence of life on Earth potentially makes it unique in this solar system. The reasons that life emerged, persisted, and evolved on Earth are tied to Earth's geochemical and geophysical processes, such as the rock cycle and carbon cycle, which have been active on Earth since its formation 4.5 billion years ago. By examining how the biosphere has interacted with key geochemical and geophysical processes over this time, this course investigates how the evolution of the biosphere and geosphere has been a synergistic process throughout the entire history of the Earth that continues today.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

EARS 3 - Elementary Oceanography

Instructor: Nakayama

Oceanography is one of the studies in which natural processes are investigated with interdisciplinary approaches by scientists of a wide range of specialties. Physical, chemical, biological and geological processes in the oceans and their interactions are studied in this course. Students will gain appreciation of the complexity of the ocean as a natural system and necessity of interdisciplinary to investigate it. Oceans as a source of resources, as a fundamental part of the global climate engine, as a book of Earth's environmental history, and as a bed of the origin of life are discussed. Use and abuse of ocean resources and associated environmental problems, such as ocean water pollution, over-fishing and whaling are also discussed.

Cross-Listed as: ENGS 03.10

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

EARS 5 - Natural Disasters and Catastrophes

Instructor: The Staff

This course will examine several different kinds of natural hazards, including volcanic eruptions, earthquakes, floods, hurricanes, and meteorite impacts. We will attempt to understand the reasons for the occurrence of these events, the reasons for the wide variations in our ability to accurately predict them, and the role of the scientist in broader societal issues relating to disaster preparation, forecasting events, and damage and cost mitigation.

Offered: Summer.

Degree Requirement Attributes: Dist:SCI

EARS 6 - Environmental Change

Instructor: Stroup

This course will investigate the science of natural and human induced environmental change on a global scale. The Earth has never existed in a pristine balanced state, and an understanding of pre-industrial changes in the Earth's environment provides important information that we can use to interpret current environmental change. Topics that will be discussed include: the evolution of the atmosphere, global temperature variation, sea level change, atmospheric trace gases and global warming, stratospheric ozone, acid rain and tropospheric ozone, human migration and landscape development, and global catastrophes.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

EARS 6.05 - Modeling the Earth

Instructor: Morlighem

This course focuses on modeling the behavior of the Earth as a coupled system. Students will learn to represent physical, chemical, and biological processes in formal, algebraic fashion, and how to organize and create computer models that implement these expressions. Students will use the STELLA graphical modeling environment, which allows the construction of models with varying levels of complexity. Modeling skills will be developed and applied throughout the course, including lectures, homework, and exams. The modeling will focus on simulating natural processes in the Earth system, such as exchanges of mass and energy, and the course will provide the student with an understanding of how the various parts of the Earth system evolve and interact. The scientific method will be introduced, the students will learn about fundamental physical laws and principles governing the behavior of natural systems, and they will be exposed to various natural phenomena relevant to Earth-system dynamics.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 07.06 - First-Year Seminars in Earth Sciences

Instructor: Barnes

Writing Seminar

Offered: Winter.

EARS 8 - Carbon Sequestration: Opportunities and Challenges

Instructor: Sharma

Global warming and ocean acidification resulting from the rise in atmospheric carbon dioxide (CO₂) are a serious threat to the modern civilization and future generations. A transition to a low carbon economy remains in distant future. Effective climate change mitigation requires urgent reductions of CO₂ emissions and a portfolio of strategies

for sequestering CO₂. The intent of this course is to introduce geochemical principles that are being investigated to sequester CO₂ already present in the atmosphere or that is released to the atmosphere by point sources such as coal-fired power plants. We will first focus on the scale of the problem and then study the science behind the proposed strategies that could reduce atmospheric carbon dioxide. The course will draw from readings of primary literature in the diverse fields of mineralogy, petrology, geochemistry, and oceanography. These will be augmented by weekly student-led discussions with researchers in these fields. The course will conclude with a general discussion of issues of scaling and environmental impacts of the CO₂ removal approaches and the way forward. Not open to students who have received credit for EARS 010.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SCI

EARS 9 - Earth Resources

Instructor: Sharma

The over-arching goal of this course is to make students—many of them future leaders in their fields—keenly aware of how the foundation and progress of society are based on the utilization of the earth resources. The fact that such resources are finite and unevenly distributed around the globe has been a major driver for not only human exploration and innovation but also wars. Also, the exploitation of earth resources has profoundly altered the earth's natural geochemical cycles with ramifications to our health, security, economy and well-being. We will discuss these issues along with the origin of Earth resources.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

EARS 12 - Big Data Science in Hydrology

Technological advances that facilitate the routine collection of terabytes of data measuring Earth's environment have resulted in the exponential growth of high-resolution hydrological digital databases spanning wide spatial and temporal dimensions. To take advantage of these new databases, hydrologists are increasingly using new tools developed for "big data" science to discover, manage, and analyze earth's ever-changing hydrology. This course is an introduction to the methods and tools of big data science in hydrology, particularly environmental statistics and the R programming language, with application to understanding Earth's hydrology at the local and regional scale. Topics include quantitative analysis of the hydrologic cycle, floods, droughts, and surface water quality. Prior computer programming experience is helpful, but not required.

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

EARS 13 - Introduction to Computational Methods in Earth Science

Instructor: Keller

This course aims to provide students with a hands-on introduction to the use and analysis of large, open datasets in the Earth Sciences. Along the way, we will introduce (in lab) some of the basic concepts of programming, as code literacy is increasingly obligatory in Earth Science. Prior programming experience may be helpful, but is not required. After introducing some basic concepts and tools, each student will work with the instructor to find a real data analysis question that can be addressed (as a final project) using the techniques learned in class.

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

EARS 14 - Meteorology

Introduction to the science of the atmosphere, emphasizing weather and weather forecasting, but including atmospheric variations on all scales from tornadoes, through the Little Ice Age, to Snowball Earth. We begin by discussing the properties of air and a few basic physical principles that control all atmospheric phenomena. These principles enable us to understand weather systems and associated fronts, clouds, winds, and precipitation, and to forecast weather using simple visual observations, satellite data and supercomputers. They are also the basis for the global circulation of air, energy and water, as well as the restlessly changing, diverse climate zones of our planet. Labs will provide hands-on experience observing the weather, building and using simple meteorological instruments, interpreting network data and satellite images, and forecasting the weather in real time. Additional topics may include air pollution, deliberate and inadvertent weather and climate modification, aviation and marine weather, and atmospheric chaos.

Degree Requirement Attributes: Dist:SLA

EARS 15 - Earth's Climate - Past, Present and Future

Instructor: The Staff

Understanding what drives climate change is one of the major scientific questions of the 21st century. Evidence for past (paleo) climate change provides essential information about Earth's climate system and the potential for future change. In this course, we will investigate paleoclimate changes and the chemistry and physics of the modern climate system. We will explore the mechanisms that influence climate on various time scales and the projections for future change. Laboratory projects will focus on collecting and analyzing data from local sites to develop paleoclimate records.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

EARS 16 - Hydrology and Water Resources

Instructor: Taylor

This course explores both the physical and technical dimensions of the Earth's surface water resources and water resource management to demonstrate that ensuring sustainable water resources requires not only a firm understanding of the physical-chemical characteristics of water, but also of its social arena. Focus is given to the array of environmental problems resulting from human impacts on water resources and contextualizes them both in terms of their physical underpinnings and in terms of social requirements driving the development of technical analyses. Topics include floods, droughts, domestic water supply, dams and dam removal, habitat degradation, snowmaking, and climate change. Weekly field studies of local streams and lakes are used to introduce hydrological field methods and to illustrate fundamental principles and phenomena. Field studies are complemented with technical analyses of water resources.

Offered: Winter.

Degree Requirement Attributes: Dist:TLA

EARS 17 - Analysis of Environmental Data

Instructor: Morlighem

Topics such as acid deposition, air and water pollution, water quality, acid mine drainage and climate change are used to introduce the fundamentals of environmental data analysis. Basic subjects include descriptive statistics, uncertainty, error propagation, hypothesis testing, regression, and experimental design. Advanced methods for spatial and time series data analysis are briefly introduced.

Prerequisite: One course in Earth Sciences and MATH 3 or permission of instructors.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

EARS 18 - Environmental Earth Sciences

Instructor: Taylor

This course takes an interdisciplinary approach toward understanding the Earth's present and past environments as systems controlled by natural processes and impacted by human actions. Environmental issues, such as global climate change, acid rain, ozone depletion, and water resources and pollution, are discussed in this context. In the process of developing this understanding, students will gain skills in collecting, interpreting, and reporting scientific data. This course does not emphasize environmental policies, but instead the scientific knowledge and arguments behind them. However, case studies will allow students to gain appreciation of the

complexity of scientific, social, cultural and political interactions surrounding local and global environmental issues and sustainability.

Prerequisite: Introductory course in Earth Sciences or a related field course recommended.

Offered: Fall.

Degree Requirement Attributes: Dist:TLA

EARS 19 - Habitable Planets

Instructor: Newton, Sharma

Is the Earth unique, or are there other planets in the universe which can support life? This question has been pondered for thousands of years, and humanity is now on the cusp of being able to answer this question. This course will examine the question of planetary habitability, focusing on the processes which made the Earth habitable, and the likelihood of finding other habitable planets in the universe. Topics to be covered include the creation of the elements, the formation of structure in the universe, planetary system formation, the habitability of Earth and other bodies in the solar system, the future habitability of Earth, and the prospects of finding habitable planets around other stars.

Cross-Listed as: ASTR 019

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

EARS 21 - Transforming the Energy System: Keeping the Lights on While Saving the Planet

This course will explore how transitioning to renewable energy systems is a necessary leverage point for addressing human-caused climate change, with a specific focus on how energy for electricity and heat is generated and used in New England. Through the collaboration of instructors from the Environmental Studies Program, the Irving Institute for Energy and Society, the Department of Earth Sciences and the Sustainability Office, students will gain an interdisciplinary perspective on New England energy systems and human-caused climate change, including 1) the economic, policy, and regulatory management and distribution of energy, 2) the environmental and societal benefits and impacts of these systems on people and the environment, 3) a scientific understanding of fossil fuel resource formation, extraction, refining and use, and 4) climate change attribution and predictions of future human-caused climate change. The course will culminate in a discussion of Dartmouth's own energy transition as well as regional- and national scale solutions for resolving the urgency of climate action with the current political, economic, and technological constraints governing the renewable energy transition.

Cross-Listed as: COCO 038 ENVS 021

Degree Requirement Attributes: Dist:TLA

EARS 32 - Macroevolution

Instructor: Peterson

Macroevolution focuses on the evolutionary process from the perspective of the species and through the lens of deep time. More specifically, it focuses on the issue of whether life is organized hierarchically, and if so, can selection occur at any/all of these other levels, in addition to the level of the organism. This course is especially well suited for discussion and question, as the definition of macroevolution, as well as its very existence, is under intense discussion by both microevolutionists and macroevolutionists alike. Topics covered include punctuated equilibrium, species-level selection, homology, and mass extinctions.

Cross-Listed as: BIOL 028, ANTH 50.46

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

EARS 33 - Earth Surface Processes and Landforms

Instructor: Penprase

This course is an introduction to geomorphology – the study of the mechanisms that shape the Earth’s surface. Students will learn about river, glacial, hillslope, and wind-driven processes, and the resulting landforms and landscapes they produce. We will also delve into how landscapes respond to and affect tectonics and climate, and the implications for understanding the history of the Earth’s surface and its future. The techniques and tools we use as geomorphologists range from direct observations to chemical, physical, mathematical, and isotopic approaches, all of which we will explore in this course. The processes we discuss are not confined to the Earth, and as such, we will also touch on the geomorphic evolution of other planetary bodies as well.

Not open to students who have received credit for GEOG 033.

Cross-Listed as: GEOG 17.01

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

EARS 34 - Earth’s Biogeochemical Cycles

This course is a survey of biogeochemical interactions among Earth’s crust, oceans, and atmosphere, including perturbations due to human activities. Particular attention is given to carbon, nitrogen, phosphorus, and sulfur biogeochemical cycles and the role of these cycles in applied environmental challenges including, for example, greenhouse warming of atmosphere from carbon dioxide and chlorofluorocarbons and the effects of inorganic and organic wastes in the marine and aqueous systems.

Prerequisite: CHEM 5 or 10 (may be taken concurrently) and one course from EARS 1-9 exclusive of EARS 7.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

EARS 35 - The Soil Resource

Instructor: Jackson

Soils are a critical natural resource; feeding our growing population depends fundamentally on soils; in fact, soils provide nutrients to all ecosystems. Agriculture and land management has increased soil erosion around the world, potentially influencing the history and fate of civilizations. In the modern era, this use is not sustainable; the physical and chemical degradation of soils far outpaces soil production. This course will explore the nature and properties of soils and examine how these processes occur in natural and human-influenced soils, and identify reasonable limits on what can influence the sustainable utilization of soils as a resource. We will begin by developing an understanding of the geologic, biologic, and chemical processes that lead to soil formation and the development of specific soil properties. The second portion of the course will examine the relationship between soils and underlying bedrock and overlying vegetation and the role of soils in ecosystems. The final section of the course will examine the situations in which soils are used to reduce the impact of human activities and the way in which humans can reduce their impact on soils: the importance of soils in septic tanks and leach fields; the use of soils as solid waste landfill caps and liners; the use of soils in the storage of hazardous wastes; and the conservation and management of soils.

Prerequisite: ENVS 2 or one course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9, or CHEM 5 and an advanced course from the environmental sciences or Earth Sciences; or permission of the instructor.

Cross-Listed as: ENVS 079

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 36 - Astrobiology

This course will explore the nascent field of astrobiology—study of life in the universe. Students will be introduced to the various research aspects in the fields of biology, chemistry, geology, planetary science, and astronomy that contribute to our current understanding of astrobiology. Scientific hypothesis testing and evolution will be a course focus as technological innovation continues to shape the field. Together we will work to address the questions: How does life begin and evolve? Is there life beyond Earth and, if so, how can we detect it?

Degree Requirement Attributes: Dist:SCI

EARS 37 - Marine Geology

This course investigates the geology, processes, and paleoarchives hidden beneath the world's oceans. The course material is necessarily broad, covering marine geography, plate tectonics, active and passive margins, coastal processes, ocean processes, sediment processes, and climate interactions. We will investigate a few specific concepts (case studies) in detail to relate the course material to current events and the recent scientific literature. A key objective of this course is for you to use case studies to practice how to critically evaluate and synthesize published marine geological data, and to construct, in writing, sound, logical, succinct arguments based on your analyses. We do not have a lab for this course, but I will introduce you to marine geological field methods throughout the term.

Prerequisite: One course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9 or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

EARS 38 - Introduction to Sedimentary Systems

Instructor: Strauss

This course considers the evidence, preservation, and temporal record of environmental change as preserved in sedimentary rocks. The aim is to learn how to interpret the sedimentary record through an emphasis on depositional models, both modern and ancient – these will be examined in detail with an eye toward interpretation of depositional processes and paleoenvironmental analysis. Short field exercises and group projects are a significant part of this course and are designed to improve your ability to make observations and cogently describe and interpret sedimentary structures and successions in the field.

Prerequisite: One course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9 or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

EARS 39 - Remote Sensing of the Environment

This course is an introduction to remote sensing of the environment – the acquisition of information about the earth from a distance, typically via spaceborne sensors. In this course, we will examine all components of the remote sensing process, from the electromagnetic radiation environment, to sensor design and data collection, to image interpretation and analysis. Not open to students who have received credit for EARS 65.01.

Cross-Listed as: GEOG 50.04

Degree Requirement Attributes: Dist:TAS

EARS 40 - Materials of the Earth

Instructor: Renshaw, Meyer

This course will prepare students for the Earth Sciences FSP and for further study in Earth Sciences. It consists of two integrated modules, structural geology and earth materials. In the Structural Geology component, students will learn how to observe and analyze the arrangement of rock units in order to gain insight into the chronology of events occurring in the geological past and the implications for kinematics (e.g., plate tectonic history) and dynamics (e.g., origin and evolution of tectonic forces). Practical skills include making and analyzing geological maps, constructing cross-sections, and analyzing three-dimensional geological data and geometries. In the Earth Materials component, students will develop an understanding of the nature and formation of solid-earth's raw materials in the context of earth's major tectonic, petrologic, hydrologic and biogeochemical systems. This will involve an understanding of the nomenclature of materials and their textures, and systems of classification, the physical and chemical properties of earth materials, associations and occurrences, and an understanding of processes of formation of earth materials resources. Field (hand-and outcrop-scale) and petrographic microscope-based laboratory procedures will be introduced. Field excursions.

Prerequisite: One course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9. CHEM 5 recommended.

Offered: Summer.

Degree Requirement Attributes: Dist:SLA

EARS 45 - Field Methods: Techniques of Structural and Stratigraphic Analysis

Instructor: The Staff

The study of geologic phenomena and field problems associated with the solid Earth. The analysis of outcrop evidence of the structural, stratigraphic, and geomorphic history of selected regions. The integrated use of geologic instruments, topographic maps, aerial photography, and satellite imagery to enable geomorphic and structural analysis. Because of the nature of this course, class meetings, assignments, readings, and reports are scheduled irregularly.

Prerequisite: EARS 40. Must be taken concurrently with EARS 46 and EARS 47.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 46 - Field Methods: Environmental Monitoring

Instructor: The Staff

The study of surface processes and products through the integration of geomorphic, hydrologic, and environmental chemistry techniques. The analysis of field evidence of the interaction between the atmosphere, hydrosphere, and lithosphere at the Earth's surface. The integrated use of geologic instruments, topographic maps, aerial photography, and satellite imagery to enable geomorphic and environmental assessment. Because of the nature of this course, class meetings, assignments, readings, and reports are scheduled irregularly.

Prerequisite: EARS 40. Must be taken concurrently with EARS 45 and EARS 47.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 47 - Field Methods: Resource and Earth Hazards Assessment

Instructor: The Staff

Field studies of rock associations, geologic structures, active and fossil volcanism, and mineral resources in the western United States. The interrelationship between upper crustal processes and earth materials in the development of landforms and landscapes, and rock and mineral provinces. The integrated use of geologic instruments, topographic maps, aerial photography, and satellite imagery to enable resource assessment. Because of the nature of this course, class meetings, assignments, readings, and reports are scheduled irregularly. EARS 45, EARS 46, and EARS 47, the Earth Sciences Off-Campus Study Program (D.F.S.P.), require considerable logistical planning for proper execution. It is therefore imperative that Earth Sciences majors planning to be enrolled in this program register in the Off-Campus Programs Office (44 N. College Street, Hinman 6102) no later than February 1 of the sophomore year. All prerequisites for EARS 40 must be met by the end of spring term of the sophomore year; failure to complete prerequisites may cause a student to be denied permission to participate in the Off Campus Program. Enrollment may be limited. Preference given to Earth Science majors.

Prerequisite: EARS 40. Must be taken concurrently with EARS 45 and EARS 46.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 51 - Mineralogy and Earth Processes

Instructor: Chaffee

Crystallography, mineral chemistry, and physical properties of the principal rock forming minerals, especially the silicates. In the laboratory, technique of hand identification, the petrographic microscope, and X-ray diffraction are mastered. The course culminates with three case studies that relate mineralogic change to the geologic

cycle, such as in regional metamorphism during mountain building; the origin of petroleum; and soil formation.

Prerequisite: EARS 40 and CHEM 5 or permission of instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

EARS 52 - Structural Geology

This course examines various aspects of regional-scale geologic processes and structures, or tectonics. Topics of study include the history of relevant geologic thought, rock deformation, the origin and evolution of mountain belts, the growth of continents and ocean basins, the causes of earthquakes and volcanic eruptions, and tectonic geomorphology. Students learn that tectonic analysis requires the synthesis of a wide range of information in an attempt to reconstruct the history and driving dynamics of the large-scale, geologic architecture of a particular region. Format: faculty- and student-led presentations, and discussion of selected articles from the peer-reviewed literature.

Prerequisite: EARS 40 or equivalent or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

EARS 58 - Stratigraphy and Sedimentary Petrology

This is a combined lecture, laboratory, seminar, and field-based course focused on the origin, diagenetic modification, and depositional history of sedimentary rocks. The course will cover theoretical and practical aspects of sedimentary petrology and stratigraphy that are critical to understanding the record of ancient climate and environments, as well as the tectonic development of sedimentary basins. In addition to studying hand specimens and utilizing standard petrographic microscopy, we will also introduce some of the other major instrumental methods used in the field today (e.g., isotope systems, provenance analyses, X-ray diffraction, etc...). This course will culminate in an optional multi-day field excursion to a sedimentary basin to complete a field-based research project.

Prerequisite: EARS 40, 45, 46, and 47. EARS 38 is recommended.

Degree Requirement Attributes: Dist:SLA

EARS 59 - Igneous and Metamorphic Petrology

Instructor: Keller

An overview of high-temperature geochemistry with particular emphasis on the processes that form igneous and metamorphic rocks. We will learn how a combination of rock fabric, texture, mineralogy, phase equilibria, and

chemical composition are used to investigate the origin and evolution of rocks. We will also examine the relationship between rock forming and tectonic processes and the origin of the Earth's crust. The course consists of lectures and laboratory; the latter includes examination of a large number of rocks in hand-samples and their corresponding thin-sections. Additionally, we will have a week-end field trip to the metamorphosed igneous rocks of the Adirondack Mountains.

Prerequisite: EARS 40 or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

EARS 60 - Earth System Modeling

What will Earth look like in 2100? Scientists use the world's most sophisticated computer programs—climate models—to answer such questions. This applications-based class introduces the theory and practicalities of process-based modeling for climate science. We will employ a range of models, from 0-dimensional to fully-coupled global-scale Earth System Models. Focusing on climate change, we will learn the potentials and pitfalls of modeling complex systems and how to evaluate models and their societal relevance.

Cross-Listed as: GEOG 060

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

EARS 62 - Geochemistry

The intent of this course is to further our understanding of the Earth by utilizing the principles of chemistry. We will place particular emphasis on how to obtain quantitative information about the processes controlling the composition of Earth's mantle, crust, ocean and atmosphere. We will examine how abundances of elements and isotopes and chemical equilibria can provide such information.

Prerequisite: CHEM 5 and CHEM 6 or equivalent or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

EARS 64 - Geophysics

Instructor: Sonder

Geological methods (mapping and analysis of samples collected at the earth's surface) tell us much about processes occurring near the earth's surface, but very little about deeper parts of the earth. Almost all surface rocks come from depths of no more than a few tens of kilometers, yet 99% of the Earth is deeper than that! How can we learn about parts of the Earth to which there is no hope of ever traveling and from which we have no samples? Geophysics gives us the tools. In this course we

will use the principles of gravity, magnetism, seismology, and heat transfer to "journey to the center of the Earth." Laboratory sessions will be focused more locally; we will collect geophysical data from the Hanover area and interpret them to learn about the rocks hidden below the Earth's surface.

Prerequisite: MATH 3 or permission of the instructor. PHYS 3 (or PHYS 13) and MATH 8 are helpful but not required.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

EARS 65 - Advanced Remote Sensing

Instructor: Koepfel

Advanced Remote sensing involves the acquisition of information about the earth from airborne and satellite sensors. Both vector (GIS and GPS) and raster (image) data will be treated with an emphasis on their interpretation for various geographic and earth science applications. A significant part of the course will be devoted to practical exercises; there will be a final project involving the computer processing and interpretation of these data.

Prerequisite: One course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9, or GEOG 3.

Cross-Listed as: GEOG 051

Offered: Fall.

Degree Requirement Attributes: Dist:TLA

EARS 65.01 - Remote Sensing of the Environment

This course is an introduction to remote sensing of the environment – the acquisition of information about the earth from a distance, typically via spaceborne sensors. In this course, we will examine all components of the remote sensing process, from the electromagnetic radiation environment, to sensor design and data collection, to image interpretation and analysis. Not open to students who have received credit for EARS 65/GEOG 51.

Cross-Listed as: GEOG 50.04

Degree Requirement Attributes: Dist:TAS

EARS 66.01 - Environmental Transport and Fate

Introduction to movement and transformation of substances released into the natural environment. Fundamentals of advection, dispersion, and reaction. Aggregation and parameterization of various mixing processes leading to dispersion at larger spatial and temporal scales. Importance of inhomogeneity, anisotropy, and stratification in natural media. Basic principles are illustrated by application to atmospheric, ground water, river, estuarine, coastal, and oceanic pollution problems.

Case studies include urban smog, acid rain, Chernobyl fall-out, and stratospheric ozone depletion.

Cross-Listed as: ENGS 043

Degree Requirement Attributes: Dist:TAS

EARS 67 - Environmental Geomechanics

Instructor: Palucis

The study of our Earth environment requires an understanding of the physical processes within and at the surface of the Earth. This course explores the physics of key Earth surface processes, including volcanic eruptions, landslides and debris flows, and turbulent flows in rivers and the sea. Advanced quantitative concepts are developed through applications in geomorphology, sedimentology, oceanography, and volcanology. Format: faculty lectures, challenging weekly problem sets, independent project, final exam.

Prerequisite: MATH 23 or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

EARS 70 - Glaciology

This course explores the unique nature and scientific importance of glaciers, ice sheets, snow, and frozen ground in the Earth system, collectively referred to as the Cryosphere. We explore how glaciers work, and how they interact with the climate system. We investigate how ice behaves from the molecular scale to the continental scale and compare and contrast this behavior to that of snowpacks. The practical skills and techniques used by glaciologists to study glaciers and ice sheets are considered along with transferable skills in advanced quantitative data analysis, including time series analysis and computational modeling of physical processes, with emphasis on practical application to real data.

Prerequisite: PHYS 3 and MATH 3, or equivalent. EARS 33 is recommended.

Degree Requirement Attributes: Dist:QDS

EARS 71 - River Processes and Watershed Science

Role of surface water and fluvial processes on landscape formation; magnitude and frequency relationships of flood flows; soil erosion, sediment transport, and fluvial landforms. This course examines the links between watershed scale processes such as weathering, denudation, and mass wasting on the supply of water and sediment to stream channels on both contemporary and geologic timescales and further evaluates the role of climate change on the magnitude and direction of shifts in watershed and fluvial processes. Not open to students who have received credit for GEOG 035.

Prerequisite: EARS 16 or EARS 33 or BIOL 23 or permission of the instructor.

Cross-Listed as: GEOG 62.01

Degree Requirement Attributes: Dist:SLA

EARS 73 - Environmental Isotope Geochemistry

This course examines the use of stable, radiogenic and cosmogenic isotopes as tools to study Earth processes, particularly processes that are environmentally important. The theory of isotope principles are introduced followed by their applications in investigating Earth's systems. The main applications include studies of climate change, hydrological processes, biogeochemical cycles, Earth's early environment, origin of life, erosion and mountain building. Labs provide hands on opportunities for students to learn mass spectrometry and isotopic data collection and interpretation.

Prerequisite: CHEM 5 or permission of instructor.

Degree Requirement Attributes: Dist:SLA

EARS 74 - Soils and Aqueous Geochemistry

Instructor: Lacroix

An overview of the basic principles that govern soil chemistry, with particular emphasis on the composition and mineralogy of soils, the chemical processes that function within soils, the reactions that describe the fate of elements (both nutrients and contaminants) within soils and soil solutions. The majority of the course will cover equilibrium soil processes. Occasional field trips will concentrate on the collection of soils and their characterization.

Prerequisite: CHEM 5 and EARS 62 or equivalents, or permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

EARS 75 - Quaternary Paleoclimatology

Evidence for past (paleo) climate change provides essential information about Earth's climate system and the potential for future change. This course focuses on understanding paleoclimate changes during the Quaternary Period such as glacial-interglacial variability, rapid climate changes, and the recent "stable" climatic conditions of the Holocene epoch. We will rely on published scientific data to examine these various topics and critically evaluate hypotheses for mechanisms of climate change.

Prerequisite: EARS 15 or ENGS 172 or equivalent or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

EARS 76 - Advanced Hydrology

Instructor: Palucis

A survey of advanced methods used to analyze the occurrence and movement of water in the natural environment. The watershed processes controlling the generation of runoff and streamflow are highlighted, and used to explore the transport and fate of sediment and contaminants in watersheds. Throughout the course the ideas and concepts are explored through the primary literature, with emphasis given to methods of observation, measurement, data analysis, and prediction.

Prerequisite: MATH 3, and one of EARS 16 or EARS 33 or BIOL 53 or ENGS 43 or permission of instructor.

Cross-Listed as: ENGS 042

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

EARS 77 - Environmental Applications of GIS

Instructor: Chipman

This course uses geographic information science (GIS) to analyze environmental systems. Students will learn advanced GIS techniques such as topographic analysis, spatial modeling, spatial statistics, remote sensing, and spatiotemporal data analysis. These methods will be explored through a wide variety of applications, including watershed hydrology, water quality, vegetation, land use/land cover, climate, wildlife ecology, and natural hazards. In lectures, laboratory exercises, and class projects, students will gain experience in designing and implementing GIS-based solutions to environmental problems.

Prerequisite: GEOG 50 or GEOG 51/EARS 65, or permission of the instructor.

Cross-Listed as: GEOG 077

Offered: Winter.

Degree Requirement Attributes: Dist:TLA

EARS 78 - Climate Dynamics

This course focuses on the physics that govern the circulation of the atmosphere and ocean, and the dominant patterns of climate variability that we observe today. We explore global-scale atmospheric dynamics that explain why the atmosphere behaves as observed. We also use the scientific literature to investigate the signature and causes of regional ocean-atmosphere variability including the El Nino- Southern Oscillation, monsoons, and North Atlantic Oscillation, and the influence of climate change on these patterns.

Prerequisite: Math 8 or equivalent and EARS 14 or EARS 15 or equivalent or Instructor Permission.

Degree Requirement Attributes: Dist:SCI

EARS 79 - Special Topics

EARS 79.01 - Special Topics Seminar

EARS 79.02 - Community Partnerships for Climate Resilience 1

Instructor: Renshaw

Student teams will partner with a diverse group of Upper Valley organizations facing climate change impacts to propose and develop concrete climate resilience projects. They will learn about adaptation strategies for challenges like extreme rainfall, flooding, heat, tick-borne diseases, and wildfires, as well as effective community partnership practices. This course emphasizes project design and proposal, with an option to continue in the spring for project implementation. Not open to first-year students.

Offered: Winter.

EARS 80.04 - Special Topics - Data Analysis

Offered occasionally to provide a course in a topic which would not otherwise appear in the curriculum.

EARS 80.02 - Astrobiology

This course will explore the nascent field of astrobiology—study of life in the universe. Students will be introduced to the various research aspects in the fields of biology, chemistry, geology, planetary science, and astronomy that contribute to our current understanding of astrobiology. Scientific hypothesis testing and evolution will be a course focus as technological innovation continues to shape the field. Together we will work to address the questions: How does life begin and evolve? Is there life beyond Earth and, if so, how can we detect it?

Degree Requirement Attributes: Dist:SCI

EARS 80.03 - Technical Computation in the Earth Sciences

Driven by increasing data availability, processing power, and model sophistication, scientific or technical computation has become increasingly central to basic research in the Earth Sciences. This course aims to provide Earth Science students with a working introduction to scientific computation including (1) hands-on experience applying common, widely applicable sampling and inversion algorithms to classic Earth Science problems; (2) an awareness of the factors limiting efficiency and scalability when working with large datasets; and (3) an introduction to some of the tools and best practices of software engineering used to produce more robust, maintainable software.

Degree Requirement Attributes: Dist:SCI

EARS 80.04 - Community Partnerships for Climate Resilience 2

Instructor: Osterberg

The course is the second of a two term sequence created to give you the foundational scientific understanding to dive deeply into a meaningful project related to climate resilience, to collaborate as a multidisciplinary team, and to gain experience in the skills needed tackle a real-world challenge that makes a tangible impact outside the classroom. In this second term of the course, you will continue to work with your community partner to begin the implement the climate resilience project you started during winter term. While the project likely will not be fully implemented by the end of the spring term, your idea should be sufficiently advanced to be far more than a concept sketch or slide presentation. The aim is implementation with a measurable impact. Ideally, your project will help your partner organization build on your work well beyond the second term; perhaps leading to a presentation to review board, an application for funding the project or a larger initiative. The format of your project's output can be a physical product, an app, a program, a service, an experience, or any other format relevant to the challenge. EARS 79.02 and EARS 80.04 are intended to be taken in sequence in the same academic year.

Offered: Spring.

EARS 86 - Special Projects

Instructor: Sonder

Advanced study in a particular field of the earth sciences under the supervision of a faculty advisor. Conclusions from the project must be submitted in a suitable oral or written report. Does not satisfy the culminating experience requirement.

Offered: Fall, Spring, Summer, Winter.

EARS 87 - Special Projects: Senior Culminating Experiences

Instructor: Sonder

A 1-term project involving independent work under the supervision of a faculty advisor. Project planning, in consultation with the advisor, should be completed in advance of the term in which the work is to be done. Conclusions from the project must be submitted in a suitable oral or written report. Serves in satisfaction of the culminating experience requirement but does not carry eligibility for Honors in the major. Requires attendance at weekly earth sciences research talks during Winter and Spring terms of the senior year.

Prerequisite: Sufficient training in the area of the project and faculty approval.

Offered: Fall, Spring, Summer.

EARS 88 - The Earth System

Instructor: Poage

A culminating experience for seniors choosing not to pursue independent research, offered concurrently with EARS 201. We review regional geology of the Appalachians in the field, and then review key components of the Earth System, including the origin of our planet and the origin of life, plate tectonics, atmospheric and ocean circulation, Earth surface processes, and environmental change. Format: local field trips, faculty- and student-led presentations, and discussion of selected articles from the peer reviewed literature.

Prerequisite: Earth Science major and fourth-year standing.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

EARS 89 - Thesis Research I

Instructor: Sonder

Research related to completion of a senior thesis. The initiative to begin a senior thesis project should come from the student, who should consult an appropriate faculty member. Conclusions from the research must presented in both written and oral form. Attendance at weekly earth sciences research seminars is required during Winter and Spring terms. Both EARS 89 and EARS 90 may be taken for course credit, but only one may count toward the major.

Students should register for EARS 89 during fall or winter of their senior year; if they desire a second course credit for thesis work, they should register for EARS 90 in a subsequent term. They may continue with their thesis research into a third term but cannot register for a third course credit. Normally a grade of "ON" (ongoing) will be given at the end of the term in which they registered for EARS 89; a final grade will replace the "ON" upon successful completion of the senior thesis. Serves in satisfaction of the culminating experience requirement.

Prerequisite: permission of a faculty research advisor.

Offered: Fall, Winter.

EARS 90 - Thesis Research II

Instructor: Sonder

Continuation of research related to completion of a senior thesis. Students who have previously registered for EARS 89 register for this course. They may continue with their thesis work into a third term, but cannot register for a third term of course credit. Attendance at weekly earth sciences research seminars is required during Winter and Spring terms.

Students are awarded one course credit for successful completion of this course. A final grade will replace the "ON" for both EARS 89 and EARS 90 upon successful completion of the senior thesis.

Offered: Spring, Winter.

EARS 179.1 - Special Topics Seminar**East European, Eurasian, and Russian Studies**

Chair: Stuart Finkel

Professor: L. Patyk; Associate Professors: V. Apresyan, S. Finkel, M. Gronas, V. Somoff; Assistant Professor: T. Filimonova; Visiting Professor: L. Kolomiyets; Lecturer: N. Plagmann; Professor Emeritus: J. Kopper.

To view Russian Language and Literature courses, click [here](#) (p. 270).

Majors

1. The Major in East European, Eurasian, and Russian Studies.
 - a. Prerequisite: RUSS 3
 - b. Requirements: A total of ten courses, which must include two language courses above RUSS 3 and a course in the teens. Another East European, or Eurasian language studied independently may be substituted for Russian with the permission of the department faculty. Of the remaining seven courses, at least two must be within the EEER Department, and one course must fulfill the culminating experience. The Area Studies Major will include courses both from within the East European, Eurasian, and Russian Studies Department and from such departments as History, Government, Economics, and Music, that, together, provide a cogent study of one or more topics with a focus on the region. The major should be planned in consultation with the chair and the courses outside the department need to be approved by the chair. For the culminating experience, students may write a thesis (RUSS 87), or, with the approval of the department faculty, designate a course in the EEER Department that will serve to satisfy the requirement.
2. The Major in Russian.
 - a. Prerequisite: RUSS 28.
 - b. Requirements: RUSS 29; one course in the sequence 41–42–43; RUSS 71; two courses in the 30s which must include RUSS 31; and one culture course (numbered 10 through 19). In addition, majors must take four additional courses, for a total of 10. Those concentrating on language would select at least some of these four courses from the forties; those focusing in culture would select additional courses in the teens; and those interested primarily in literature would design a major with an emphasis on courses in the thirties. Two courses

from the LSA+ may be counted toward the major and counted as a culture course. The culminating experience requirement must be satisfied by completing RUSS 71 or RUSS 86. In addition, those writing an honors thesis will enroll in RUSS 87, and may also take RUSS 85 as part of their preparation for the thesis.

Minors

1. The Minor in Russian

Prerequisite: RUSS 3, or permission of the chair.

Minor courses: a total of six courses including

 - a. EEER 31, 32, or 33.
 - b. One or two of the following courses: EEER 10 - EEER 19.
 - c. Up to four other RUSS or EEER courses numbered 23 or higher, for a total of six courses beyond the prerequisite.
 - d. Students may count two of the LSA+ courses toward the minor.
2. The Minor in East European, Eurasian, and Russian Studies.

Prerequisite: *One* from EEER 10 through EEER 19.

Requirements: A total of six courses. Not more than two of these may be from the LSA+. Three other courses should be from EEER 30 and higher. Up to two courses may be from other departments or programs (History, Government, Geography, Jewish Studies, etc) with an Eastern European, Eurasian, and Russian Studies focus.

Honors Program

Seniors who give evidence of outstanding ability and who wish to pursue serious research on an independent project are invited to apply for honors work. Students must satisfy the minimum College requirement and must also meet two departmental requirements. First, they must have a grade average of 3.3 for all courses taken within the major. Second, they must have received at least an A- in an advanced course that emphasizes research and analysis.

Area studies majors may satisfy this second requirement with one of these courses, or, if the topic of the thesis is outside the area of language and literature, with a course from the academic area in which they intend to do research. Application is normally made by the third week of the fall term, with RUSS 85 taken in the fall and RUSS 87 in the winter. The thesis must be submitted no later than the third week of spring term. Further information is available from the department Chair.

Term Abroad

Dartmouth Advanced Language Study Program (LSA+) in the Baltic States (Baltic LEAP), also available as Baltic LEAP FSP (see Guarini website).

The Dartmouth Russian LSA+ Program is conducted jointly with Government and the Irving Energy Institute at Vilnius University in Lithuania and at Tartu University in Estonia. Applications for the summer program are due February 1. Those accepted for the program will sign up for EEER 25 and RUSS 22 and 23. Successful completion of the FSP will serve in satisfaction of the Summer Residence Requirement (even when taken in the summer following the first year or third year).

Prerequisite for the Russian LSA+ program: RUSS 1, RUSS 2, RUSS 3, or the equivalent, with a grade of no lower than B- in RUSS 3.

We recommend taking at least one EEER course from the teens (EEER 10, 13, 14, or 15) before embarking on the LSA+.

EEER - East European, Eurasian, and Russian Studies

EEER 10 - Understanding Russia

An examination of Russia as a cultural, national, and historical entity part of and yet apart from both Europe and Asia. Russia is a continental power of vast proportions whose traditions, character, national myths, and forms of political organization often seem a mirror-image to those of the United States. After a brief survey of Russian history, the course will examine certain determinants of Russian culture, including Christianity, multinationalism, and the status of Russian civilization on the periphery of Europe. The course will then deal with the art, music, and popular literature of Russia, and conclude by examining certain contemporary issues, including the complex coexistence of Russian and Soviet culture. Open to all classes.

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:TMV; WCult:CI

EEER 11.04 - Topics in Music History: Russian Music

The objective of this course is to give the student an overview of Russian music in order better to understand the cultural, religious, and political history of Russia's past 1,000 years and to position the student's ongoing mastery of this history within a larger context. Questions that emerge from this course will find echoes in current cultural, religious, and political issues, and students will be directed to explore these intersections in class discussions and coursework.

Cross-Listed as: MUS 40.05

Degree Requirement Attributes: Dist:ART; WCult:W

EEER 12 - Imagining Siberia

This course examines the geographical and cultural space of Siberia through literature, film, journalistic, historical and scholarly writing. Among its central themes are the colonization of Siberia, integration of indigenous Siberians into Russian life; indigenous political and environmental activism; Siberia as a place of exile (imperial and Soviet); Siberia as a site of socialist construction; the effect of industrial development on ecology, indigenous practices, as well as Siberia's wider population; climate change

Degree Requirement Attributes: Dist:SOC; WCult:NW

EEER 13 - Slavic Folklore: Vampires, Witches and Firebirds

In this course, we will discuss a variety of genres from Russian folklore. As we move from the familiar genre of the riddle to the often mystifying beliefs and rituals of the ancient Slavs and then to the fairy tale, comfortingly familiar from childhood, we will learn to not only recognize the richness and density of texts that may initially seem uncomplicated but also to discern the patterns and meanings behind the apparently exotic narratives and behaviors. By thoroughly studying one of the world's richest oral traditions, Slavic folk life and folklore, we will acquire the tools and techniques necessary for collecting, documenting, and interpreting folklore -- which is perhaps the most truly international of all arts. The course is based on materials in Russian and East European cultures, but also draws from other traditions. Open to all classes

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

EEER 14 - The History of Russian and East European Film

An interpretive history of Russian, Soviet, Post-Soviet and Central European film. Topics include: tsarist Russia and the psychological school of the silent film (Evgeny Bauer); the Revolution and the Golden Age of Soviet montage (Sergey Eisenstein and Dziga Vertov); Stalinism and film as an instrument of mind control and propaganda; late Soviet symbolist cinema (Andrey Tarkovsky); and contemporary Russian Film Noir. The course also touches upon Eastern/Central European film, including the Czech New Wave (surrealist animator Jan Svankmeyer) and the "post-Yugoslavian wave" (Emir Kusturica and Dusan Makoveev). In addition to regular weekly screenings, all films will be made available online in an experimental format: divided into separate short clips that will be used in class for in-depth analysis and close cinematic readings. The final project (done in groups) will be creative: you will make a video-parody or video-stylization of one of the studied films. Open to all classes.

Offered: Summer.

Degree Requirement Attributes: Dist:ART; WCult:W

EEER 15 - Russia and the West: From Early Times to Present Day

Instructor: Finkel

In its thousand-year history, Russia has occupied a unique place between Europe and Asia, and both Russian and foreign observers have wrestled with defining its place vis-à-vis western (European) civilization. This course will explore Russia's place in world history, examining the complex and evolving relationship of Russia and Europe, and the Soviet Union and the West, from the middle ages to the present. Particular emphasis will be given to the complex relationship of Putin's Russia with the United States today.

Cross-Listed as: HIST 92.06 RUSS 50.01

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

EEER 16 - The Door Opened: Women Writing in Eastern Europe

This course proposes a fresh take on 20th- and 21st-century literature and film by women from a wide range of national and linguistic backgrounds (including Hungary, Ukraine, Romania, Poland, the Soviet Union, Yugoslavia and elsewhere). We examine women's points of view on various topics and what media women prefer for telling stories about their lives and experiences. We also explore the problematic concept of "Eastern Europe," historically exoticized and feminized vis-a-vis its Western "big brothers."

Degree Requirement Attributes: Dist:INT or LIT;
WCult:CI

EEER 17 - Slavic Fairy Tales

In this course we will investigate the reasons why fairy tales are such enduring and powerful forces in our lives. Our special focus will be the incredibly rich body of traditional Russian folk and fairytales as well as their modern adaptations in the visual arts, music, literature, theater, and film.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 18 - Russian and East European Theater

This course is devoted to Russian drama and theater from the 19th through the 21st century. We will read eight plays that are central to the Russian literary and theatrical tradition and then discuss their most significant interpretations on both the Russian and the world stage. The meetings will be conducted in a non-traditional format. In our examination of the plays, we will attempt to model the process of stage production in accordance with the principles developed by Konstantin Stanislavsky-a

celebrated Russian director whose approach to theater transformed acting in Russia and beyond. The course will culminate in the production of a play by a Russian playwright which students themselves will cast, direct, and design. All readings are in English.

Cross-Listed as: THEA 018

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 19 - Modern Conspiracy: The Russian and American Conspiracist Traditions

Conspiracy narrative has come to dominate our national and international political discourse like no other time in modern history. It is therefore essential that we understand the operation of conspiracy narrative, its psychological allure and political function, and its devastating social consequences. In this course, we will investigate two national conspiracist traditions, the American and the Russian, and the parallel rise and stunning convergence of Russian and American conspiracism in our current political moment. In order to do so, we will inquire into the historical origins, the form, function, and effectiveness of conspiracist narratives in these two traditions in the 20th and 21st centuries. Ultimately we will approach conspiracy theories as ways of knowing, of penetrating and ordering complex and opaque realities. They are also powerful narrative weapons that imperil the shared truths on which cohesive societies are based. Our course texts include *The Master and Margarita* (Bulgakov), *The Crucible* (Miller), and *Libra* (DeLillo), *Ivan the Terrible Part II* (Eisenstein) *The Manchurian Candidate* (Frankenheimer) and *The Matrix* (The Wachkowskis) as well as literary and cultural studies of conspiracist narrative and ideation.

Cross-Listed as: COLT 63.02

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

EEER 21 - Baltic History, Culture & Regional Identity

This course, taught by the faculty member directing the Saint Petersburg program, introduces students to aspects of contemporary Russian culture through a variety of media, including literature and journalism, film, television, and art. The topic will vary from year to year, depending on the specialty of the faculty member. Credit for this course is awarded to students who have successfully completed the Dartmouth Foreign Study Program in Russia.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

EEER 24 - Baltic Energy Systems

The Baltic States -- Estonia, Latvia, and Lithuania -- are a cultural and commercial crossroads. They are also a living laboratory for navigating the complex pressures of transitioning to low-carbon, socially innovative energy systems. This course will explore social and technological

dimensions of energy transitions in the Baltics via two four-week modules, one based at Vilnius University in Lithuania and the other based at the University of Tartu in Estonia. The course will examine how the histories and futures of Baltic energy systems are shaped by their ties to Europe and their proximity to Russia, as well as how the Baltic states are transforming energy infrastructures and policies in response to urgent energy security and climate change challenges.

Cross-Listed as: GOVT 96.05

EEER 25 - Introduction to Baltic History and Culture

This course introduces the history and culture of the Baltic region, encompassing Estonia, Latvia and Lithuania, via two four-week modules, one based at Vilnius University in Lithuania and the other based at the University of Tartu in Estonia. The course explores history from the prehistoric period (including Baltic and Finno-Ugric folklore and mythology specific to the region) to the present day, with special emphasis on the period of nation-states (from the mid-nineteenth century and through the twentieth century). We examine how the histories and cultures of these countries have been shaped by their peculiar geographical and linguistic circumstances, and their proximity to both Europe and Russia/the Soviet Union. The course will meet twice a week for 1.5h. Each week will feature a different guest speaker, including university colleagues from Vilnius and Tartu universities, but also local experts on literature, cultural history (including Jewish history) and other areas.

Degree Requirement Attributes: WCult:CI

EEER 31 - The World as Word: 19th Century Russian Fiction

Instructor: Somoff

In his Philosophical Letters, Pyotr Chaadaev, a 19th century Russian intellectual, compared Russian history to the history of Western civilization. Chaadaev proclaimed that Russia had been cut off from the global community, belonged to no cultural system, and contributed nothing to the progress of the human spirit. Since then, Russian writers and thinkers have wrestled with Chaadaev's categorical verdict. One response from the 20th century poet Osip Mandelstam pointed out that Chaadaev had overlooked one singular contribution: the Russian language. "Such a highly organized, such an organic language is not merely a door into history, it is history itself." Taking Mandelstam's point to its logical conclusion, it is Russia's literature that becomes the Rosetta stone to the exceptional nature of the Russian experience. In this course, we will explore some of the texts that make up this Rosetta stone. While reading some of the most celebrated works from 19th century Russian fiction – texts by Pushkin, Lermontov, Gogol, Turgenev, Goncharov, Dostoevsky, Tolstoy, and Chekhov – we will attempt to account for the distinct character of Russian literature and its unique role in Russian history and culture.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 32 - Reading Red: 20th Century Russian Fiction

Instructor: Somoff

This course examines the major works of 20th century Russian literature. During that century, the people of Russia experienced a series of cataclysmic events including two World Wars; the overthrow of the 300-year-old Romanov dynasty and the triumph of the Bolshevik revolution; a Civil War; the mass trauma of collectivization; the Great Terror of Stalinism; and the collapse of the Soviet Union. As we read and discuss novels, stories, poems, and plays written by the Russian writers of that time, we will consider the correlations and tensions between the Russian sociohistorical reality and artistic expression. In addition to readings from literary and historical sources, we will watch films created by some of the most celebrated Russian filmmakers as well as the recent controversial documentary *The Soviet Story* produced by Latvian director Edvins Snore.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 33 - Dreams and Disasters: Contemporary Post-Soviet Cultures

This course focuses on Russophone literature, film, art and culture in the new millennium (from the early 2000s to the present day), incorporating a crucial discussion of the late Soviet period and the 1990s. Beginning with the collapse of the USSR, cultural life in Russia has been characterized by ceaseless change, but also the reemergence of old patterns, tendencies and problems. Much contemporary Russian literature and art is caught up in complicated negotiations with the Soviet past and its social, cultural and political institutions, while also looking ahead to an uncertain future. We will read novels, short stories, plays and poetry, watch films and discuss visual and performance art with a view to topics ranging from gender and sex, activism and violence, family and national identity, internet communication and other language problems.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 35 - Dostoevsky and the Problem of Evil

Dostoevsky laid bare the tragedy of human existence and probed the innermost recesses of the human psyche to show the terrifying isolation of a human being separated from God. Revolted by a world in which innocent children suffer, Dostoevsky tested the meaning to be found in Christianity, personal responsibility and human solidarity. This course examines his major novels, with particular emphasis on the artistic expression of his philosophical views. Those views will be examined in the context of

Russian intellectual and literary history. Readings include "Notes from Underground," "Crime and Punishment," "The Idiot," "Demons," and "The Brothers Karamazov." Taught in English. Open to all classes

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 36 - Leo Tolstoy's Art and Thought

From childhood to the end of his life, Tolstoy struggled to overcome his fear of death. As he himself put the problem, 'Is there any meaning in my life which the inevitable death awaiting me does not destroy?' In his quest for bulwarks against that fear, he studied the great philosophers and he examined closely the value system of the peasants. He found temporary relief in war and in marriage, but the definitive solution always eluded him. The evolution of this theme, and the formal devices by which Tolstoy expressed it in his prose, will be traced in the major novels, War and Peace and Anna Karenina. The course will conclude with a brief examination of the prose that Tolstoy produced after his conversion. Taught in English. Open to all classes.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 37 - The Good Doctor: Anton Chekhov and the Healing Arts

Instructor: Patyk

The great Russian writer, Anton Chekhov (1860-1904) is not only credited with pioneering the modern short story form and inventing modern theater, but he was also a beloved and practicing doctor. Chekhov's works can be read as a guide to the non-medical healing arts, including humor, adventure, compassion, and art itself. We will draw on his works, as well as on Chekhov's own epistolary advice, with the goal of learning "how to write like Chekhov."

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 38 - Special Topics in Russian Literature, Culture and Area Studies

These courses focus on areas of Russian literature, culture, and society that are not covered by our core curriculum. They introduce students to the study of aspects of Eurasian culture and society, including contemporary media culture, Russian Orthodoxy, politics and society, and environmental studies through various media and forms of cultural representation (literature, film, digital media), as well as interdisciplinary approaches.

EEER 38.08 - The "New Man" on the Moon: Science Fiction Under Socialism

Cyborgs, intergalactic vistas, and overextended futurities ostensibly characterize western science fiction. Yet space age put cosmic agendas on writing and film-editing desks

all over the former Socialist bloc as well. We will explore the East/West differences in generic conventions and investigate the uneasy fit between Socialist Realism—the state-sponsored style for picturing the real life of the “New Socialist Man”—and the questionable political orders and subversive desires unleashed by fictions of deregulated space travel.

Cross-Listed as: COLT 56.01

Degree Requirement Attributes: Dist:INT or LIT

EEER 38.09 - Creative Writing in Russian: Russian and Ukrainian Short Story

This class is conducted in the format of a workshop and provides learners and speakers of Russian with an opportunity to engage in creative writing in Russian. We will read selected Russian, Ukrainian (and other) literary texts and examine them from the perspective of a writer rather than a reader or a critic. We will also explore semantic, stylistic, and poetic resources of language through a variety of experimental assignments. Finally, each student will undertake their own creative writing project, which will center on a specific literary genre and a specific topic chosen as the cultural-historical focus for the course. For the Fall of 2017, this topic will be the 1960s-70s in Ukraine, which, at that time, was part of the Soviet Union. Each student will write one short story, set in 1960-70s Ukraine, and written from the perspective of an imaginary, yet historically grounded, narrator. The reading list for the course will include some of the best short stories written in the Russian and the Ukrainian languages as well as collateral texts and films of various genres devoted primarily to the 1960s-70s in Ukraine and the Soviet Union. These readings and viewings will serve as a reservoir of characters, situations, plots etc. which could inspire, or even serve as prototypes for the students' own short stories.

Degree Requirement Attributes: Dist:ART; WCult:W

EEER 38.12 - History of Attention

The course will trace a broad outline of the social and cultural history of human attention. We will begin by establishing a firm foundational understanding of attention as a neuroscientific and cognitive phenomenon. We will then proceed to attention in preliterate societies (hunter-gatherers' attention, attentional strategies in oral literary genres, such as the epic narrative); modern forms of attention in literature, music, pictorial art, and film; attention in the context of religious and spiritual practices; and finally, the current state of attention, including the social and political implications of the generalized 'attention deficit disorder' induced by the media and the internet.

Cross-Listed as: COCO 028

Degree Requirement Attributes: Dist:TMV

EEER 38.15 - Homelands and Diasporas: Russian Jews on Three Continents

Drawing on a variety of disciplines, such as anthropology, history, sociology, political science, and cultural studies, and sources ranging from academic works to works of fiction and films, the course first explores the history and culture of Russian (pre-1917) and especially Soviet Jews (1917-1991)—a major and significant segment of the world Jewry—prior to the massive immigration of the 1970s-1990s. The rest of the course involves a comparison of the experience of Russian-speaking Jews in the three major countries they have immigrated to—Israel, US, and Germany—as well as those remaining in Russia today.

Cross-Listed as: ANTH 50.41 COCO 033 JWST 05.01

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

EEER 38.17 - Modern Russia and it's Culture: Historical Roots and Global context

This course examines modern Russia and its culture in a historical and global context. By focusing on Russian culture, socioeconomic issues, and geopolitical affairs of the late-20th and 21st century, we will discuss the impact of history on Russia's present, on Russian consciousness and identity, and on the major trends in Russian society and politics. We will analyze how Russia demonstrates power and presents itself around the world, and how it is perceived by others.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 38.20 - Poetry After War

The course will focus on poetry written after catastrophe, that takes on the impossibility of speaking and using language. We will read poets who lived through the fall of totalitarian regimes and the Holocaust, as well as later poets who sought to work through this trauma in order to recover language for writing. We will also examine work by poets who are grappling with the catastrophic failure of language in today's war in Ukraine.

Cross-Listed as: COLT 31.03

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

EEER 38.21 - Translation and Censorship in Eastern Europe

Translation has been a target of censorship and control over several centuries. In this course, we will use Ukraine as a case study to trace and discuss the relationship between translation and censorship, with close references to other countries of Eastern Europe, in particular the Baltic states under Soviet rule and those belonging to soviet bloc, such as Poland, Hungary, Bulgaria, etc., as well as new countries appeared in the place of old Soviet entities.

Cross-Listed as: COLT 19.03

Degree Requirement Attributes: Lang:LRP; Dist:SOC;
WCult:NW

EEER 38.22 - Language Ideologies in Literary and Media Translation

Our focus in this course will be on translation as an ideological weapon, with the capacity for far-reaching misrepresentation of key political and cultural concepts and messages. Such misrepresentation has proliferated in recent times, not least through translations that have been mediated by the Russian language or through deliberately misleading translations. We will use tools including corpus linguistic approaches, pragmatics, and theories of discourse to provide a new perspective on language ideologies.

Cross-Listed as: COLT 19.04

Degree Requirement Attributes: Lang:LRP; Dist:SOC;
WCult:W

EEER 38.24 - Jewish Folklore

Instructor: Gronas

What makes stories and songs necessary to our identity, dignity, and spirituality? This course attempts to answer these questions through the study of Jewish folklore. We'll focus mostly on stories and songs, but also address bordering genres (riddles, proverbs, folk drama). Along with studying Jewish folklore, we will *experience* it by singing songs and enacting a folk-play. This dual approach stems from the backgrounds of the co-teachers, one a scholar, the other a Grammy-nominated songwriter.

Cross-Listed as: JWST 34.05

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:W

EEER 38.25 - Ukrainian Dreams after Communism

For many Ukrainians, 1991 became a crucial point when the long-held dream of their independence came true. Our course takes a multi-dimensional look at the period of the three recent decades as an advance towards the realization of collective dreams shaping the post-Soviet nation, combined with everyday disappointments, anxiety, and uncertainty. The course aims to analyze the agency of contemporary Ukrainian people, the media, literature, and digital folklore in creating new messages, meanings, and values.

Degree Requirement Attributes: Dist:SOC; WCult:CI

EEER 38.27 - Decolonizing Translation

The course takes a panoramic view of translation as an ambivalent reflection of the (post)colonial condition. As a "channel of colonization," translation has relied on legal

and linguistic manipulations and prohibitions to unleash epistemicide and linguicide. As a form of resistance, translation has channeled emancipatory postcolonial struggles. In this course, we will survey both functions between the 18th to the early 21st century. We will draw on case studies from around the globe, including the Middle East, South, Southeast and Western Asia, South and Central America, Mexico and the islands of the Caribbean, as well as North America, Europe and Eurasia. We'll revisit the relationship between translation, orientalism, world literature, have a closer look at border identities across geographical regions and historical circumstances, reconsider translational imagination and the art of self-translation, and reflect on the gains, losses, misses, and un/translatables in translation.

Cross-Listed as: COLT 19.06

Degree Requirement Attributes: Dist:LIT; Lang:LRP; WCult:NW

EEER 38.28 - Literature and Ideology in Eastern Europe

Instructor: Kolomiyets

The course will focus on the politics and contexts of language functioning in literary works as an instrument of ideological influences as well as the tool of counterinfluence, or resilience, to various kinds of ideological pressure. We will analyze a selection of literary works representing new and updated genres and styles, with a special look at literary works as war testimony "after Bucha" in Ukraine. Among the considered authors are winners of prestigious literary prizes.

Cross-Listed as: COLT 50.01 RUSS 38.28

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

EEER 38.29 - Ukraine, Jews, and the Literature of War

This course explores the Jewish contribution to, and integration with, Ukrainian culture. It focuses on the writers and poets of Jewish descent whose literary activities span from the early 20th century to the 2020s. We'll develop a consistent vision of Jewish encounter and participation in Ukrainian modernity, literary and cultural life. The course also embraces and contextualizes Jewish writers who were born in Ukraine and Ukrainian authors of Jewish origin as important participants in the oikumene that shaped them as writers.

Cross-Listed as: COLT 54.01 JWST 34.04

Degree Requirement Attributes: Dist:INT; WCult:W

EEER 38.30 - Languages of Russia and the Former Soviet Union

When asked what languages are spoken in Russia, most people would probably say Russian. Yet, Russia and the

former Soviet territories stretch from the icebergs of the Arctic to the steppes of Central Asia and are home to more than 150 languages from a multitude of language families, including Indo-European, Uralic, Turkic, and Mongolic.

This course examines the evolution of languages in different regions of Russia and the former Soviet Union, highlighting present-day efforts to document and conserve endangered languages and the challenges encountered by language activists. In terms of content, the course combines academic readings with popular and opinion pieces and videos.

Cross-Listed as: LING 11.26

Degree Requirement Attributes: Dist:INT or SOC; Lang:LRP; WCult:NW

EEER 39 - Wonder Works from Ukraine: Folklore, Literature, Film

Instructor: Somoff

This course explores Ukrainian folklore, including vampire legends, rites of passage, and fairy tales. We will uncover the patterns and meanings behind these narratives and customs, reflecting on their enduring appeal to modern writers, artists, and ourselves. Students will collaborate with peers in Ukraine on projects such as the art of *pysanka* workshop and gather contemporary folklore from Ukraine-based informants (via Zoom), examining the vital role folklore plays in the wartime experiences of present-day Ukrainians.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

EEER 50 - Special Topics in Russian History

Students will work with primary and secondary sources to examine periods of Russian, Soviet and Eurasian history. Each course will focus on a particular time period or theme.

EEER 50.02 - The Russian Revolution

The Russian Revolution of 1917 and the Bolshevik seizure of power proved to be among the most important events of the 20th century, and they had profound implications for world history up until the current day. In this course, students will examine the causes and consequences of these momentous occurrences and grapple with a set of complex and intricate historical questions that still divide historians. We will begin by examining how in the late 19th century far-reaching social changes & external challenges confronted the 300 year-old Romanov dynasty, and how, ultimately, this dynasty was unable to adapt to the modern era. Students will learn about the multifarious political movements that emerged in opposition to the old regime, and about the so-called Revolution of 1905, which shook but did not overthrow the tsar.

Cross-Listed as: HIST 055

Degree Requirement Attributes: Dist:SOC; WCult:W

EEER 50.03 - Twentieth-Century Russia

Instructor: Finkel

An examination of major developments and problems in twentieth-century Russian history with particular attention to the consequences of the October Revolution, Leninism, civil war and its impact, politics and society during the New Economic Policy of the 1920s, the formation of the Stalinist system and its historical legacy, the Krushchev era, the Brezhnev years of “stagnation,” Gorbachev’s perestroika and the problems of transition to a law based on democratic and open market system of the Russian Federation, the successor state to the Soviet Union. Open to all classes.

Cross-Listed as: HIST 056

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

EEER 50.04 - Behind the Iron Curtain: The Cold War From the Other Side

Instructor: Finkel

This course explores the Cold War from “Behind the Iron Curtain,” including both the global political struggle for ideological and strategic primacy and the reflection of this struggle in domestic cultural and material developments from the end of World War Two until the Soviet collapse in 1991. We will examine how “Cold War competition” played out in a variety of interlocking spheres, from expansionist foreign policies that first divided Europe and gradually extended to the entire global south, to urgent economic competition in both military technology and domestic consumer products, to ideological and cultural competition.

Cross-Listed as: HIST 57.01

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

EEER 71 - Advanced Seminar in East European, Eurasian, and Russian

In these seminar courses, advanced learners and native speakers of Russian have an opportunity to read in the original and to study in depth works that are central to Russian intellectual history and literary tradition. Topics vary from year to year and may concentrate either on individual authors (Pushkin, Chekhov, Gogol), or a period (Middle Ages, The Silver Age, the Post-Soviet era), or a phenomenon (Russian Humor, Popular Culture, Utopianism). The course is conducted in Russian.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 71.01 - Media Research and Creative Writing in Russian

In this class, we will conduct a collaborative research and writing project. The result will be an epistolary novel (a novel in letters) written by our class entirely in Russian. The setting of the action is going to be contemporary Russia with the context for the letters encompassing all spheres of everyday Russian life.

Degree Requirement Attributes: Dist:LIT; WCult:W

EEER 85 - Independent Reading

Russian 85 is available to students in the Honors Program who intend to do preparatory work for a thesis or to students who wish to study a topic not normally covered in a regularly offered course. In the latter case it is necessary to prepare a one-page proposal describing what the student plans to study and to accomplish during the term. The proposal must then be approved by the faculty member who has agreed to direct the course and by the Department as a whole. Final approval must be received before the beginning of the term in which the course is to be taken.

EEER 86 - Independent Reading and Research in Russian

Independent reading and research.

EEER 87 - Thesis

A program of individual research designed for honors students. Interested students should consult the Chair of the Department.

RUSS - Russian Language and Literature Courses

To view Russian Language and Literature requirements, click here (p. 262).

RUSS 1 - Introductory Russian

Instructor: Apresyan

An introduction to Russian as a spoken and written language. None of these serves in partial satisfaction of the Distributive or World Culture Requirements.

Offered: Fall.

RUSS 2 - Introductory Russian

Instructor: Apresyan

An introduction to Russian as a spoken and written language. None of these serves in partial satisfaction of the Distributive or World Culture Requirements.

Offered: Winter.

RUSS 3 - Introductory Russian

Instructor: Filimonova

An introduction to Russian as a spoken and written language. None of these serves in partial satisfaction of the Distributive or World Culture Requirements.

Prerequisite: Russian 2

Offered: Spring.

RUSS 22 - The Russian Language: Study Abroad

The second course in the Russian Moscow program, credit for this course is awarded to students who have successfully completed the Dartmouth Foreign Study Program in Russia.

Prerequisite: membership in the Foreign Study Program.

Degree Requirement Attributes: WCult:W

RUSS 23 - The Russian Language: Study Abroad

This course represents the work done in the phonetics classes and in the conversation classes at the Higher School of Economics in Moscow. Credit for this course is awarded to students who have successfully completed the Dartmouth Foreign Study Program in Russia.

Prerequisite: membership in the L.S.A. Program.

Degree Requirement Attributes: WCult:W

RUSS 27 - Intermediate Russian I

Instructor: Plagmann

A continuation of the 1-2-3 cycle, this course is the first of the intermediate language courses offered by the Department. The course prepares the student for further upper-level study of the language. It includes intensive review, introduction to new grammatical topics, as well as reading, composition and conversation.

Prerequisite: RUSS 3 or permission

Offered: Fall.

RUSS 28 - Intermediate Russian II

Instructor: Plagmann

The sequence RUSS28 and RUSS29 completes the cycles of second-year Russian. Special emphasis is placed on such difficult areas as participles, aspects and verbs of motion. The course includes extensive reading, video work and vocabulary building.

Prerequisite: RUSS 27 or permission

Offered: Winter.

RUSS 29 - Intermediate Russian III

Instructor: Plagmann

The sequence RUSS 28 and RUSS 29 completes the cycles of second-year Russian. Special emphasis is placed on such difficult areas as participles, aspects and verbs of

motion. The course includes extensive reading, video work and vocabulary building.

Prerequisite: RUSS 28 or permission

Offered: Spring.

RUSS 41 - Advanced Conversation and Composition

The language-learning goal of the course is to expand the students' vocabulary, work with new vocabulary and idioms, to review and reinforce certain grammatical and stylistic subtleties. Students will be introduced to Russian cultural traditions and some specifically Russian attitudes in an exploration of problems of cross-cultural communication and miscommunication. There will be films, short stories, and articles for discussion.

Prerequisite: RUSS 29 or higher

Offered: Fall.

RUSS 42 - Advanced Russian through History, Press and Film

Advanced Russian through the study of the Russian society and a brief synopsis of Russian history. Students will continue to develop their spoken, written, and reading proficiency in the Russian language. There will be stories and articles for discussion, one film, and grammar exercises.

Offered: Summer.

RUSS 43 - Seminar in Russian Culture

Instructor: Somoff

In these seminar courses, numbered in the forties, advanced learners and native speakers of Russian have an opportunity to read texts in their original Russian and to study aspects of Russian intellectual history and the literary tradition in depth. The course focus varies from year to year and may concentrate on particular topics and phenomena (e.g. popular culture, media, humor, poetry, and translation). The course also continues work on advanced grammar and is conducted in Russian. Students will complete a project in Russian.

Offered: Spring.

RUSS 43.01 - Media Research, Creative Writing, and Translation Workshop

This class will be devoted to collaborative research, writing, and translation projects. Using authentic Russian-language sources, from scholarly articles to social media networks, the students will conduct research for a "case study" which is of major significance in contemporary Russia and write a one-act play, entirely in Russian, in the genre of documentary drama. The students will then translate their play into English and present a staged reading of it at the end of term.

Degree Requirement Attributes: Dist:LIT; WCult:W

RUSS 45 - Special Topics in Russian Language

History of the Russian Language. This course introduces the student to the history of the phonology (sound development) and morphology (development of grammatical categories) of Russian as a Slavic and Indo-European language.

Prerequisite: RUSS 29 or higher

RUSS 48 - Structure of Modern Russian

This course will introduce the student to the necessary methodology for analyzing the linguistic structure of Russian, and will examine the theoretical foundations of such analysis. The course will focus on the structure of the noun, pronoun, and verb, as well as on various aspects of Russian word formation.

Prerequisite: RUSS 29

UKRA - Ukrainian Language and Literature**UKRA 3 - Introductory Ukrainian III**

Instructor: Kolomiyets

Building on Intensive Ukrainian, this course further develops students' oral and written communicative skills through authentic materials, analytical and creative exercises, and project work. Each student will partner with a student in Ukraine for conversational practice. The class will collaborate with a Kyiv-based professional theater and participate in the Worldwide Ukrainian Play Readings initiative.

Offered: Winter.

UKRA 11 - Intensive Ukrainian

Instructor: Somoff

Immersive study of Ukrainian language and culture that combines Ukrainian 1 and 2 into a single term. The course emphasizes oral communication while developing basic listening, reading, and writing skills. Students partner with their peers in Ukraine for conversational practice and project work. Upon successful completion of the course, students can take UKRA 003. This is an accelerated Language (LACC) course.

Offered: Fall.

UKRA 27 - Intermediate Ukrainian I

The course is designed for the students with the Novice mid to high level of language proficiency (ACTFUL 1989 standards). Upon completion of this course students should be able to achieve the Intermediate Low level of language proficiency.

This course aims to further students' knowledge of the Ukrainian language. The course materials are organized around various themes to enhance students' involvement

and interaction with the living culture of the Ukrainians and introduce students to various discourses of the Ukrainian language. An in-depth overview of grammar and syntax is offered. Further mastering of four basic linguistic skills – speaking, reading, listening, and writing – is emphasized at the higher levels of language proficiency. Course material will engage students in exploring Ukraine's living cultural and linguistic environment through the study of its living language on site.

Economics

Chair: James D. Feyrer

Vice Chair: Ethan G. Lewis

Professors D. T. Allen, P. M. Anderson, D. G. Blanchflower, E. U. Cascio, D. Comin, E. V. Edmonds, J. D. Feyrer, D. A. Irwin, M. G. Kohn, A. T. Levin, E. G. Lewis, E. F. P. Luttmer, N. Pavcnik, C. Olivetti, B. I. Sacerdote, A. A. Samwick, C. M. Snyder, D. O. Staiger, R. W. Staiger, H. L. Williams, J. Zinman, E. W. Zitzewitz; Associate Professors D. K. Fetter, P. Novosad; Assistant Professors M. W. Grant, A. Gupta, M. D. McKelway, S. M. Mello, D. Ramos-Toro, M. L. Startz, A. Wyse, N. G. Zorzi; Senior Lecturers E. S. Curtis, M. P. Doyle, M. Petre, J. W. Welborn; Lecturers H. Lee Research Associate M. Yedomiffi

To view Economics courses, [click here](#) (p. 274).

Requirements for the Major

Prerequisites: ECON 1 and ECON 10, with an average grade no lower than C, and MATH 3. A student who fails to achieve the minimum grade average for the prerequisites may, with the permission of the vice chair, substitute grades in ECON 21 and ECON 20 for those in ECON 1 and ECON 10, respectively. Another statistics course may be substituted for ECON 10 with permission of the vice chair. Newly declared Econ Majors who have not previously satisfied this requirement must take Econ 10.

Requirements : Nine courses in addition to the prerequisites, with a GPA for these nine courses of no less than 2.0. The nine courses must include the following:

1. ECON 20, ECON 21, and ECON 22
2. A culminating experience class and its prerequisites. This implies choosing a 3-course sequence from among the following:
 - a. ECON 62, with prerequisites ECON 32 and ECON 29
 - b. ECON 64, with prerequisites ECON 24 and either ECON 27 or ECON 39
 - c. ECON 65, with prerequisites ECON 25 and ECON 35
 - d. ECON 66, with prerequisites ECON 26 and ECON 36
 - e. ECON 67, with prerequisites ECON 27 and either

ECON 24 or ECON 28 or ECON 37

- f. ECON 68, with prerequisites ECON 28 and ECON 38
- g. ECON 69, with prerequisites ECON 29 and ECON 39
- h. Honors via the 80-81-82 sequence (see below)

3. Three additional ECON courses, at least two of which must be numbered between 23 and 69

Notes: ECON 2, ECON 5 and ECON 6 may not be counted toward fulfillment of the major requirement.

Requirements for the Modified Major

The modified major is intended to fit the needs of students who have a definite interest in economics but are interested also in studying some specific problem or topic that falls partly in the field of economics, the study of which depends also upon courses in related fields, e.g., mathematics and computer science. Each student's program must be approved by the vice chair of the department (who consults the curriculum committee) no later than fall of senior year; this approved program of courses constitutes the major. Note that the department website provides examples of several "pre-approved" modified majors that meet the guidelines.

Prerequisites : ECON 1 and ECON 10, with an average grade no lower than C, and MATH 3. A student who fails to achieve the minimum grade average for the prerequisites may, with permission of the vice chair, substitute grades in ECON 21 and ECON 20 for those in ECON 1 and ECON 10, respectively. Another statistics course may, in certain instances, be substituted for ECON 10 with permission of the vice chair. Newly declared Econ modified majors who have not previously satisfied this requirement must take Econ 10.

Requirements:

1. A unified, coherent program of at least ten courses is required, of which at least six courses must be in economics (in addition to ECON 1, ECON 10 and MATH 3) and four courses in a field or fields related to the special topic approved by the department vice chair. The GPA for the six courses in Economics must be no less than 2.0. The additional courses in a field outside of economics must be chosen from those satisfying the major of the department offering the course.
2. The six courses in economics must include the following:
 - a. ECON 20, ECON 21, and ECON 22
 - b. A culminating experience class and its prerequisites. This implies choosing a 3-course sequence from among the following:
 - i. ECON 62, with prerequisites ECON 32 and ECON 29
 - ii. ECON 64, with prerequisites ECON 24 and either ECON 27 or ECON 39
 - iii. ECON 65, with prerequisites ECON 25 and ECON 35
 - iv. ECON 66, with prerequisites ECON 26 and ECON 36

- v. ECON 67, with prerequisites ECON 27 and either ECON 24 or ECON 28 or ECON 37
- vi. ECON 68, with prerequisites ECON 28 and ECON 38
- vii. ECON 69, with prerequisites ECON 29 and ECON 39

Requirements for Another Major Modified with Economics

Prerequisites : ECON 1 and ECON 10, with an average grade no lower than C, and MATH 3. (A student who fails to achieve the minimum grade average for the prerequisites may, with the permission of the vice chair, substitute grades in ECON 21 and ECON 20 for those in ECON 1 and ECON 10, respectively. Another statistics course may, in certain instances, be substituted for ECON 10 with permission of the vice chair.)

Requirements : A unified, coherent program of at least four courses in economics in addition to the prerequisites, with a GPA of no less than 2.0. The four courses must contain ECON 21, ECON 22, and two additional classes numbered between 20 and 69.

Economics Minor

Prerequisites : ECON 1 and ECON 10, with an average grade no lower than C, and MATH 3. A student who fails to achieve the minimum grade average for the prerequisites may, with the permission of the vice chair, substitute grades in ECON 21 and ECON 20 for those in ECON 1 and ECON 10, respectively. Another statistics course may be substituted for ECON 10 with permission of the vice chair. Newly declared Econ minors who have not previously satisfied this requirement must take Econ 10.

Requirements : Six courses in addition to the prerequisites, with a GPA for these six courses of no less than 2.0. No courses can be counted toward both a major and a minor. The six courses must include the following:

1. ECON 20, ECON 21, and ECON 22
2. A culminating experience class and its prerequisites. This implies choosing a 3-course sequence from among the following:
 - a. ECON 62, with prerequisites ECON 32 and ECON 29
 - b. ECON 64, with prerequisites ECON 24 and either ECON 27 or ECON 39
 - c. ECON 65, with prerequisites ECON 25 and ECON 35
 - d. ECON 66, with prerequisites ECON 26 and ECON 36
 - e. ECON 67, with prerequisites ECON 27 and either ECON 24 or ECON 28 or ECON 37
 - f. ECON 68, with prerequisites ECON 28 and ECON 38
 - g. ECON 69, with prerequisites ECON 29 and ECON 39

Transfer Credit

Upon approval by the Vice Chair, a maximum of two course credits for work taken elsewhere may be counted

toward the economics major, including prerequisites. For an economics modified major or economics minor, only one economics course may be transferred, while no economics courses may be transferred for another major modified with economics. In the case of a major, modified major, or minor, the culminating experience course and its two prerequisites are required to be taken at Dartmouth. ECON 20 taken elsewhere may not be allowed to be transferred. It is recommended that transfer credit be sought mainly for courses not regularly offered by the Department. Transfer credit will only be accepted from respected degree-granting institutions of higher education. Only courses requiring the equivalent of ECON 1 as a prerequisite will be credited toward the fulfillment of a major, modified major, or minor. Students contemplating taking major, modified major or minor courses elsewhere should thus consult the Vice Chair well in advance, to assure that appropriate transfer credits will be accepted.

Economics Honors Program

The Honors Program in Economics provides qualified students with several different pathways to graduating with 'Honors in Economics' or with 'High Honors in Economics,' each of which are outlined below.

To be eligible for the Program, a student must have a grade point average of at least 3.3 in courses counting toward the major (excluding ECON 1, ECON 10, and MATH 3), and an overall grade point average of at least 3.0. Additionally, in order to be eligible for 'High Honors,' a student must take ten major courses (beyond prerequisites), rather than just the nine courses required for a standard or 'Honors' major.

Majors enrolled in a culminating experience class whose research papers for that course are deemed of exceptional merit by the instructor, and who are otherwise eligible for the Program, shall be granted 'Honors in Economics' with no additional coursework necessary. No more than two students per section may be granted 'Honors' in this way without a vote of the department.

An additional method of earning 'Honors' is to complete the ECON 80-81-82 sequence with an average grade of B+ and having received a grade of A- or better in each of the prerequisite classes (i.e. ECON 20, ECON 21 and ECON 22). The instructors of this sequence may additionally recommend that students who have done such outstanding work in these courses that it would achieve the 'Honors' designation by the method described above be granted 'High Honors' by vote of the Department, provided the student has completed ten major courses (beyond prerequisites). Note that successful completion of this sequence may take the place of 3-course culminating experience sequence described above in the regular major section.

A final, more traditional method of achieving 'Honors' or 'High Honors' is by writing an Honors thesis. Honors theses are, in all cases, continuation of original research papers completed in another 60- or 80-level class, and/or, in rare cases, an independent study (ECON 85). A thesis is generally completed in conjunction with taking ECON 87.01, which is offered every spring term. Permission is required to enroll in ECON 87.01, and is decided by a committee consisting of the potential Honors thesis advisor(s) and the ECON 87.01 instructors. The application is due by the end of the winter term.

In rare cases students can complete an Honors thesis in a term other than the spring term by enrolling in ECON 87 with an advisor's permission. The standards for permission to enroll in this case are the same as for ECON 87.01.

Both regular majors and modified majors who wish to enroll in ECON 87 or ECON 87.01 will be expected to have taken all courses relevant to their topic prior to enrollment. For those enrolling in ECON 87 or ECON 87.01, an average grade of B+ (3.33) or better in the 60- or 80- level course (and/or ECON 85) and ECON 87.01 (or ECON 87) is necessary for the student to graduate with 'Honors in Economics.' A vote of the Department is necessary to achieve 'High Honors in Economics,' along with one additional major course beyond those required for the standard or 'Honors' major. The Department will consider the student's performance on the thesis and his or her record in Economics courses in awarding 'High Honors.'

ECON - Economics Courses

To view Economics requirements, [click here](#) (p. 272).

ECON 1 - The Price System: Analysis, Problems, and Policies

Instructor: Lee, Petre, Ramos-Toro, Uddin

Emphasis will be placed on problems and policies of current interest as they relate to resource use and the distribution of income and output. Students will receive an introduction to the theory of supply and demand in both product and factor markets in order to examine selected topics drawn from such areas as industrial organization and antitrust policy, labor economics, international trade, economic development, agriculture, urban problems, poverty and discrimination, public sector economics, and environmental problems.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 2 - Economic Principles and Policies

Instructor: Blanchflower

This is a general survey course for students who have had no previous college level economics and who do not plan to take further economics courses. It is divided between microeconomic concepts—supply and demand, labor and capital markets, tax incidence, comparative advantage, international trade, and benefit-cost analysis—and macroeconomic issues such as economic growth, unemployment inflation, national income and product accounting, the banking system, and monetary and fiscal policy. Applications to current policy issues will be emphasized throughout. ECON 2 may be taken under the Non-Recording Option (NRO). It does not count towards the major or minor.

Prerequisite: Students who have previously taken ECON 1 or who have been exempted from ECON 1 at matriculation may not enroll in ECON 2. Completion of ECON 2 does not, however, preclude subsequent enrollment in ECON 1.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ECON 3 - Essential Mathematics for Economic Analysis

Instructor: Doyle

This course covers many of the same basic calculus topics as Math 3, but with the focus on developing an understanding of the mathematical structure of economics, since having mathematical skill is essential to the study of economics. Examples of economic applications of calculus topics include using derivatives to study consumer demand and labor productivity and using integrals to study income distributions. Additionally, key statistical measures needed for econometrics classes, such as expected value and variance will be introduced. Not open to students who have received credit for Math 3.

Prerequisite: Math 1

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

ECON 5 - Adam Smith and Political Economy

Instructor: Clark

The eighteenth-century Scottish philosopher Adam Smith was one of the founders of "political economy," the study of the interrelationship between society, government, and the economy. This course focuses on Smith's major ideas through his two important works, *The Theory of Moral Sentiments* and *The Wealth of Nations*, and deals with such topics as the origins and consequences of economic

growth, and the role of government in a commercial society.

Cross-Listed as: GOVT 86.25

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

ECON 6 - Personal Finance

Instructor: Curtis

Managing one's own finances is something most of us will need to do over the course of a lifetime. Decisions like how much to borrow to fund education or how much to save for retirement, or the monthly budget choices we might make to balance necessary and desired spending with net income, all affect our personal well-being. This course is designed to do three important things: 1) give students a basic grounding in financial literacy by learning some tools and principles of personal finance that can be used in daily life, 2) introduce students to empirical research on the ways households use the financial system with particular emphasis on understanding some behavioral biases and common mistakes people make, and 3) explore ways in which the financial system can be improved to make it easier and safer to use. Over the course of the term, students will build their own personal finance portfolios incorporating their learning into their own individualized plans. **Not open to students who have received credit for ECON 26, 36, or 66.**

Offered: Spring.

ECON 10 - Introduction to Statistical Methods

Instructor: Lee, Wyse

This course introduces the student to the basic concepts and methods of statistics. It covers descriptive statistics and inference (estimation and hypothesis testing) for a single variable and for two variables. The probability theory required for these topics will be developed.

Because of the large overlap in material covered, no student may receive credit for more than one of the courses ECON 10, ENVS 10, GOVT 10, LING 10, MATH 10, PSYC 10, PBPL 10, QSS 15, or SOCY 10.

Prerequisite: ECON 1 and MATH 3 (or MATH 1 or ECON 3) are recommended

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:QDS

ECON 15 - Political Economy of China

Instructor: Welborn

This course examines how politics, economics, and culture have shaped the modern Chinese economic policy. Course topics include the Mao era, the pathologies of socialism and central planning, and the post-Mao transition to the

market. Special emphasis will be placed on how "capitalism with Chinese characteristics" affects innovation, entrepreneurship, and law. Students will be graded on class participation as well as original research.

Prerequisite: ECON 1

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ECON 16 - Regulation

Instructor: Welborn

This course examines the history, politics and economics of market regulation in the United States. Class discussions will focus on the arguments for and against state intervention in the market. We will also explore the meaning of "market failure" and "government failure" in the context of financial markets, transportation, the environment, health care, and public utilities. Special emphasis will be placed on how regulation affects prices and why regulated firms may demand regulation. Students will be graded on class participation as well as original research.

Prerequisite: ECON 1

Cross-Listed as: PBPL 022

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ECON 17 - Technological Progress and the Entrepreneurial Economy

The course examines technological invention and innovation and the path of technological progress and economic growth. Readings and discussion will develop understanding of the relation of new technology to science and cultural evolution and will describe the roles played, within economic and political systems, by inventors, entrepreneurs, companies, and finance when, from needs and opportunities, technologies emerge as creative new combinations.

Prerequisite: ECON 1

Degree Requirement Attributes: Dist:SOC

ECON 19 - The Clash of Economic Ideas

Do the ideas of economists change the world? Or do major events change the ideas of economists? This course interweaves economic history with the history of economic thought to explore some of the major economic events that have changed our world over the past two centuries, such as the industrial revolution, the Great Depression, the collapse of socialism, and the globalization of the world economy. We will explore how the ideas of economists continue to influence how we think about how the economy works and the role of government in the economy. In particular, we will be studying the works of

Adam Smith, Karl Marx, John Maynard Keynes, Friedrich Hayek, and Milton Friedman.

ECON 20 - Econometrics

Instructor: Duque, Fetter, Mello, Zitzewitz

Econometrics is the statistical analysis of economic data. This course focuses on regression analysis (specification, estimation, and hypothesis testing) and problems and pitfalls in its application in economics. The course involves extensive use of the statistical program STATA and will enable students to implement their own empirical research projects in preparation for the culminating experience in the economics major.

Prerequisite: ECON 10 and MATH 3 (or ECON 3 or MATH 8 or MATH 11 or MATH 12 or MATH 13)

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:QDS

ECON 21 - Microeconomics

Instructor: Doyle, Lee, Petre

This course is a study of the pricing and allocation process in the private economy. Topics include the theories of demand and production, and the determination of prices and quantities for commodities and factors of production in competitive and noncompetitive markets. Applications of the theory and its implications for empirical analysis are also considered.

Prerequisite: ECON 1 and MATH 3 (or ECON 3 or MATH 8 or MATH 11 or MATH 12 or MATH 13)

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 22 - Macroeconomics

Instructor: Curtis, Diaz

This course is concerned with the behavior of the economy as a whole, particularly fluctuations in economic activity. General equilibrium models are developed to analyze the determinants of GNP, unemployment, the rate of inflation, and the growth of output. The micro foundations of macro aggregates are developed, with special emphasis on the role of expectations. The analytic tools are used to evaluate monetary and fiscal policies and to understand current macroeconomic controversies.

Prerequisite: ECON 1 and MATH 3 (ECON 3 or MATH 8 or MATH 11 or MATH 12 or MATH 13)

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 24 - Development Economics

Instructor: Duque, Edmonds, McKelway, Yedomiffi

This course uses economic analysis to understand contemporary issues in low-income countries. We consider why extreme poverty and hunger, child mortality, low-levels of education, gender inequality, environmental degradation, high fertility, and child labor are pervasive in the developing world. We also examine the economic consequences of globalization and infectious diseases such as malaria and HIV/AIDS. For each topic, we seek to understand the factors and constraints influencing decision-making in developing countries. We use this understanding to discuss the role of markets, civil organizations, government policy, and international institutions.

Prerequisite: ECON 1 and ECON 10

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ECON 25 - Competition and Strategy

Instructor: Welborn

This course examines the strategies that businesses use in choosing prices, advertising, research and development, and mergers to maximize their profits. The course studies how business strategy is constrained by market competition and antitrust policy (government policy toward monopoly, collusion, and mergers). The analysis is conducted using game theory, empirical methods, and experimental methods.

Prerequisite: ECON 1 and MATH 3 (or ECON 3 or MATH 8 or MATH 11 or MATH 12 or MATH 13), ECON 10 and ECON 21

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ECON 26 - The Economics of Financial Intermediaries and Markets

Instructor: Kohn

This course examines the nature and function of financial intermediaries (e.g., banks, mutual funds, and insurance companies) and of securities markets (e.g., the money and capital markets and the market for derivatives). It analyzes liquidity and risk management and studies the efficiency, stability, and regulation of the financial system.

Prerequisite: ECON 1

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 27 - Labor Economics

Instructor: Anderson

This course studies the economic behavior of employers and employees as they interact in the labor market. The

class will move beyond the basics of labor supply and demand to cover such topics as human capital investment, the structure and determinants of financial compensation and benefits packages, contract negotiations and arbitration. Additionally, since many of the pressing problems facing the United States are labor market issues, this course will provide a basis for better understanding of nationally-debated issues such as reforms of the welfare system, the income tax system, immigration policy, and affirmative action programs.

Prerequisite: ECON 1.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ECON 28 - Public Finance and Public Policy

Instructor: Luttmmer, Mello

Government policies exert a pervasive influence over the economy and people's wellbeing. This course first analyzes the economic effects of public policies in the areas of environmental pollution, social insurance, retirement income, health, and poverty alleviation. The course then studies how governments finance their operations, paying attention both to institutional details and the effects of tax systems on efficiency and inequality. Throughout, we use empirical evidence and economic reasoning to better understand economic tradeoffs involved in current and proposed policies, including health reform, universal basic income, wealth taxation, unemployment insurance, fundamental tax reform, and Social Security.

Prerequisite: ECON 1

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SOC

ECON 29 - International Finance and Open-Economy Macroeconomics

Instructor: Sublet, Zorzi

This course covers introductory material in the area of international monetary theory and policy. It examines the behavior of international financial markets, the balance of payments and exchange rates, interactions between the balance of payments, the exchange rate and domestic economic activity and ways of organizing the international monetary system.

Prerequisite: ECON 22

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:INT or SOC

ECON 31 - An Introduction to Behavioral Economics

Instructor: Zinman

Behavioral economics seeks to enrich economics with insights, often drawn from other disciplines, that help us

better the world by improving understanding of human decision making and its limitations. This course provides an overview of how behavioral economists go about doing this, and the extent to which we are making progress, with a focus on individual decision making. We start with the standard approach to behavioral economics-- augmenting a classical model with allowance for one or two among dozens of potential decision making biases or constraints at a time-- and build to prospects for grand unification of behavioral economics.

Prerequisite: ECON 1, ECON 21

Offered: Spring.

ECON 32 - Monetary Policy and the Macroeconomy

Instructor: Levin

This course will examine the key elements of a monetary policy framework, investigate how monetary policy decisions influence financial conditions and macroeconomic outcomes, and consider the practical challenges of monetary policymaking in a global context. Basic methods in time-series econometrics will be used to analyze macro data, construct forecasts, and assess current monetary policy strategies. Students will work together in teams, each of which will collect and analyze information for a specific country and give a series of oral presentations to the class.

Prerequisite: ECON 1, ECON 10 and ECON 22

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ECON 35 - Games and Economic Behavior

Instructor: Uddin

Game theory is the study of decisions made in strategic settings. The course introduces equilibrium concepts solving the infinite-regress problem (A's decision depends on B's which depends on A's, and so forth) in increasingly complex environments. A wealth of social-science applications are considered ranging from business competition to terrorism as well as lighter applications to sports and games.

Prerequisite: ECON 1, ECON 10 and MATH 3 or ECON 3

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ECON 36 - Theory of Finance

Instructor: Samwick, Welborn

This course studies decision making under risk and uncertainty, capital budgeting and investment decisions, portfolio theory and the valuation of risky assets, efficiency of capital markets, option pricing, and problems of asymmetric information.

Prerequisite: ECON 10, ECON 21

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 37 - Gender and Family Issues in Modern Economies

Instructor: Olivetti

This course examines the changing economic roles of women and men in modern economies and the trade-offs faced by households. The origins and persistence of these trade-offs are analyzed through the lenses of economic models. The ultimate objective is to provide you with the tools to critically address a wide range of real-world questions related to gender and family. For instance: How have technological changes in the home and the market transformed families? In what ways are families in the US becoming increasingly stratified? What forces led married women to enter paid employment? What forces might lead them to "opt-out"? What is the rationale for paid parental leave? Why some firms offer it? Should they?

Prerequisite: ECON 1, ECON 10

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ECON 38 - The Economics of Governments and Public Policy

Instructor: Cascio

Fundamental questions in public finance concern *when* and *how* governments should intervene in the economy. However, another fundamental question is: *why* do governments do what they do? This course considers governments as economic actors. We will theoretically and empirically investigate how social decisions are made; why governments fail; why different levels of government (federal, state, local) fund different public goods and services; and how governments at different levels interact. Topics to be covered include externalities and public goods, political economy, and fiscal federalism. K-12 education in the United States will provide a detailed case study, though other applications may be considered from time to time. Course involves an empirical project.

Prerequisite: ECON 1, ECON 10

Degree Requirement Attributes: Dist:SOC

ECON 39 - International Trade

Instructor: Irwin, Staiger R.

This course deals with the causes and consequences of international trade and factor movements. Topics covered include theories of why nations trade, the consequences of trade for economic welfare and the distribution of income, the determinants of trade patterns, the tariff and other forms of commercial policy, trade policies of selected

countries, and the formation of the multinational corporation.

Prerequisite: ECON 1

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:INT or SOC

ECON 41 - Health Economics and Policy

Instructor: Colla

The goals of the course are: 1) to understand the economic forces that have created the current challenges in US healthcare; 2) to develop skills that enable you to determine what types of information, data, and analyses are needed to analyze the economics of health policies designed to expand coverage, improve quality, and contain costs; and 3) through in-class exercises and a project, to perform and present economic analysis of current topics relevant for state and federal health system reform. Not open to students who have received credit for ECON 071.

Cross-Listed as: PBPL 84.02

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

ECON 45 - Environmental and Energy Economics

This course examines environmental and energy issues from an economics perspective. The course begins by discussing fundamental concepts in environment economics including cost benefit analysis and economic valuation of the environment. We also explore issues of policy design from an efficiency perspective. The class is introduced to issues of energy economics, including oil, natural gas, and electricity markets, renewables policy, transportation policies, and climate change policies. Finally, the course examines environmental issues related to trade, development, public finance, and competitive strategy. Not open to students who have received credit for ECON 075

Degree Requirement Attributes: Dist:SOC

ECON 57 - Data Analysis for Economic Policy: Economics of Career and Family

Instructor: Blanchflower

This course examines the changing significance, timing, and meaning of career, family, and marriage, with special emphasis on the economic role of women and on determinants of gender gaps. For example, the gap between men's and women's earnings exists across the income distribution and the education distribution. But the gap is generally far greater for higher earners and for those with more education. Why? How do these gaps arise and what might reduce or eliminate them? Topics include the role of time controllability and compensating differentials; discrimination in pay in a host of circumstances; women's

bargaining skills; feedback mechanisms between household's decisions and the labor market; children; parental leave policy; firm-level policies; childcare policies.

Prerequisite: ECON 1, ECON 20 and ECON 21

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ECON 62 - Topics in Macroeconomics

Instructor: Levin

This seminar course will involve an in depth examination of selected topics that are of significance to the macro economy and economic growth. Topics will vary from year to year. It will examine developments in the United States and other advanced and developing economies. It will build on work done in Intermediate Macro (Econ 22) and Monetary Policy and the Economy (Econ 32) as well as the Financial Crisis (Econ 76). It focuses especially on issues and trends in the macro-economy and movements in the business cycle that develop over time. It is also possible to take an historical perspective on past macroeconomic developments including the Great Recession. Will require writing a major paper. Not open to students who have received credit for ECON 042.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 29 and ECON 32

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC

ECON 64 - Topics in Development Economics

Instructor: Startz

This seminar considers microeconomic aspects of the causes and consequences of extreme poverty in the developing world. Recent research on topics such as child labor, credit, education, environmental degradation, fertility, gender discrimination, health, HIV/AIDs, insurance, malnutrition, social capital, and technology adoption will be considered in depth. Topics vary from year to year. Students are required to write a major research paper. Not open to students who have received credit for ECON 044.

Prerequisite: ECON 20, ECON 21, and ECON 24

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

ECON 65 - Topics in Industrial Organization

This course examines selected topics in business strategy and public policies designed to facilitate competition. These topics include market power, price discrimination, entry, product differentiation, vertical integration,

regulation, and anti-trust. Students will discuss a broad range of papers on empirical industrial organization, apply concepts in a competitive strategy game, and write a major paper. Not open to students who have received credit for ECON 045.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 25 and ECON 35

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ECON 66 - Topics in Money and Finance

Instructor: Gupta, Zitzewitz

A seminar course covering in depth such selected topics as the following: the theory of financial institutions; banking panics; the excess variability of asset prices; finance constraints and capital market imperfections; the theory of monetary policy; inflation and financial markets; debt and deficits. Will require writing a major paper. Not open to students who have received credit for ECON 046.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 26 and ECON 36

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SOC

ECON 67 - Topics in Labor Economics

Instructor: Lewis

This seminar provides an in-depth examination of selected topics in labor economics, with an emphasis on recent empirical studies. Readings will vary from year to year, but areas studied will generally build on material introduced in Econ 27. Will require writing a major empirical paper. Not open to students who have received credit for ECON 047.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 27 and either ECON 24 or ECON 28 or ECON 37

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ECON 68 - Topics in Public Economics

Instructor: Cascio

This seminar explores pressing public policy issues using the theoretical and empirical tools of public economics. The course begins with a review of research design and relevant econometric techniques. We then move on to in-depth explorations in selected topic areas, with a focus on the U.S. Topics vary from year to year but have recently included public goods and externalities; finance, accountability, and choice in K-12 education; behavioral and external effects of the cash and near-cash social safety net or of tax policy; and moral hazard and welfare impacts of social insurance. Will require writing a major empirical

paper. Not open to students who have received credit for ECON 048.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 28 and ECON 38

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ECON 69 - Topics in International Economics

Instructor: Grant

This seminar will cover selected topics in international trade and finance beyond those covered in ECON 29 and ECON 39. Offerings in the next few years are expected to include current research on (1) financial crises in emerging markets, (2) the role of trade, open capital markets, and financial development on growth in developing countries, (3) the determinants and consequences of foreign direct investment, (4) the impact of the multilateral trade agreements on world trade, and (5) issues related to globalization. Will require writing a major paper. Not open to students who have received credit for ECON 049.

Prerequisite: ECON 20, ECON 21, ECON 22, ECON 29 and ECON 39

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC

ECON 70 - Immersion Experience in Applied Economics and Policy

In Economics 70, students study a specific topic in applied economics or policy on campus and then engage with that topic during a two-week immersion off campus after the end of the exam period. Specific topics and destinations for the off-campus component vary by term offered. This course may not be repeated for credit. For details on how to enroll see: <https://economics.dartmouth.edu/immersion-experience>.

Prerequisite: ECON 1

ECON 70.01 - The Transition of Poland to a Market Economy

Instructor: Curtis

Most economics courses taught in the US heavily emphasize the efficiency of markets and how individual decision-making, in freely functioning markets, can be modeled and understood. But there are a number of countries around the world whose economic organization is NOT mainly guided by markets; some of these economies remain partially controlled, or planned, where property and the means of production are formally government-owned and prices are centrally determined. This history of central planning has influenced the development of markets in much of Eastern Europe and the former Soviet Union; some economies have fully

transitioned from planning to markets, while some lag significantly behind. In this class, students will study the history of the centrally-planned economic system and how it influenced economic development in Poland and we learn how Poland's economy has transitioned to a market-oriented economy.

Prerequisite: ECON 1

ECON 70.02 - China: The Country, The Companies and the People

Instructor: Comin

China will study inclusive growth in China from three distinct perspectives: the aggregate, the company and the people. The aggregate/macro level will inform us about the economic mechanisms that are driving growth and inequality and how the policies and institutions are impacting them. From a company perspective, we will investigate how they operate in China. Finally, people are what ultimately we care about as social scientists. Therefore, we will make a central goal of the off-campus portion of Ec70 to interact with the Chinese population and to shed some light on all those important questions posed above that are very hard to grasp from the distance.

Prerequisite: ECON 1

ECON 70.04 - Human Development in Peru

Instructor: Comin

Peru, like many developing countries, is struggling to lift the income level of a vast part of its population. At the same time, economic progress is often achieved at the cost of environmental degradation. This course studies the drivers of under-development with an emphasis in finding avenues to achieve simultaneously economic and environmental progress. To explore this overarching theme, we will explore a broad range of topics which include (but are not limited to) (i) the informal economy, (ii) the rural-urban divide, (iii) underdevelopment and the environment and (iv) tourism. In addition to reading and discussing the literature on these topics, we will approach them via projects that students design and implement. Projects can have either a research goal or an operational one. In the latter case, the successful implementation of the project will have a positive impact on some local community in Peru.

ECON 70.06 - Frauds, Panics, Crashes, and Bank Runs

Instructor: Sacerdote

This is an immersive course that will feature intensive group projects, presentations of academic papers, and original research on a topic within the theme of the course. The theme of the course is to understand the conditions and human behavior that lead to large scale financial fraud, panics, market crashes and bank runs. The course contains ethical themes as well as economic

ones. A Dartmouth education includes understanding why you should not engage in the behaviors profiled both from a rational and from an ethical point of view. A Dartmouth economics education includes understanding how markets work and how they can fail and perhaps how structural and regulatory changes can improve market functioning.

Prerequisite: ECON 1, ECON 10 and ECON 26 with ECON 20 recommended

Offered: Fall.

ECON 72 - Fed Challenge

Instructor: Curtis

The College Fed Challenge is intended to help students become more knowledgeable about the Fed and the decision-making process of the Federal Open Market Committee (FOMC), the Federal Reserve's monetary policy-setting group. The cap for the class is 10 students by instructor permission (5 of the 10 will be chosen to go to the competition). Not open to students who have received credit for ECON 078.

ECON 73 - The Political Economy of Development

Instructor: Kohn

Why are some nations rich and others poor? Answering this question requires an understanding of the process of economic development and growth and also of the obstacles—predominantly political—that are placed in its way. This course develops such an understanding using the evidence of preindustrial Europe and China and building on the insights of Adam Smith. It then applies this understanding to analyze the problems of developing and developed countries today.

Prerequisite: ECON 1

ECON 76 - Pandemics and Financial Crises

Instructor: Blanchflower

Topics covered will include (but are not limited to): the impact of the COVID pandemic, and subsequent recovery or lack of it and policy responses. Monetary and fiscal policy responses including quantitative easing will be examined. Direct comparisons will be drawn with the Great Depression, the Great Recession and other financial crises.

Prerequisite: ECON 1, ECON 10

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:INT or SOC

ECON 77 - Social Entrepreneurship

Instructor: Samwick

This course provides an introduction to the theory and practice of social entrepreneurship, defined as the process of finding innovative, sustainable solutions to social

problems, particularly those related to poverty. Students will learn about the nature and causes of poverty, both domestically and internationally, and about the role that social entrepreneurs play in addressing poverty. The course culminates with teams of students developing business models for their own social entrepreneurship ventures.

Prerequisite: ECON 1

Cross-Listed as: PBPL 043

Degree Requirement Attributes: Dist:SOC; WCult:W

ECON 79 - Research in International Economics

Instructor: Allen

The course covers the latest research in international economics. Students will attend seminars where leading experts from both Dartmouth and other top institutions worldwide present their latest research and participate in an active discussion of the merits and limitations of the research. The primary outcomes of the course will be (1) a series of writing assignments summarizing these discussions; and (2) a proposed independent research proposal the student can pursue in a culminating experience and/or a senior thesis.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC

ECON 80 - Advanced Topics in Econometrics

Instructor: Staiger

This course has two goals: (1) To further develop techniques that test for and remedy common problems associated with linear and non-linear regression analysis, and (2) to develop a practical understanding of how regression analysis can be used to examine the empirical relevance of economic theory.

Prerequisite: ECON 20, ECON 21 and ECON 22 with a grade of A- or better or permission of instructor

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ECON 81 - Advanced Topics in Microeconomics

Instructor: Snyder

This is an advanced course on the economics of information. The focus of the course is a rigorous mathematical treatment of the value of information, moral hazard, learning, adverse selection, and signaling. Applications to labor markets, corporate governance, financial markets, and insurance will be discussed.

Prerequisite: ECON 20, ECON 21 and ECON 22 with a grade of A- or better and MATH 8 or permission of instructor

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ECON 82 - Advanced Topics in Macroeconomics

Instructor: Zorzi

The purpose of this course is to study in depth selected topics in Macroeconomics. Topics will include consumption, savings and investment; dynamic inconsistency and the design of monetary and fiscal policies, multiple equilibria, bubbles and cycles, and economic growth.

Prerequisite: ECON 20, ECON 21 and ECON 22 with a grade of A- or better or permission of instructor

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ECON 85 - Independent Study in Economics

This course is required of all majors in the Honors Program who do not initiate their honors work in their 60-level course; they will be expected to do the preliminary work on their Honors theses in this course. This course offers an opportunity for a student to do independent work under the direction of a member of the Department. For students who take this course in order to engage in independent study of a topic of interest rather than as a part of honors work, the prerequisite background will consist of all the regularly offered courses in the chosen field of study. Such a student will normally be expected to prepare, prior to the taking of ECON 85, a prospectus and a list of reading pertaining to the study he or she wishes to pursue.

Prerequisite: Requires permission of the vice chair and of the department faculty member who will be advising the student.

Offered: Fall, Spring, Summer, Winter.

ECON 87 - Senior Thesis

As explained above under 'Economics Honors Program', selected students will be invited to enroll in ECON 87 after they have completed their 40-level course. Alternatively, a student can initiate honors work in ECON 85 and then enroll in ECON 87 with the approval of the student's adviser and the vice chair. Honors students will normally take ECON 87 in the term following their enrollment in ECON 85, or alternatively, following their enrollment in a 40-level course in which a thesis has been started. Other majors who wish to write a non-Honors thesis for single course credit will be required to have as prerequisite background all regularly offered courses in the chosen field of study and may take the course in either the first or second terms of the senior year.

Prerequisite: Requires permission of the vice chair, permission of the department faculty member who will be advising the student, and, in the case that the research was

begun in a 40-level course, the permission of the faculty member who taught the 40-level course in which the thesis topic and the research were developed.

Offered: Fall, Spring, Summer, Winter.

ECON 87.01 - Senior Thesis in a Collaborative Setting

Instructor: Cascio, Novosad

Most economics students that write an honors thesis start their idea for an honors thesis topic based on independent research project completed in an Economics culminating experience seminar (any 60-level course) or the honors courses (any 80-level course). This course is meant to provide assistance in completing an honors thesis in economics that goes well beyond just advice from a single advisor. Completing an honors thesis in a collaborative setting will involve tasks such as presenting your work at multiple stages, as well as contributing to your peers' success by providing constructive feedback.

Offered: Spring.

Minor in Education

Chair of the Education Minor Steering Committee:
Michele T. Tine, Associate Professor, Sociology

Professor D. J. Coch, Psychological and Brain Sciences;
Associate Professor D. J. M. Kraemer, Psychological and Brain Sciences; Lecturer F. M. A'Ness.

To view Education courses, click here (p. 283).

Students may minor in Education. Students may take Education courses singly, to fill distributive requirements or as electives, or in a set that will satisfy the requirements for the minor. Any cross-listed courses used for the Education minor require sign-up in the Education enrollment. Students who wish to have Education as the secondary part of a Modified Major may do so if the major forms a unified and coherent whole as approved by the primary department and the Registrar. All transfer courses must be approved by the Chair of the Education Minor Steering Committee.

The Education minor investigates the complex world of education through a research-based, interdisciplinary lens. [EDUC 1](#) (p. 283) serves as the introductory course but is not a prerequisite for other Education courses. Courses numbered in the 10s through 40s are mid-level courses that explore broader topics, whereas courses numbered in the 50s and 60s are higher-level courses that examine more specific topics in more depth.

The minor is composed of six courses: [EDUC 1](#) (p. 283) is required, along with five other EDUC courses. Of the five other EDUC courses, at least four must be core Education

courses: EDUC 13, 17, 19, 20, 27, 46, 47, 50, 52, and 64. It is strongly recommended that minors take both mid-level and higher-level courses. A list of all EDUC courses, the terms and times they will be offered, and sample syllabi (if available), are on the minor website.

EDUC - Education Courses

To view Education requirements, click here. (p. 283)

EDUC 1 - Introduction to Education: Learning, Development, and Teaching

Instructor: Tine, Coch

Education, development, and learning are inextricably intertwined. In this course, we will explore how pre-Kindergarten through high school education is informed by scientific evidence across multiple domains. Topics to be explored may include the educational system in America; the research-to-practice gap and educational misconceptions; social, emotional, and motivational development in school context; memory, study strategies, metacognition, and assessment as related to learning; and learning and teaching in early math, science, and reading. Open to all classes.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist: SOC

EDUC 13 - Disability in Children's Literature

Instructor: Coch

In this course, we will explore how disability is represented in contemporary children's literature for middle-grade readers. Using educational, medical, and social lenses, we will critically consider the portrayal of students with various disabilities and others in their lives (teachers, parents, siblings, peers) in select children's books, and discuss and determine how such books might be used for teaching and learning. Reading is one essential way that students learn about the world. Can children's books be used to learn and teach about disability? Are students with disabilities represented accurately in children's books? Are they portrayed as having equal educational opportunities?

Offered: Spring.

Degree Requirement Attributes: Dist: SOC

EDUC 15 - Language Acquisition

Instructor: Wray

Language is a socially and cognitively complex activity, yet most healthy individuals acquire language in the first years of their life with no expended effort. This course provides an in-depth overview of typical language development from fetus to adult, as well as atypical development. The study of this topic within this course is informed by cognitive science, speech and hearing,

psychology, philosophy, and neurology, and is ultimately couched in linguistic framework and terminology.

Not open to students who have received credit for LING 11.17.

Cross-Listed as: LING 015

Offered: Winter.

Degree Requirement Attributes: Dist: SOC

EDUC 17 - What Works in Education?

Instructor: Coch

In a federally-mandated era of “evidence-based” education, what works in K-12 education? How do we know what works, and what does not? What does research show about which aspects of the classroom and school (other than content and curriculum, or what is taught) have a meaningful impact on student growth, learning, and achievement? We will consider topics such as class size, ability grouping and tracking, school start times, summer school, homework, direct instruction, problem- and project-based learning, personalized learning, and teacher education.

Offered: Winter.

Degree Requirement Attributes: Dist: SOC

EDUC 19 - Educational Testing

Instructor: Kraemer

Increasingly, standardized tests define the landscape of American education. We use test scores to evaluate students, teachers, schools, states, and nations. But what do these test scores really mean? In this course, students examine the fundamentals of test development, and discuss what we can and cannot infer from test scores. Topics include using tests to assess learning, to promote learning, and to identify factors that predict different learning outcomes for different students. Open to all.

Degree Requirement Attributes: Dist: SOC

EDUC 24 - Education and Inequality

Instructor: McCabe

How are schools organized and how do they organize society? What effects do schools have on individuals and what effects do they have on society? Using sociological theories and methods, we will examine the structure of schools and their effects on individuals and society. We will explore both formal and informal education. This course will focus on inequalities, specifically how social class, race, gender, and sexuality both organize and are organized by educational environments.

Cross-Listed as: SOCY 058

Offered: Winter.

Degree Requirement Attributes: Dist: SOC; WCult: W

EDUC 27 - The Impact of Poverty on Education

Instructor: Tine

Rising income inequality is undermining the ability of public K-12 schools to meet a foundational goal: to provide children from impoverished areas the opportunity to succeed. This course focuses on the forces that have translated the growing income gap into a growing education gap. We will examine primary research from various fields that details how poverty affects developing children, families, neighborhoods, and schools in ways that go on to affect educational outcomes. We will also consider how interventions strategically targeted at these contexts can improve the educational success of children growing up in poverty.

Cross-Listed as: SOCY 024

Offered: Spring.

Degree Requirement Attributes: Dist: SOC

EDUC 30 - Educational Psychology

Instructor: Kraemer

How do we learn? How can modern educational settings harness recent innovations concerning the essence of human learning? Educational psychology provides a foundation for applying the psychological principles that underlie learning in both formal and informal educational settings. In this course, we will explore the multitude of ways that people learn, the effects of different types of teaching strategies on learning, and the impact of individual differences on learning. We will also explore assessment, creativity and problem solving, as well as cultural and motivational influences on learning across diverse educational situations. Underlying the course will be an account of the way the human mind works, changes, and adapts in different settings. This includes the home, the school, the university and any context in which explicit or implicit education takes place. Open to all classes.

Cross-Listed as: COGS 031 PSYC 52.07

Degree Requirement Attributes: Dist: SOC

EDUC 32 - Learning and Education Across Cultures

Instructor: A'Ness

What role does culture play in human learning and development? Do differences in learning and schooling across cultures lead to disparities in learning outcomes? We will (i) explore the influence culture has on cognitive, social, and moral development, (ii) consider the diversity of views and practices regarding learning and education across cultures, (iii) examine differences in academic systems and achievement across countries, and (iv) discuss the implications for educational policy and practice in the US. Open to all classes.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

EDUC 35 - Who Gets In? College Admissions Post Affirmative Action

Instructor: Herman

Given the US Supreme Court's 2023 ruling on affirmative action, how can public and private policies adapt to meet the legal standards for choosing applicants to highly selective colleges and universities? Through a careful examination of legislation, executive policies, and legal action, this course looks at both the intent and the implementation of affirmative action, its history, its consequences, and its future. Students will consider why institutions of higher education are interested in recruiting a diverse range of students, why they have experienced lawsuits against their affirmative action policies, and how things are changing with the SCOTUS decision. Teaching methods include some traditional classroom techniques (text analysis, writing, discussion) as well as experiential education techniques (such as creating a public policy portfolio project, conversing with professionals who administer admissions programs at colleges and universities, and pitching proposals to a panel of policy experts). This course seeks open-minded people of all political persuasions to have robust discussions that will lead to policies with a chance of succeeding in our polarized environment.

Cross-Listed as: GOVT 30.12 PBPL 027

Degree Requirement Attributes: Dist:SOC; WCult:CI

EDUC 46 - STEM Learning and Education

Instructor: Kraemer

How do we learn, understand, and teach science, technology, engineering, and math (the STEM disciplines)? In this class, we will explore the nature and development of the scientific mind; how we formulate theories, design experiments, and understand scientific, technological, and mathematical concepts; and how we learn and teach related skills in the classroom, addressing the debate about the effectiveness of direct instruction and hands-on approaches. Open to all classes.

Cross-Listed as: PSYC 52.08

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

EDUC 47 - Social and Emotional Development

Instructor: Tine

This course investigates the social and emotional development of children as they move through middle school, and into adolescence. Throughout, students will read, analyze, and apply (in various assignments) classic

and current empirical research on topics including the development of self-conscious emotions, gender roles, temperament, personality, motivation, aggression, self-esteem, identity, romantic relationships, delinquency, and the roles that parents and peers play in child development. Educational implications will be considered. Open to all classes.

Offered: Winter.

Degree Requirement Attributes: Dist: SOC

EDUC 50 - The Reading Brain: Education and Development

Instructor: Coch

The majority of children entering first grade do not know how to read; the majority of children leaving first grade do know how to read, at least at a basic level. What is involved in the amazing development of the ability to make meaning of marks on a page? What goes on in the brain during reading and learning to read? We explore answers to these questions and more in this introduction to reading as we investigate the roles of orthography, phonology, semantics, syntax, and comprehension in reading. We focus on the development of reading behaviors, the brain bases of reading skills, and how scientific discoveries can inform educational practices. Open to all classes.

Cross-Listed as: COGS 033 LING 11.19 PSYC 52.09

Degree Requirement Attributes: Dist:SOC; Lang:LRP

EDUC 52 - Topics in Educational Theory

Instructor: Tine

In this course we will learn about the major theories that have influenced the study of human development throughout history. Readings and discussions will provide an in-depth historical lens onto the major conceptual approaches to the study of human development and learning including Freud, Piaget, Vygotsky, Behaviorism, Information Processing, Nativism, and Mind, Brain and Education. The course aims to explain the historical origins of current trends in the study of human development, learning and education. Open to all classes.

Degree Requirement Attributes: Dist: SOC

EDUC 59 - Thinking

Understanding how people think is a central quest in cognitive psychology. The extraordinary human capacity for logic and reason have earned our species the moniker "rational animal". But research points to a dizzying array of cognitive functions that may come into play when we think. Thought may be infused with emotion, blinded by illusion, relativized by culture, or biased by ideology or self-interest. Thought is framed by mental categories, constrained by selective attention, memory and forgetting,

and skewed by the familiar or the novel. In this course, we will examine research on many of these facets of thinking - from lucidly logical thinking to brazenly irrational thinking to aesthetic thinking that is neither. Along the way, we will consider a range of related issues: slow and fast thinking; conscious and unconscious processing; verbal and spatial thinking; the relationship between thought and language; imagination, creativity, and artistic thinking; attributions of causality; moral thinking; and judgments of people and groups.

We will also touch upon the evolutionary bases for thought and a comparison of human intelligence with artificial intelligence.

Cross-Listed as: PSYC 51.11

Degree Requirement Attributes: Dist:SOC

EDUC 64 - Development in the Exceptional Child

Instructor: Coch

What is an "exceptional" child? How might an exceptional child think about and experience the world? What is happening inside the brain of an exceptional child? We will learn about specific types of exceptionality likely to be encountered in the classroom, including attention deficit/hyperactivity disorder, autism spectrum disorders, depression, dyscalculia, specific language impairment, dyslexia, and dysgraphia. In exploring exceptionality, we will focus on behaviors that define the exceptional child; different approaches to learning, viewing the world, and interacting with others that characterize exceptional children; the brain bases of atypical or exceptional development; and how scientific knowledge affects educational practice. Open to all classes.

Cross-Listed as: COGS 034

Offered: Winter.

Degree Requirement Attributes: Dist: SOC

Engineering Sciences - Undergraduate

Chair: Vicki V. May

Professors M. Ackerman, I. Baker, S. Chin, B. Cushman-Roisin, G. Cybenko, E. Fossum, I. Georgakoudi, T. U. Gerngross, K. E. Griswold, R. Halter, K. Keller, J. Liu, L. R. Lynd, G. P. Parker, K. D. Paulsen, B. Pogue, L. R. Ray, E. Santos Jr., R. Sarpeshkar, E. M. Schulson, C. R. Sullivan, S. Taylor, D. Van Citters, X. Zhang; Professors Emeriti J. P. Collier, E. Garmire, U. J. Gibson, R. J. Graves, E. Hansen, A. Hartov, C. E. Hutchinson, F. E. Kennedy, W. Lotko, D. R. Lynch, U. Osterberg, V. F. Petrenko, H. J. Richter, B. U. O. Sonnerup, G. B. Wallis; Associate Professors S. G. Diamond, H. Fang, H. J. Frost, W. Li, G. P. Luke, C. Meyer, K. Odame, M. Q. Phan, K. S. Samkoe, W. J. Scheideler, H. L. Seroussi, J. T. Stauth, V. Vaze, J. Zhao; Assistant Professors A. Boys, T. E. Burgin,

C. Chen, B. Ferguson, M. Fitzpatrick, R. Gallivan, B. Goods, K. Hixon, J. Lee, Y. Li, W. Marrero Colon, E. Mayfield, B. Mazaheri, E. L. Murnane, Y. Nakayama, H. Nguyen, W. Ouyang, A. Rizzo, W. J. Scheideler; Senior Lecturers M. Albert, E. Bish, P. Bonfert-Taylor, D. Cullen, U. Gibson, O. Goodenough, P. J. Hoopes, K. Hoyt, K. Kawiaka, E. Korsunskiy, M. Laser, R. Lasky, D. Macaulay, V. May, S. Peterson, P. Robbie, S. Shepherd, M. Testorf, J. Wilson; Lecturers R. Barry, P. Bruza, M. Carpenter, S. Davis, X. Fan, C. Hackett, J. Hannon, R. Harder, M. Kokko, E. Monroe, N. Montgomery, A. Murdza, E. Murphy, G. Pope, B. Schweitzer, F. Shubitidze, P. T. Staats, R. Steinhauer, E. Truex, R. White, P. P. Yu.

To view Engineering Sciences Undergraduate courses, click here (p. 293).

To view Engineering Sciences Graduate requirements, click here (p. 899).

To view Engineering Sciences Graduate courses, click here (p. 904).

The undergraduate Engineering Sciences major leads to an A.B. degree. It provides engineering students with a common core of Science and Engineering Sciences courses. Interest in the various branches of engineering is accommodated through electives and usually through additional study leading to a Bachelor of Engineering or higher degree. For those students considering careers in such diverse fields as medicine, management, or law, the Engineering Sciences major enables them to better understand our increasingly technological society.

Students interested in a career in Engineering should plan on completing the Bachelor of Engineering. The Bachelor of Engineering (BE) degree program is accredited by the Engineering Accreditation Commission of ABET under the commission's General Criteria. The Bachelor of Engineering is equivalent in technical content to the Bachelor of Science degree in Engineering offered at many other universities but is broader in scope.

Graduate degrees are differentiated according to function. For those interested in design, professional practice, and engineering management, the Master of Engineering (MEng.) and Master of Engineering Management (M.E.M.) degrees are offered; for those interested primarily in research, the M.S. and Ph.D. degrees are offered. Additionally a joint M.D./Ph.D. program and M.D./MEng. are offered in conjunction with the Dartmouth Medical School and a joint M.E.M./M.B.A. and MEng./M.B.A. program are offered with the Tuck School of Business. The Thayer School Guide to Programs and Courses should be consulted for detailed information on all programs beyond the AB.

Courses Available To Non-Majors and First-Year Students

Several engineering sciences courses have few or no prerequisites and may be taken by first-year students exploring a potential interest in the major, or by non-majors seeking to broaden their education with the study of technology. In general these courses are numbered ENGS 1 through 21.

Technology

Most undergraduate courses up to [ENGS 86](#) satisfy the Technology and Applied Sciences distributive requirements (TAS). Some also satisfy the distributive laboratory requirement (TLA). For those students interested in an introduction to technology and applied sciences one of the courses [ENGS 1](#) through [ENGS 21](#) is recommended.

Use of NRO ([Non-Recording Option](#)) in all Majors and Minors

Unless otherwise prohibited, prerequisites may be taken under the [non-recording option](#). Any course being used to satisfy major or minor requirements beyond the prerequisites, may not be taken under the non-recording option.

Satisfactory Completion of Engineering Majors and Minors

Satisfactory completion of engineering majors requires a grade point average of 2.0 in the courses satisfying the major (other than those prerequisite to the major or minor). The same criterion holds for courses in a modified major and those in a minor.

Requirements for the Major

The sequential nature of the Engineering Sciences curriculum, and the possibilities for developing modified majors with other departments require that students plan their study programs well in advance. Assistance in planning programs may be obtained from an engineering faculty advisor.

All first-year students interested in the sciences should take the placement test in mathematics. The prerequisite courses for the Engineering Sciences major are [MATH 3](#), [MATH 8](#), [MATH 13](#), [PHYS 13](#), [PHYS 14](#), plus [ENGS 20](#) and [CHEM 5](#). [COSC 1](#) and [COSC 10](#) can be substituted for [ENGS 20](#). For students prepared for advanced placement in Calculus it is advisable to take the sequence, [MATH 8](#) and [MATH 13](#), or [MATH 11](#).

No more than two transfer courses may be used for credit in the major.

The Engineering Sciences Major requires seven courses from the core program:

1. [ENGS 21](#), [ENGS 22](#), and [ENGS 23](#) are required.
 2. Two from [ENGS 24](#), [ENGS 25](#), [ENGS 26](#), [ENGS 27](#), and [ENGS 28](#)
 3. Two from [ENGS 31](#) or [ENGS 32](#); [ENGS 33](#) or [ENGS 34](#); [ENGS 30](#), [ENGS 35](#) or [ENGS 36](#); or [ENGS 37](#).
- Two additional courses are required:
4. One elective in Engineering Science.
 5. One additional course in Engineering Science, mathematics or a science.

A Culminating Experience in Engineering Sciences is required. This is typically taken as one of the two electives or may be an additional course. The culminating experience may be: a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Only Engineering Sciences courses numbered above 20 (excluding [ENGS 87](#)) may be counted as electives in the major.

Students seeking to complete the A.B. and B.E. degrees concurrently should note that [ENGS 89](#) may also be counted toward requirements for the B.E. program.

Requirements for the Major in Biomedical Engineering Sciences

The biomedical engineering major is offered to students interested in going to medical school. .

Prerequisites are [MATH 3](#), [MATH 8](#), [MATH 11](#) or [MATH 13](#), [PHYS 13](#), [PHYS 14](#), [CHEM 5-6](#) or [CHEM 11](#), plus [ENGS 20](#). [COSC 1](#) and [COSC 10](#) can be substituted for [ENGS 20](#).

Unless otherwise prohibited, prerequisites for the major may be taken under the Non-Recording Option though this is discouraged for medical school applications. Students should consult the pre-health advising program for more information.

The biomedical engineering major consists of five engineering science courses, [ENGS 21](#) and [ENGS 22](#), one additional core course chosen from [ENGS 23](#), [ENGS 24](#), [ENGS 25](#), [ENGS 26](#) [ENGS 27](#), [ENGS 28](#) one gateway

course chosen from [ENGS 31](#), [ENGS 32](#), [ENGS 33](#), [ENGS 34](#), [ENGS 35](#) or [ENGS 36](#) and [ENGS 56](#) or one additional course chosen from [ENGS 23](#), [ENGS 24](#), [ENGS 25](#) or [ENGS 26](#); four biology and chemistry courses, two from [BIOL 12](#), [BIOL 13](#), [BIOL 14](#) and [CHEM 51/CHEM 52](#) (p. 186) or [CHEM 57/CHEM 58](#) and one biochemistry or engineering science elective chosen from [BIOL 40](#) or [CHEM 41](#), or an engineering science course numbered 23 or above.

Students wishing to pursue the BE degree are advised to choose an Engineering Sciences course as their elective.

A Culminating Experience in Engineering Sciences is required and should be consistent with a student's career objectives and courses taken. This can be taken as one of the two electives or as an additional course. The culminating experience may be: a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Dartmouth Medical School offers an opportunity for accomplished biomedical engineering sciences majors to apply for early admission to the Dartmouth Medical School through the Early Assurance Program. For more information, please consult the Thayer website at: <http://engineering.dartmouth.edu/undergraduate/ab/biomed-major.html>

Requirements for the Engineering Physics Major

The Department of Engineering Sciences and the Department of Physics and Astronomy offer a major in Engineering Physics. The Engineering Physics major features a 5/5 split in courses, unlike a modified major which requires six courses from one field and four from the other.

Students interested in a future career in Medical Physics are encouraged to consider the Engineering Physics major. The Thayer School Guide to Programs and Courses should be consulted for more detailed information.

The prerequisite courses for the Engineering Physics major are [MATH 3](#), [MATH 8](#), [MATH 13](#), [MATH 23](#); [PHYS 13](#), [PHYS 14](#); [CHEM 5](#); and [COSC 1](#) and [COSC 10](#) or [ENGS 20](#);

The Engineering Physics major is a ten-course program consisting of three Engineering Sciences core courses ([ENGS 22](#), [ENGS 23](#), [ENGS 24](#)); three Physics core courses ([PHYS 19](#), [PHYS 40](#), [PHYS 43](#) [Students taking

[PHYS 15](#) and [PHYS 16](#) should substitute a third physics elective for [PHYS 19](#)]); and four electives, two from each department. Two electives must be selected from the following list: [ENGS 25](#), [ENGS 33](#), [ENGS 34](#); [PHYS 50](#), [PHYS 68](#), [PHYS 90](#) (p. 668); [PHYS 73](#) or ENGS 131; [PHYS 66](#) or [ENGS 64](#) or ENGS 120; [PHYS 44](#) or [ENGS 72](#). The other two electives may be courses from the Engineering Sciences Department (numbered above 20, excluding ENGS 80 and [ENGS 87](#)) or courses from the Physics and Astronomy Department which fulfill the straight physics major.

Note: Five courses should be from Engineering Sciences and five courses should be from Physics and Astronomy.

Students wishing to pursue the BE degree are advised to choose an Engineering Sciences course as their elective.

A culminating experience is required in the major and may count as one of the electives above. It must be one of the following: a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list) or [PHYS 68](#), [PHYS 72](#), [PHYS 73](#), [PHYS 74](#), [PHYS 76](#), [PHYS 82](#), [PHYS 87](#).

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

For more information contact Professor Kristina Lynch (Physics and Astronomy) or Professor Jifeng Liu (Engineering Sciences).

Modified Majors

Diverse interests of students have, in the past, led to the construction of Engineering Sciences majors modified by courses in biology, chemistry, mathematics, computer sciences, physics, studio art, or environmental studies.

The following specific modified majors have been established. For questions, please contact the Engineering Sciences Department.

Modified major with Biology: Students interested in engineering and biology may elect a modified major with biology. This modified major must include:

1. as prerequisites: [MATH 3](#), [MATH 8](#), and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); [CHEM 5](#) or [CHEM 11](#), [ENGS 20](#), and [BIOL 12](#);
2. for the Engineering Sciences portion: [ENGS 22](#), [ENGS 25](#) and [ENGS 35](#) plus three courses elected from [ENGS 21](#),

[ENGS 23](#), [ENGS 24](#), [ENGS 26](#), [ENGS 33](#), [ENGS 34](#), [ENGS 36](#), [ENGS 37](#), [ENGS 52](#), [ENGS 56](#), [ENGS 58](#), [ENGS 91](#), ENGS 161, ENGS 162, ENGS 165 ([ENGS 91](#), ENGS 161 and 165 also satisfy the culminating experience requirement, see below);

3.
for the biology portion: [BIOL 13](#), plus three courses elected from [BIOL 37](#), [BIOL 42](#), [BIOL 43](#), [BIOL 45](#), [BIOL 46](#), [BIOL 71](#) or [CHEM 51](#) or [CHEM 57](#).

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 90](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. (Consult the Engineering Sciences Department for the most recent list.)

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified major with Chemistry: Students interested in engineering and chemistry may elect a modified major with chemistry. The major enables students to design programs of study that reflect the diversity of their interests. It requires a core of three engineering courses, provides a broad yet relevant set of engineering electives, requires a two-course chemistry core, and is completed with two chemistry electives. This modified major must include:

1.
as prerequisites: [MATH 3](#), [MATH 8](#), and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); [CHEM 5/ CHEM 6](#) or [CHEM 10](#); [ENGS 20](#);

2.
for the Engineering Sciences portion: [ENGS 22](#), [ENGS 25](#) and 36 plus three courses elected from the following: [ENGS 21](#), [ENGS 23](#), [ENGS 24](#), [ENGS 26](#), [ENGS 33](#), [ENGS 34](#), [ENGS 35](#), [ENGS 37](#), [ENGS 52](#), [ENGS 91](#), ENGS 156, ENGS 158 ([ENGS 91](#), ENGS 156 and ENGS 158 also satisfy the culminating experience requirement, see below.) Not more than two from [ENGS 21](#), [ENGS 35](#) and [ENGS 37](#) may be counted toward the major.

3.
for the Chemistry portion: [CHEM 51](#) or [CHEM 57](#) and [CHEM 75](#) plus two courses elected from [CHEM 41](#), [CHEM 52](#) or [CHEM 58](#), [CHEM 63](#), [CHEM 64](#), CHEM 67, [CHEM 76](#).

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of

the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified Major with Computer Science: Students interested in engineering and computer science may elect a modified major with computer science. Such a modified major must include:

1.
as prerequisites: [MATH 3](#), [MATH 8](#), [MATH 13](#); [COSC 1](#) and [COSC 10](#); [PHYS 13](#) and [PHYS 14](#); and [CHEM 5](#).

2.
for the modified major required courses include: [ENGS 22](#), [ENGS 27](#), [ENGS 31](#), [COSC 50](#), plus [ENGS 23](#) or [ENGS 24](#).

3.
for the modified major, breadth options include: a total of five courses from Groups A, B, and C with at least one course from each of the groups and three of the courses must be Computer Science courses; Group A includes [ENGS 32](#), [ENGS 62](#), [COSC 51](#); Group B includes [ENGS 26](#), [ENGS 68](#), [ENGS 92](#) ([ENGS 92](#) also satisfies the culminating experience requirement, see below), [COSC 60](#); Group C includes [ENGS 91](#), [COSC 31](#), [COSC 77](#), [COSC 58](#).

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified Major with Earth Sciences : Students interested in engineering and earth sciences may elect a modified major with earth sciences. Such a modified major must include:

1.
as prerequisites: [MATH 3](#), [MATH 8](#), and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); [CHEM 5](#), [ENGS 20](#), one introductory Earth Sciences course ([EARS 1-9](#) exclusive of [EARS 7](#)) plus [EARS 40](#);

2.
for the Engineering Sciences portion: [ENGS 22](#), [ENGS 23](#), [ENGS 24](#) and [ENGS 25](#) plus two engineering sciences electives, numbered above 20 (except ENGS 87);

3.
for the Earth Sciences portion: Four Earth Sciences courses, numbered 10 or above, at least one of which must be a Core Methods and Concepts course (Earth Sciences 30-59) and at least one of which must be a Quantitative Analysis or Advanced Topics course (Earth Sciences 60-79).

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified Major with Environmental Sciences: Students interested in engineering and environmental science may elect an engineering major modified with environmental science courses. Effective preparation for graduate study or professional activity in the environmental sciences requires an assimilation of material traditionally encountered in biology, chemistry, ecology, and earth sciences, as well as in engineering sciences. This modified major must include:

1.
as prerequisites: [MATH 3](#), [MATH 8](#), and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); [CHEM 5](#) or [CHEM 10](#); and [ENGS 20](#); at least one additional prerequisite from BIOL, CHEM, or EARS as appropriate for the environmental sciences electives below.

2.
for the Engineering Sciences portion: [ENGS 22](#), [ENGS 25](#), [ENGS 37](#) and three of the following: [ENGS 27](#), [ENGS 34](#), [ENGS 35](#), [ENGS 36](#), [ENGS 41](#), [ENGS 43](#), [ENGS 44](#), [ENGS 52](#), ENGS 171, ENGS 172, with at least two courses from among [ENGS 41](#), [ENGS 43](#), [ENGS 44](#), [ENGS 45](#) (p. 303).

3.
for the Environmental Sciences portion: four courses from the following list, with at least two courses from one department. [BIOL 21](#) or 51, [BIOL 26](#), [BIOL 27](#) or BIOL 68, [BIOL 22](#), 25, 53; [CHEM 51](#), [CHEM 63](#); [EARS 16](#), [EARS 35](#), [EARS 66](#), [EARS 67](#) (p. 259), [EARS 71](#), [EARS 72](#), [EARS 77](#), [EARS 78](#); [ENVS 12](#), [ENVS 15](#), [ENVS 20](#),

[ENVS 25](#), [ENVS 30](#). Additional requirements: [CHEM 51](#) is permitted only as a prerequisite to [CHEM 63](#).

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified major with Public Policy: Students interested in technology and public policy may elect an engineering major modified with public policy. This modified major must include:

1.
as prerequisites: [MATH 3](#), [MATH 8](#) and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); [ENGS 20](#) or [COSC 1](#) and [COSC 10](#); [CHEM 5](#); a course in statistical data analysis, such as [ECON 10](#), [SOCY 10](#), or [MATH 10](#).

2.
for the Engineering Sciences portion: [ENGS 21](#) and [ENGS 22](#), plus one course selected from [ENGS 23-ENGS 28](#), one course selected from [ENGS 30-37](#), one course selected from [ENGS 41](#), [ENGS 43](#), [ENGS 44](#), ENGS 51, [ENGS 52](#), [ENGS 56](#) and one Engineering Sciences course numbered above 20.

3.
for the Public Policy portion: [PBPL 5](#), plus at least one Public Policy methods course, such as: [PBPL 40-48](#) or [ECON 20](#), and at least one course from a policy track. These are typically mid-level courses in Public Policy or related departments, and cannot include Engineering Sciences courses. Possible tracks include: Environment and Public Policy; Health and Public Policy; Natural resources and Public Policy; and Science/technology and Public Policy. The Rockefeller Center maintains a list of suggested offerings in these areas.

4.
the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Modified major with Studio Art: Students interested in architecture or product design may elect an engineering major modified with studio art. This modified major must include:

1. as prerequisites: [MATH 3](#), [MATH 8](#), and [MATH 13](#); [PHYS 13](#) and [PHYS 14](#); plus [ENGS 20](#) and [CHEM 5](#);
2. for the engineering science portion: [ENGS 21](#), [ENGS 22](#), [ENGS 24](#) and [ENGS 33](#), plus two courses elected from any Engineering Sciences course available for AB credit in the major ([ENGS 76](#) or a graduate level elective also satisfy the culminating experience requirement, see below);
3. for the studio art portion: [SART 15](#) and [SART 16](#), plus two upper level studio art courses.
4. the modified major must also include a culminating experience, which may be a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list. Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

Requirements for a Modified major with Engineering Sciences as the Primary Department

Prerequisites are [MATH 3](#), [MATH 8](#), [MATH 13](#), [PHYS 13](#), [PHYS 14](#), plus [ENGS 20](#) and [CHEM 5](#). [COSC 1](#) and [COSC 10](#) can be substituted for [ENGS 20](#). For students prepared for advanced placement in Calculus it is advisable to take the sequence, [MATH 8](#) and [MATH 13](#), or [MATH 11](#).

1. [ENGS 21](#), and [ENGS 22](#), are required.
2. One from [ENGS 24](#), [ENGS 25](#), [ENGS 26](#), [ENGS 27](#), and [ENGS 28](#)
3. One from [ENGS 30](#), [ENGS 31](#), [ENGS 32](#), [ENGS 33](#), [ENGS 34](#), [ENGS 35](#), [ENGS 36](#); or [ENGS 37](#).
- 4.

One elective in Engineering Science numbered above 20 (excluding ENGS 80 and [ENGS 87](#))

5. And a Culminating Experience

A Culminating Experience in Engineering Sciences is required. This is typically taken as one of the electives or may be an additional course. The culminating experience may be: a project or a thesis, [ENGS 86](#), [ENGS 88](#) or [ENGS 89](#) ([ENGS 89](#) must be taken as part of the two-course design sequence [ENGS 89/ ENGS 90](#)); or an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list. Consult the Engineering Sciences Department for the most recent list.

Prior to enrollment in [ENGS 89](#), at least six engineering sciences courses must be completed; [ENGS 21](#) plus five additional courses numbered 22 to 76 and 91 and above.

For more information, please contact the Engineering Sciences Department.

All modified Engineering Sciences majors must be approved by the Chair of the Engineering Sciences Department.

Requirements for Another Major Modified with Engineering Sciences

Prerequisites are [MATH 3](#) and [MATH 8](#), and [PHYS 13](#) or [PHYS 3](#) and [PHYS 4](#)*. The required courses are four Engineering Sciences courses numbered above 20 (excluding [ENGS 87](#)), to include [ENGS 21](#) and should be coherent with the student's major field of study and approved, upon petition, by the Chair of Engineering Sciences. Students should note that many Engineering Sciences courses require prerequisites in addition to [MATH 8](#) and [PHYS 13](#). No engineering sciences courses 20 and above may be taken under the Non-Recording Option.

*Must have been taken at Dartmouth, no AP credit is permitted.

All modified Engineering Sciences majors must be approved by the Chair of the Engineering Sciences Department.

Requirements for the Minor in Engineering Sciences

Prerequisites are [MATH 3](#), [MATH 8](#) and [MATH 13](#), and [PHYS 13](#) and [PHYS 14](#). The required courses are [ENGS 20](#), [ENGS 21](#), [ENGS 22](#) and two Engineering Sciences undergraduate courses numbered above 20 (excluding ENGS 80 and [ENGS 87](#)). Students should note that some Engineering Sciences courses require prerequisites in addition to those noted. No courses beyond the prerequisites may be taken under the Non-Recording Option. No course may be used for both a major and a

minor (although a course may be part of one of these and prerequisite to the other, or prerequisite to both).

No more than one transfer course may be used for credit in the minor.

Requirements for the Minor in Materials Science

The minor in Materials Science is sponsored by faculty in Chemistry, Physics and Engineering with an interest in interdisciplinary education and research in materials science.

1.
As prerequisites: [PHYS 13](#) and [PHYS 14](#); [CHEM 5](#) or [CHEM 11](#),
2.
[ENGS 24](#) is required
3.
One from [PHYS 76](#) or [ENGS 133*](#)
4.
Two from:
 - a.
Group A [ENGS 131](#) or [PHYS 73](#)
 - b.
Group B [CHEM 96.04](#) (p. 189) or [CHEM 96.06](#) (p. 189)
 - c.
Group C [ENGS 73](#), [ENGS 132](#), or [PHYS 43](#)

*If ENGS 133 is taken as part of the requirement for the courses under Methods, at least one elective from outside the Engineering Sciences Department must be chosen.

No course may be used for both a major and a minor (although a course may be part of one of these and prerequisite to the other, or prerequisite to both).

No more than one transfer course may be used for credit in the minor.

Requirements for the Minor in Human-Centered Design

The minor in human-centered design in Engineering Sciences is an interdisciplinary program comprising six courses, one from Section 1, two from Section 2, and three from Section 3:

Section 1. Prerequisites: ENGS 12

Section 2. *Ethnographic Methods and Human Factors /Psychology*: [ANTH 3](#), [ANTH 18](#), [ENGS 15.07](#), [GEOG 11](#), [PSYC 22](#), [PSYC 23](#), [PSYC 28](#), [PSYC 38](#), [PSYC 43](#), [PSYC 50.02](#), [PSYC 51.11](#), [PSYC 53.10](#), [PSYC 53.12](#), [PSYC 53.13](#), [SOCY 11](#)

3. Design Electives: [ENGS 15.01](#), [ENGS 15.02](#), [ENGS 15.09](#), [ENGS 15.11](#), [ENGS 15.12](#), [ENGS 18](#), [ENGS 21](#), [ENGS 19.01](#), [ENGS 44](#), [COSC 23.01](#), [COSC 25.01](#), [COSC 25.02](#), [COSC 28](#), [COSC 29.06](#), [COSC 63.01](#), [COSC 67](#), [COSC 89.34](#), [FILM 51](#), [PBPL 43](#), [SART 65](#), [SART 66](#)

It is recommended that students take ENGS 12 first. Before taking courses in section 3, it is recommended that students take ENGS 12 plus at least one course from Section 2.

No course may be used for both a major and a minor (although a course may be part of one of these and prerequisite to the other, or prerequisite to both).

No courses in the HCD minor may be taken under the Non-Recording Option.

No more than one transfer course may be used for credit in the minor.

For Engineering majors: Only ENGS courses numbered below 20 may be counted towards the minor.

*One of the two courses in Section 2 must be outside of the student's major.

Students majoring in Cognitive Science, Cultural Anthropology, Neuroscience, Psychology, and Sociology may substitute an additional Section 3 course in place of their second Section 2 course.

For advice contact the Faculty Advisor for the minor, Peter Robbie.

Requirements for Any Major Modified with Human-Centered Design

Any major may be modified with the minor in Human-Centered Design. The HCD minor portion of the modification requires a total of six courses, one from Section 1, two from Section 2, and three from Section 3.

Section 1. Prerequisites: [ENGS 12](#)

Section 2. *Ethnographic Methods and Human Factors /Psychology*: [ANTH 3](#), [ANTH 18](#), [ENGS 15.07](#), [GEOG 11](#), [PSYC 22](#), [PSYC 23](#), [PSYC 28](#), [PSYC 38](#), [PSYC 43](#), [PSYC 50.02](#), [PSYC 51.11](#), [PSYC 53.10](#), [PSYC 53.12](#), [PSYC 53.13](#), [SOCY 11](#)

3. Design Electives: [ENGS 15.01](#), [ENGS 15.02](#), [ENGS 15.09](#), [ENGS 15.11](#), [ENGS 15.12](#), [ENGS 18](#), [ENGS 21](#), [ENGS 19.01](#), [ENGS 44](#), [COSC 23.01](#), [COSC 25.01](#), [COSC 25.02](#), [COSC 28](#), [COSC 29.06](#), [COSC 63.01](#), [COSC 67](#), [COSC 89.34](#), [FILM 51](#), [PBPL 43](#), [SART 65](#), [SART 66](#)

Students majoring in Cognitive Science, Cultural Anthropology, Neuroscience, Psychology, and Sociology may substitute an additional Section 3 course in place of their second Section 2 course.

Students wishing to modify their major with HCD should discuss their plans with their major advisor as well as the

Faculty Advisor for the minor, Peter Robbie. Formal proposals for modification require approval of both the major department as well as Engineering Sciences Department Chair, Vicki May.

**Due to the potential overlap between the HCD courses and existing majors, there is potential for creating a program of study that does not add significant value beyond a straight major. Students pursuing the modification should note that 1) there should be a strong intellectual rationale, 2) the proposed plan should be adding something new and significant that is not possible with the straight major, and 3) there should not be significant overlap in courses between the modifier and the primary field of the major.

Honors in the Major

During their junior or senior year, students may apply for admission to the Honors Program in Engineering Sciences. The application must be filed no earlier than the second week of the fall term in the junior year and no later than the second week of the winter term in the senior year. Contact the Chair of the Engineering Sciences Department for details. Admission to the Honors Program may be granted to those students who have attained an overall grade point average of 3.0, and a grade point average of 3.33 in the major.

The main requirement of the Honors Program is the completion of an honors project. The project, a creative activity suitable to the major subject, is not restricted to experimental work but can equally take the form of a theoretical investigation. Much of the development of the honors project will normally take place within the framework of [ENGS 88](#), the Honors Thesis. ([ENGS 88](#) also fulfills the requirement for a culminating experience in the major.) Upon completion of the project, the student will submit a written thesis and give an oral presentation. Those students who satisfactorily complete the Honors Program with a 'B+' average or better and have a grade point average of 3.3 or higher in the major at the time of graduation, will earn Honors recognition in the major. High Honors will be granted to those students who, in addition, have taken two engineering science courses beyond those required for the major (excluding courses under [ENGS 20](#) and [ENGS 87](#)), have attained a grade point average of 3.50 in all engineering courses, and have completed outstanding independent work. A vote of the Department is also required prior to awarding High Honors. Students may begin their project the previous term by enrolling in [ENGS 87](#), Undergraduate Investigations. An interim evaluation of honors students will be made after one term and continuation will be recommended for those students whose work demonstrates the capacity for satisfactory (B+) work. Students who satisfactorily complete the Honors Program will have entered on their permanent record Honors in Engineering Sciences, or High Honors in Engineering Sciences.

Advanced Standing in Thayer School Graduate Programs

Many students majoring in engineering sciences enter Dartmouth College with course credits, proficiencies, or both, in a number of subjects resulting from exceptional preparation in high school. As a result, these students have increased elective freedom in choosing courses to satisfy their A.B. requirements.

The 100- and 200-level Engineering and Engineering Sciences courses described in this catalog can be used to satisfy the A.B. degree requirements.

Election of 100- and 200-level Engineering and Engineering Sciences courses in excess of the undergraduate requirements for the major and for admission to any of Thayer's post-A.B. programs will permit a student to be admitted to the Thayer School with advanced standing. Depending upon the number of elective opportunities, significant reduction in the time required to complete Thayer School's graduate degree programs is possible.

To take full advantage of this opportunity students are urged, as early as possible after declaring their major, to consult with their Thayer School adviser. Additional details are contained in the Thayer School Guide to Programs and Courses.

Requirements for the Bachelor of Engineering Degree (B.E.)

The Bachelor of Engineering (BE) degree program is accredited by the Engineering Accreditation Commission of [ABET](#) under the commission's General Criteria.

Consult the current Thayer School Guide to Programs and Courses for details on the requirements for the Bachelor of Engineering degree, as well as Master's degree programs.

ENGS - Engineering Sciences - Undergraduate Courses

To view Engineering Sciences Undergraduate requirements, [click here](#). (p. 286)

To view Engineering Sciences Graduate requirements, [click here](#). (p. 899)

To view Engineering Sciences Graduate courses, [click here](#). (p. 904)

ENGS 1 - Everyday Technology

Instructor: Davis

This course is intended to take the mystery out of the technology that we have grown to depend on in our everyday lives. Both the principles behind and examples of devices utilizing electricity, solid and fluid properties, chemical effects, mechanical attributes and other topics

will be discussed. In the associated lab project, students will dissect, analyze, (and possibly revive!) a broken gadget or appliance of their choosing. This course has no prerequisite, but enrollment may be limited.

Degree Requirement Attributes: TLA

ENGS 1.01 - Mathematical Concepts in Engineering

Instructor: P. Taylor

This course introduces prospective engineering students to mathematical concepts relevant in engineering while emphasizing the solving of engineering problems rather than mathematical derivations and theory. All topics are driven by engineering applications taken directly from core engineering courses. The course includes hands-on laboratory exercises as well as a thorough introduction to Matlab.

Degree Requirement Attributes: Dist:TAS

ENGS 2 - Integrated Design: Engineering, Architecture, and Building Technology

Instructor: Wilson

An introduction to the integrated design of structures and the evolving role of architects and engineers. The course will investigate the idea that design excellence is very often the result of deep collaboration between engineers, architects, and builders and that it is only in relatively recent history that a distinction between these areas of expertise has existed. The historical, social, and architectural impact of structures will be explored and several structures and their designers will be studied in depth. Enrollment limited to 50 students. No Prerequisite.

Degree Requirement Attributes: TAS

ENGS 3 - Materials: The Substance of Civilization

Instructor: Lasky, Bish

With the exception of ideas and emotions, materials are the substance of civilization. From the "Iceman's" copper ax to indium phosphide gallium arsenide semiconductor lasers, materials have always defined our world. We even name our epochs of time based on the dominant material of the age: Stone Age, Bronze Age, Iron Age and now Silicon Age. In addition to discussing the nature and processing of metals, polymers, ceramics, glass and electronic materials, this course will analyze the dramatic developments in civilization directly resulting from advances in such materials. The text Stephen Sass's *The Substance of Civilization* will be used in the course. Enrollment limited to 50 students per section. No Prerequisite.

Degree Requirement Attributes: TAS

ENGS 3.10 - Elementary Oceanography

Oceanography is one of the studies in which natural processes are investigated with interdisciplinary

approaches by scientists of a wide range of specialties. Physical, chemical, biological and geological processes in the oceans and their interactions are studied in this course. Students will gain appreciation of the complexity of the ocean as a natural system and necessity of interdisciplinary to investigate it. Oceans as a source of resources, as a fundamental part of the global climate engine, as a book of Earth's environmental history, and as a bed of the origin of life are discussed. Use and abuse of ocean resources and associated environmental problems, such as ocean water pollution, over-fishing and whaling are also discussed.

Cross-Listed as: EARS 003

Degree Requirement Attributes: Dist:SCI

ENGS 4 - Technology of Cyberspace

Instructor: Taylor

This course will cover some basic concepts underlying the 'information superhighway.' The technologies of high speed networking have stimulated much activity within the federal government, the telecommunications and computer industries, and even social science and popular fiction writing. The technical focus will be on communications technologies, information theory, and the communications requirements of video (standard and ATV), speech (and other audio), text data. Social economic and policy issues will be an integral part of the course. Enrollment limited to 30 students.

Degree Requirement Attributes: TAS

ENGS 5 - Healthcare and Biotechnology in the 21st Century

Technologies that will impact healthcare in the 21st century are explored, including biology, robotics, and information. Biotechnologies are explored that will be used for the treatment of diseases and the regeneration of missing organs and limbs. Robotics will be explored that will replace parts. This will include artificial organs, robots as replacement for human parts, the human genome project, gene therapy, biomaterials, genetic engineering, cloning, transplantation (auto, allo and xeno), limb regeneration, man-machine interfaces, robotics, prosthetic limbs, artificial organs and joints. This section will also cover ethical issues related to the above topics and issues regarding the FDA and the approval of new medical treatments. We will discuss going beyond normal with respect to the senses, muscles and creating wings. Enrollment is limited to 75 students. No Prerequisite.

Degree Requirement Attributes: TAS

ENGS 6 - Technology and Biosecurity

Instructor: Hoyt

This course will introduce students to the technologies used to combat biological threats to security ranging from pandemic influenza to bioterrorism. In particular, this

course will explore the dual role that technology plays in both enhancing and destabilizing security. Specific technologies covered include the use of nanotechnology, synthetic biology, and mass spectrometry. The course considers questions such as: Where can technological solutions have the greatest impact? When can defensive technologies have offensive applications? And, how can we balance the need to regulate potentially dangerous technologies against the need for academic freedom and high tech innovation? This course has no prerequisite, but enrollment is limited to 30 students.

Degree Requirement Attributes: TAS

ENGS 7 - First-Year Seminars in Engineering Sciences

ENGS 8 - Materials in Sports Equipment

Sports equipment uses almost every type of material imaginable, as athletes and designers leverage state-of-the-art materials to maximize human efficiency, performance, comfort and safety. As something most people have some familiarity with, active Dartmouth students in particular, it is an excellent subject for an exploration of material characteristics, selection, design, and failure. This course will introduce materials science concepts in a way that is accessible and useful for the non-major. It will exercise student's critical thinking, quantitative and communication skills. In-class demonstrations will allow students to explore material behavior and differences between materials 'hands-on' and possible field trips or lab visits will introduce them to some engineering test methods. Finally, this course will demystify terms used by manufacturers and salespeople, and help students, as athletes and consumers, make informed equipment choices. Enrollment is limited to 40 students. No prerequisite.

Degree Requirement Attributes: TAS

ENGS 9 - Everyday Technology

Instructor: Davis

This course is intended to take the mystery out of the technology that we have grown to depend on in our everyday lives. Both the principles behind and examples of devices utilizing electricity, solid and fluid properties, chemical effects, mechanical attributes and other topics will be discussed. In the associated lab project, students will dissect, analyze, (and possibly revive!) a broken gadget or appliance of their choosing. This course has no prerequisite, but enrollment is limited to 50 students.

Degree Requirement Attributes: Dist:TLA

ENGS 11 - The Way Things Work: A Visual Introduction to Engineering

Instructor: Macaulay

Students will explore and compare engineered systems and processes in the world around them. They will sketch and

build models to help them understand and communicate. Each week, students will learn new sketching and visual communication techniques that they will use to visually explain how engineered systems or processes work. Students will also maintain a sketchbook to practice new sketching techniques. After being exposed to some basic engineering principles students will further investigate specific engineered systems through sketching, research, disassembly, and building. They will communicate their findings visually.

Prerequisite: None

Degree Requirement Attributes: Dist:ART

ENGS 12 - Design Thinking

A foundation course on the cognitive strategies and methodologies that form the basis of creative design practice. Design thinking applies to innovation across the built-environment, including the design of products, services, interactive technology, environments, and experiences. Topics include design principles, human need-finding, formal methodologies, brainstorming, heuristics, thinking by analogy, scenario building, visual thinking, and study of experienced thinkers. Weekly projects and exercises in a variety of media provide practice and development of students' personal creative abilities. Enrollment limited to 20 students. No prerequisite.

Degree Requirement Attributes: Dist:TAS

ENGS 13 - Virtual Medicine and Cybercare

There is a revolution in technology that is occurring in health care. This new technology will dramatically change how health care is delivered in the future. This course will cover topics related to the virtual human created from bits. This will include virtual reality, augmented reality and datafusion, computer simulation, advanced 3D and 4D imaging techniques, the operating room of the future, minimally invasive surgery, space medicine, teleoperations, telemedicine and telesurgery, internet 2 and cyber-space, artificial intelligence and intelligent agents applied to medicine, and the national library of medicine virtual human project. We will also discuss the FDA approval of computer simulators, robotic surgeons, and the ethics of robots doing surgery. In addition we will discuss the medical library of the future, teleconferencing and the use of interactive media in healthcare education. We will also discuss computerized patient records (CPR) and clinical information systems. Enrollment limited to 48. No prerequisite.

Degree Requirement Attributes: TAS

ENGS 14 - The Science and Engineering of Music

Instructor: Hartov

Almost everyone enjoys some forms of music, but few are familiar with the science and engineering that make music possible. In this course students are invited to explore the making of music from technical and scientific perspectives. In particular this covers aspects of acoustics, the workings of musical instruments, and selected aspects of musical theory and audio engineering. Students in the course explore music with many in-class demonstrations and hands-on experimentation. Course topics include how sound is recorded and stored digitally, the composition of sound from a musician's point of view (pitch, chords, harmony and melody) and from an engineer's point of view (frequency, harmonics). The relationships between these two perspectives are then explored. This course does not require proficiency in either music or any particular instrument. Enrollment is limited to 75 students.

Degree Requirement Attributes: TAS

ENGS 15 - Undergraduate Investigations in Engineering

An original investigation in a phase of science or engineering under the supervision of a member of the staff. Students electing the course will be expected to have a proposal approved by the department chair and to meet weekly with the staff member supervising the investigation. The course is open to undergraduates who are not majoring in engineering. A report describing the details of the investigation must be filed with the department chair and approved at the completion of the course.

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Prerequisite: Permission of department chair (a one-page proposal submission is required and must be submitted for approval prior to the end of the term preceding the term in which the course will be taken).

Degree Requirement Attributes: Dist:TAS

ENGS 15.01 - Senior Design Challenge I

Instructor: Korsunskiy

The Senior Design Challenge is a two-term course designed to serve as a senior capstone experience for Dartmouth students across all majors. Students in this project-based course will practice human-centered design, developing not only the skills, but also the creative confidence to apply their liberal arts education to make a positive difference in the world beyond Dartmouth. Students will work in interdisciplinary teams on projects that will be determined in partnership with organizations in the Upper Valley. The project topics will be designed to give students some flexibility in determining the specific problem on which to focus, while ensuring client responsiveness and substantial fieldwork opportunities. Enrollment is limited.

Students are awarded one course credit for successful completion of this course upon completion of ENGS-15.02. Students register for ENGS-15.01 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for ENGS-15.02 the subsequent term to complete the coursework. A final grade will replace the "ON" in ENGS-15.01 upon completion of ENGS-15.02.

Degree Requirement Attributes: Dist:TAS

ENGS 15.02 - Senior Design Challenge II

Instructor: Korsunskiy

The Senior Design Challenge is a two-term course designed to serve as a senior capstone experience for Dartmouth students across all majors. Students in this project-based course will practice human-centered design, developing not only the skills, but also the creative confidence to apply their liberal arts education to make a positive difference in the world beyond Dartmouth. Students will work in interdisciplinary teams on projects that will be determined in partnership with organizations in the Upper Valley. The project topics will be designed to give students some flexibility in determining the specific problem on which to focus, while ensuring client responsiveness and substantial fieldwork opportunities. Enrollment is limited.

Students are awarded one course credit for successful completion of this course. Students who have registered for ENGS-15.01 register for ENGS-15.02 to complete the coursework. A final grade will replace the "ON" for ENGS-15.01 upon completion of this course for a total of 2 credits for ENGS-15.01 and ENGS-15.02.

Degree Requirement Attributes: Dist:TAS

ENGS 15.03 - The Ecosystem for Bio-Innovation

Instructor: Cooper

We are living through biology's century: global pandemics; \$100 genomes; bio-reactor beef; plastic-eating engineered microbes...and we still have 80 years to go.

This course is built around the basic idea that biotechnology is changing the world, but will only reach its greatest potential—technologically, economically, ethically—if we learn to guide it as a complex ecosystem of inter-dependent actors. Biotech hubs thrive where there is a dense milieu of intellectual and financial capital from top universities, academic medical centers, entrepreneurs, and venture capital. This course aims to ensure that future leaders—physicians, scientists, journalists, lawyers, financiers, patients, legislators—understand the ways that scientific advances, innovation policy, and entrepreneurship feed one another.

Taught by a biotech venture capital investor, this is an inter-disciplinary course designed to empower students with the context and confidence to go deeper than news

headlines that fail to see *both* the ‘forest’ *and* the ‘trees’. The term will unfold in a cumulative manner. We begin with a diagnosis and overview of the Ecosystem for Bio-Innovation, and then go deeper into the institutions and players that cross-pollinate within this ecosystem, focusing on healthcare (e.g. mRNA vaccines, genetic disease treatments) while making note of biotechnology’s far broader impact on our society and planet. Each week of the course will focus on one theme, while also introducing new intellectual frameworks, plus real-world cases to help concretize key concepts. We will bring material to life through a combination of lecture, Socratic learning, student projects, guest speakers, and in-class debates, always infusing our time together with a sense of the scientific, economic, political, and ethical choices at stake. Final projects will allow students to critically apply coursework toward a cutting-edge area of biotechnology.

Degree Requirement Attributes: Dist:TAS

ENGS 15.04 - Computing Before Electronics

Instructor: Frost

In this course we explore the computational techniques by which society survived and thrived before the advent of the integrated circuit and the electronic calculator. From the commerce of early civilizations until the last third of the 20th century, there was a progression of mechanical calculating gadgets, some simple – some quite ingenious and complex. Among these we will study slide rules, planimeters, integrators, digital adding machines, nomographs, and other special charts and graphical techniques. We will also cover celestial navigation, which in its day was a particularly important application of calculation; technical drawing and perspective, the precursors to computer graphics; and cryptography, whose computational requirements helped propel us into the electronic age. Laboratory sessions will give students direct experience using antique and period calculating instruments, plus the opportunity to create their own calculating devices.

Prerequisite: Introductory Calculus (Math 3, or equivalent, or permission)

Offered: Spring.

Degree Requirement Attributes: Dist:TLA

ENGS 15.05 - Blockchain Explored: Promise, Pitfalls and Plumbing

This course will explore blockchains – how they work, how they have been used, and how they are affecting society in finance, information sharing, and law. Blockchain technology and its applications have been hyped and condemned with equal fervor. We will examine the phenomenon from a number of perspectives, and aim to provide all participants, no matter what their background or level of technical skill, with both some hands-on experience in working with blockchain-based software and

some understanding of the place of applications such as cryptocurrencies, NFTs and DAOs in contemporary America.

ENGS 15.06 - Technology Entrepreneurship

This course introduces students from all majors, including science, engineering, and humanities to the fundamentals of entrepreneurship as applied to the commercialization of new technologies.

Through case studies, readings, lectures, projects, and engagement with class guests the course will provide instruction and perspective on the process entrepreneurs take to start, resource, adapt and grow innovative technology-based ventures and help develop students’ understanding of their own interest in pursuing careers in the field.

ENGS 15.07 - Research Methods for Human-Centered Design

Research to inform Human-Centered design draws from a variety of disciplines (chiefly Human Factors and User Research) to solve complex, ambitious problems in technology design. The process across fields is the same: leveraging empathy and psychological research principles to bring human needs and experience into product design and development.

This course will cover a range of research methods that apply to product design, predominantly through the lens of digital products (but applicable to other technologies). Key primary research methods will include contextual inquiry, expert interviews, diary studies, usability testing, cognitive walk throughs, A/B testing, and surveys.

In order to ground these methods in theory, as well as provide practical experience, the course will be a blend of lecture, readings, discussion, and projects. The course is ideal for students with a social science background and an interest in applying this discipline to technology, or students who have had an introduction to research methods for product design and an interest in learning more. A background in statistical or data analysis is helpful but not compulsory.

ENGS 15.08 - AI Demystified: A Roadmap To Understand Evolving Technologies

AI Demystified unfolds the pivotal world of Artificial Intelligence (AI), spotlighting its multifaceted applications and theoretical concepts across diverse sectors such as healthcare and commerce. This course, while demystifying AI, delves deep into its practical and ethical aspects, aligning with its impactful presence in our daily lives and future. Through a combination of illuminative lectures, hands-on coding sessions, weekly assignments, and a group project, students traverse through AI’s principles, applications, and societal impacts, culminating in a wholesome learning experience tailored for AI beginners

and prospective professionals, and preparing them to adeptly navigate our increasingly AI-infused future.

Prerequisite: COSC 1 or ENGS 20. A working knowledge of Python is recommended. Students will be expected to have an elementary knowledge of Python by the end of week 2. Materials will be provided to support this.

ENGS 15.09 - Design Ethics

Every physical and digital artifact in the human-built environment is the product of a design process, and every decision that designers make—from how to gather research information, to what materials to use—carries ethical implications. That is, every choice that designers make has the potential to shape the distribution of benefits and harms. Yet, very often, designers are not fully aware of these ethical implications and are not trained to navigate the complex ethical dilemmas that they encounter in their work. Consequently, we are surrounded by objects and systems that perpetuate social injustices and environmental destruction. This course integrates philosophical theorizing and design practice, exploring the moral, social, and environmental responsibilities of designers in, e.g., product design, engineering design, UI/UX design, and other related fields. Through readings, group discussions, short lectures, case studies, guest speakers, and hands-on projects, students will learn to critically analyze and apply ethical principles in the context of design. Along the way, students will develop not only a deeper understanding of the role of design in shaping our world, but also the skills needed to become more thoughtful and responsible designers.

Prerequisite: Any one of: ENGS 12, ENGS 21, or COSC 25.01

Degree Requirement Attributes: Dist:TMV

ENGS 15.10 - Narrative Design for Innovators

Innovators cannot avoid narrative. It simply comes with the territory. Would you have heard of Apple if it didn't break through with a powerful THINK DIFFERENT brand? Or what about Theranos? Would they have risen (and fallen) so quickly if it weren't for a captivating idea about changing healthcare with just one drop of blood? In both of these cases, would the founders have been so iconic without their infamous black turtlenecks?

Innovation, scale, and story go hand in hand. As the innovator brings their idea to the world, they have a number of questions to consider: how do I communicate what's so game-changing about this idea? How do I tell my story so investors and advocates trust me to bring this innovation to market? How do I build a brand my audience identifies with (and wants to buy)? How do I build a company culture that recruits and retains the best talent—and rallies people to make a positive impact on the world?

These are all designed objects with narrative at the core, which we'll learn to craft.

We'll explore how traditional design processes and mindsets used to create digital and physical artifacts can be applied to the narrative artifact. Building on this foundation, we'll also expand the designers' toolkit with new methods of research, analysis, and craft specific to the narrative dimension of design work.

From Airbnb to Tesla, Beyonce to Taylor Swift, we'll go way beyond "marketing" and analyze case studies of how the world's most impactful innovators use diverse narrative strategies to grow traction around their ideas and achieve their goals.

Students will then get to try their hand at applying these strategies to design impact-focused narratives through practice projects. For the midterm project, student groups will redesign Budweiser to speak to a modern story of masculinity. For the culminating project of the course, students will design and pitch narrative objects to real-world founders to help them launch their new-to-world businesses.

ENGS 15.11 - Design & Education

This course explores intellectual synergies between design and education including three explicit intersections: how design methods help us create better learning experiences; how design pedagogies can be valuable to the instruction of non-design subjects; and how human-centered design might help us address persistent problems in education systems. In an attempt to practice what it preaches, this course does not use the standard letter grading system—please inquire with the instructor about implications for your minors/modifications.

Prerequisite: One of: ENGS 12, EDUC 01, EDUC 17, EDUC 27, EDUC 32; or instructor permission

ENGS 15.12 - Design and Entrepreneurship

In this course, students will learn how entrepreneurs reason and behave in contexts with high uncertainty and how entrepreneurial skills might help us effect positive change in applications including and beyond venture formation. Through short sprints, weekly readings and discussions, and a longer project, students will experience several approaches to "entrepreneurial thinking." Throughout the term, the class will discuss how each approach relates to design thinking, uncertainty, innovation, and the goals of the liberal arts.

ENGS 15.13 - Vaccines, Drugs, and Entrepreneurship

This course will introduce students to how new vaccines and drugs are developed and delivered to patients by scientists, industry, and entrepreneurs. This course will also examine new opportunities to improve speed, scale and access to new medicines that are not just commercially viable, but socially valuable. To tell this story, we will follow the development of Covid-19 vaccines from the initial discoveries made in protein, nucleic acid, and nano-material engineering, the transfer of these technologies into

entrepreneurial venture capital-backed startup companies like Moderna and BioNTech, and their development into novel vaccines that saved millions of lives. We will examine the technical, clinical, business, and marketing/educational, and policy strategies that determine the development, access, and acceptance of these new vaccines and drugs.

A key feature of this course is a student team project in which students use entrepreneurial thinking to design a comprehensive development plan for a novel biomedical product candidate that employs engineering, business, and social science strategies identified throughout the term. The objective of the plan is to design, test, manufacture, and sell a safe and effective product that will be both accessible and acceptable to the end-user population. By the end of the course, students will be able to analyze the biotechnology landscape, identify promising biomedical venture opportunities, understand effective business strategies, and identify strategies that can enhance the social value of these ventures. Students will emerge from this course with a deeper understanding of unique challenges and opportunities inherent in biotech entrepreneurship.

ENGS 16 - Biomedical Engineering for Global Health

The past 20 years have seen an incredible amount of high-tech medical advances, but to what degree have these impacted the health of those living in the developing world? The potential for years of life gained through biomedical technology is tremendous in some of the world's poorest regions, but appropriate design requires an understanding of the clinical, political, and cultural landscape, and a clean-slate approach to developing low-cost, effective tech. This course offers an exciting opportunity to understand how to design solutions for the most important health challenges of the developing world. Learning goals will be achieved through hands-on experience, including: a laboratory component where we deconstruct, design and build a low-cost medical device, case study discussions on successful global health innovations, and several "teardowns" of common medical devices. Lecturers from Thayer, Tuck, TDC and Geisel will cover complimentary topics in clinical medicine, healthcare delivery, innovation and medical imaging. A final project will bring everything together by addressing a real health problem with a prototype of a low-cost tech solution. Enrollment is limited to 40 students.

Degree Requirement Attributes: TAS

ENGS 17 - Electronics for Musicians

Instructor: Hartov

From public address systems to recording performances and the creation of synthetic sounds, electronic technology permeates the making of music in many ways. In this course we propose to familiarize students with the technology behind the production of music. The course

will cover analog electronics from microphone to speaker, digital electronics from the acquisition of sounds, their digital processing and their digital synthesis. This course is targeted to undergraduate students in music but is open to all students with an interest in the topic. Students will learn through in-class exploration and through labs. The course will conclude with students completing a project of their choice demonstrating their mastery of the subject.

Degree Requirement Attributes: TLA

ENGS 17.04 - Making Music: The Art, Science, and Symbolism of Musical Instruments

Instructor: Levin, Wegst

A hands-on course in which students working in groups build and assemble simple musical instruments with the aim of understanding how materials, technologies, craftsmanship, and cultural knowledge interact in the conception, design, and production of diverse instruments around the world. Merging the methodologies of engineering and materials science with the approaches of arts and humanities, the course explores from an interdisciplinary perspective the social meanings and powers ascribed to musical instruments, and the way that instruments have come to function as potent symbols of personal, cultural, and political identity.

Cross-Listed as: COCO 020 MUS 17.04

Degree Requirement Attributes: WCult:NW

ENGS 18 - System Dynamics in Policy Design and Analysis

Instructor: Peterson

This course introduces systems dynamics, an approach to policy design and analysis based upon feedback principles and computer simulation. The approach is useful for gaining an understanding of the underlying structural causes of problem behavior in social, economic, political, environmental, technological, and biological systems. Goals of this approach are to gain better understanding of such problem behaviors and to design policies aimed at improving them. Lectures and exercises illustrate applications of the approach to real, current problems such as urban decay, resource depletion, environmental pollution, product marketing and distribution, and agricultural planning in an expanding population. The similarity and transferability of underlying feedback characteristics among various applications is emphasized. No prior engineering or computer science experience is necessary.

Prerequisite: MATH 3

Degree Requirement Attributes: TAS

ENGS 19.01 - Future of Energy Systems

Instructor: Peterson

Energy production, distribution, and use is central to human activity. In many quarters, there is growing appreciation for the nexus among energy, climate change, the environment, and economic development. This course will focus on futures of energy as they impact, and are impacted by, these drivers. The course uses model-based approaches to develop global-scale energy scenarios and to explore the potential evolution of current and potential energy options in both localized and global settings.

Degree Requirement Attributes: Dist:TAS

ENGS 20 - Introduction to Scientific Computing

In this course, students learn how to solve problems in engineering and sciences by writing computer programs. To this end, students learn general concepts to design programming solutions to problems and gain experience implementing these solutions in the commonly used programming language C. Programming topics include problem decomposition, control structures, recursion, arrays and other data structures, file I/O, and code modularization. Applications will be drawn from numerical solutions of ordinary differential equations, root finding, searching and sorting, simulation, and data analysis. Good programming style, debugging techniques and computational efficiency are emphasized. Although no previous programming experience is assumed, a significant time commitment is required. Students planning to pursue the engineering sciences major are advised to take ENGS 20. Students considering the computer science major should take COSC 1 and COSC 10. Students considering both majors should consider taking ENGS 20 and COSC 10.

Prerequisite: MATH 3 and prior or concurrent enrollment in MATH 8

Degree Requirement Attributes: Dist:TAS

ENGS 21 - Introduction to Engineering

The student is introduced to engineering through participation, as a member of a team, in a complete design project. The synthesis of many fields involving the laws of nature, mathematics, economics, management, and communication is required in the project. Engineering principles of analysis, experimentation, and design are applied to a real problem, from initial concept to final recommendations. The project results are evaluated in terms of technical and economic feasibility plus social significance. Lectures are directed toward the problem, and experiments are designed by students as the need develops.

Prerequisite: MATH 3 or equivalent

Degree Requirement Attributes: Dist:TLA

ENGS 22 - Systems

The student is introduced to the techniques of modeling and analyzing lumped systems of a variety of types,

including electrical, mechanical, reacting, fluid, and thermal systems. System input will be related to output through ordinary differential equations, which will be solved by analytical and numerical techniques. Systems concepts such as time constant, natural frequency, and damping factor are introduced. The course includes computer and laboratory exercises to enhance the students' understanding of the principles of lumped systems. Students will develop the ability to write MATLAB code. Enrollment is limited to 35 in fall and 50 students for winter and summer.

Prerequisite: MATH 13, PHYS 14, and ENGS 20

Degree Requirement Attributes: TLA

ENGS 23 - Distributed Systems and Fields

A study of the fundamental properties of distributed systems and their description in terms of scalar and vector fields. After a summary of vector-field theory, the formulation of conservation laws, source laws, and constitutive equations is discussed. Energy and force relations are developed and the nature of potential fields, wave fields, and diffusion fields examined. A survey of elementary transport processes is given. Particular attention is given to the relation between the description of systems in terms of discrete and distributed parameters. Applications are chosen primarily from fluid mechanics, electromagnetic theory, and heat transfer. Includes a set of laboratories.

Prerequisite: ENGS 22, or equivalent

Degree Requirement Attributes: TAS

ENGS 24 - Science of Materials

An introduction to the structure/property relationships that govern the mechanical, the thermal, and the electrical behavior of solids (ceramics, metals, and polymers). Topics include atomic, crystalline, and amorphous structures; x-ray diffraction; imperfections in crystals; phase diagrams; phase transformations; elastic and plastic deformation; free electron theory and band theory of solids; and electrical conduction in metals and semiconductors. The laboratory consists of an experimental project selected by the student and approved by the instructor. Enrollment limited to 60 students.

Prerequisite: PHYS 14 and CHEM 5

Degree Requirement Attributes: TLA

ENGS 25 - Introduction to Thermodynamics

The fundamental concepts and methods of thermodynamics are developed around the first and second laws. The distinctions among heat, work, and energy are emphasized. Common processes for generating work, heat, refrigeration, or changing the physical or chemical state of materials are analyzed. The use of thermodynamic data and auxiliary functions, such as entropy, enthalpy, and free

energy, is integrated into the analysis. The numerous problems show how theoretical energy requirements and the limitations on feasible processes can be estimated. Enrollment is limited to 60 students.

Prerequisite: MATH 13, PHYS 13, ENGS 20 or COSC 1 and COSC 10

Degree Requirement Attributes: TAS

ENGS 26 - Control Theory

The course treats the design of analog, lumped parameter systems for the regulation or control of a plant or process to meet specified criteria of stability, transient response, and frequency response. The basic theory of control system analysis and design is considered from a general point of view. Mathematical models for electrical, mechanical, chemical, and thermal systems are developed. Feedback control system design procedures are established using root-locus and frequency-response methods.

Prerequisite: ENGS 22

Degree Requirement Attributes: Dist:TLA

ENGS 27 - Discrete and Probabilistic Systems

Instructor: Cybenko

This course is an introduction to probabilistic methods for modeling, analyzing, and designing systems. Mathematical topics include the fundamentals of probability, random variables and common probability distributions, basic queueing theory, and stochastic simulation. Applications, drawn from a variety of engineering settings, may include measurement and noise, information theory and coding, computer networks, diffusion, fatigue and failure, reliability, statistical mechanics, ecology, decision making, and robust design.

Prerequisite: MATH 8 and either ENGS 20 or COSC 1 and COSC 10. PHYS 13 or CHEM 5 recommended.

Degree Requirement Attributes: TAS

ENGS 28 - Embedded Systems

Instructor: P. Taylor

Small computers have been embedded in engineered systems, such as automobiles, for a few decades. With the growth of such application areas as the Internet of Things (IoT) and advanced driver assistance systems (ADAS), embedded systems are becoming yet another fundamental tool for engineering design. The purpose of this course is to introduce embedded systems to students at an early stage in their engineering education, with minimal prerequisites. Many students have been exposed to the potential of embedded systems at the hobby or maker level through robotics and the boards such as the popular Arduino and are excited to go farther. Other students see programming for the first time in introductory computing courses and want to do more. This course offers a path into

important physical applications of computing in engineering, equipping you with skills you can use throughout your project work at Thayer School. Engs 28 will introduce you to a variety of physical sensors and actuators, and how to connect them to a microcontroller. Our development platform is an Arm-based STM32 Nucleo-64 board, and we will teach you to program its STM32C031C6 microcontroller with the industry-standard ANSI C language rather than making use of this board's Arduino compatibility or using the STM32 Hardware Abstraction Layer library. This will give you a stronger understanding of how a microcontroller works and skills that will transfer to more complex processors later. Students interested in pursuing embedded systems after this course can go on to courses in digital and analog electronics (Engs 31 and 32), software design (Engs/CoSc 50), microprocessors (Engs 62), and mechatronics (Engs 147).

Prerequisite: ENGS 20 or COSC 10; and PHYS 14

Degree Requirement Attributes: Dist:TLA

ENGS 29 - Computer-Aided Design and Kinematics

This course introduces computer-aided design and kinematics applied to study the geometry of motion in linkage systems that are components of machines ranging from vehicle suspensions to robotic arms. The principles and methods introduced include capturing design intent in parametric models, design communication with mechanical drawings, computer-based kinematic design, and design validation with rapid prototyping. A series of project-based learning activities focus on the design of linkage mechanisms to control the leg movements of walking machines where the objective is to transform the rotation of an input crank into a desired walking movement for the legs. The course aims to develop spatial and geometric thinking abilities while practicing mechanical design within constraints and building prototypes of increasingly complicated walking mechanisms. The lessons and projects examine technologies that surround us and art that explores the boundary of mechanical animals and life.

Prerequisite: ENGS 021

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

ENGS 30 - Biological Physics

Instructor: Samkoe

Introduction to the principles of physics and engineering applied to biological problems. Topics include the architecture of biological cells, molecular motion, entropic forces, enzymes and molecular machines, and nerve impulses.

Prerequisite: CHEM 5, PHYS 13 and PHYS 14 (or equivalent). PHYS 14 (or equivalent) may be taken concurrently. Students with strong quantitative skills who have taken PHYS 3 and PHYS 4 can enroll with permission of the instructor.

Cross-Listed as: PHYS 30

Degree Requirement Attributes: TAS

ENGS 31 - Digital Electronics

This course teaches classical switching theory including Boolean algebra, logic minimization, algorithmic state machine abstractions, and synchronous system design. This theory is then applied to digital electronic design. Techniques of logic implementation, from Small Scale Integration (SSI) through Application-Specific Integrated Circuits (ASICs), are encountered. There are weekly laboratory exercises for the first part of the course followed by a digital design project in which the student designs and builds a large system of his or her choice. In the process, Computer-Aided Design (CAD) and construction techniques for digital systems are learned. Enrollment is limited to 60 students.

Prerequisite: ENGS 20 or COSC 1 and COSC 10.

Cross-Listed as: COSC 56 (formerly 47)

Degree Requirement Attributes: TLA

ENGS 32 - Electronics: Introduction to Linear and Digital Circuits

Principles of operation of semiconductor diodes, bipolar and field-effect transistors, and their application in rectifier, amplifier, waveshaping, and logic circuits. Basic active-circuit theory. Introduction to integrated circuits: the operational amplifier and comparator, to include practical considerations for designing circuits with off-the shelf components. Emphasis on breadth of coverage of low-frequency linear and digital networks, as well as on high order passive and active filter design. Laboratory exercises permit "hands-on" experience in the analysis and design of simple electronic circuits. The course is designed for two populations: a) those desiring a single course in basic electronics, and b) those that need the fundamentals necessary for further study of active circuits and systems.

Prerequisite: ENGS 22, or equivalent background in basic circuit theory.

Cross-Listed as: PHYS 48

Degree Requirement Attributes: TLA

ENGS 33 - Solid Mechanics

After a brief review of the concepts of rigid body statics, the field equations describing the static behavior of deformable elastic solids are developed. The concepts of stress and strain are introduced and utilized in the development. Exact and approximate solutions of the field

equations are used in the study of common loading cases, including tension/compression, bending, torsion, pressure, and combinations of these. In the laboratory phase of the course, various methods of experimental solid mechanics are introduced. Some of these methods are used in a project in which the deformation and stress in an actual load system are determined and compared with theoretical predictions. The course includes several computer exercises designed to enhance the student's understanding of the principles of solid mechanics.

Prerequisite: MATH 13 and PHYS 13

Degree Requirement Attributes: TLA

ENGS 34 - Fluid Mechanics

Instructor: Meyer

We interact with fluids every day. From complex systems such as cars, airplanes, and chemical plants, to simple devices like a bike pump, our world is filled with engineering applications that make use of the principles of fluid mechanics. This course surveys the fundamental concepts, phenomena, and methods in fluid mechanics, as well as their application in engineered systems and in nature. Emphasis is placed on the development and use of conservation laws for mass, momentum, and energy, as well as on the empirical knowledge essential to the understanding of many fluid dynamic phenomena. Examples are drawn from mechanical, chemical, civil, environmental, biomedical, and aerospace engineering.

Prerequisite: ENGS 23 or equivalent

Degree Requirement Attributes: TLA

ENGS 35 - Biotechnology and Biochemical Engineering

Instructor: Gerngross

A consideration of the engineering and scientific basis for using cells or their components in engineered systems. Central topics addressed include kinetics and reactor design for enzyme and cellular systems; fundamentals, techniques, and applications of recombinant DNA technology; and bioseparations. Additional lectures will provide an introduction to metabolic modeling as well as special topics. The course is designed to be accessible to students with both engineering and life-science backgrounds. This course has a graduate section, see ENGS 160. Enrollment is limited to 25 students.

Prerequisite: MATH 3, CHEM 5, BIOL 12 or BIOL 13 or permission

Degree Requirement Attributes: TLA

ENGS 36 - Chemical Engineering

Instructor: Lee

This course will expose students to the fundamental principles of chemical engineering and the application of

these principles to a broad range of systems. In the first part of the course, aspects of chemical thermodynamics, reaction kinetics, and transport phenomena will be addressed. These principles will then be applied to a variety of systems including industrial, environmental, and biological examples.

Prerequisite: ENGS 22, ENGS 25; CHEM 5

Degree Requirement Attributes: TAS

ENGS 37 - Introduction to Environmental Engineering

Instructor: Roisin

A survey of the sources, measurement techniques, and treatment technologies relating to environmental pollution resulting from the activities of humans. The course will be technology-focused, but will also touch on topics related to the implementation of technology in the real world such as public perception, policy and legislation, and choosing between technological alternatives. Technological and other issues will be addressed relating to water pollution, air pollution, solid wastes, and the fate and transport of pollutants in the environment. Consideration of each area will include general background and key concepts, detailed design examples of importance in the area, and case studies/current topics. The course will include guest lectures.

Prerequisite: MATH 3 and CHEM 5, or equivalent, or permission

Degree Requirement Attributes: TAS

ENGS 41 - Sustainability and Natural Resource Management

Instructor: Roisin

Natural resources sustain human productivity. Principles of scientific resource management are established, including mathematical model development based on material balances and decision making based on dynamical and stochastic systems. Three generic categories of resource are analyzed: exhaustible, living, and renewable. In the first category we emphasize the life-cycle of exploitation including exhaustion, exploration and substitution. In the living category we explore population dynamics under natural and harvested regimes, for fisheries, fowl and forests. The renewable case of water is treated in terms of quantity and quality. Finally, air quality management is considered through the lens of assimilative capacity. Throughout, the intersection of natural processes and economic incentives is explored with dynamical systems theory, computer simulations, and optimization techniques. Case studies illustrate contemporary management problems and practices.

Prerequisite: MATH 23 or ENGS 22, and ENGS 37

Degree Requirement Attributes: Dist:TAS

ENGS 43 - Environmental Transport and Fate

Instructor: Renshaw

Introduction to movement and transformation of substances released into the natural environment. Fundamentals of advection, dispersion, and reaction. Aggregation and parameterization of various mixing processes leading to dispersion at larger spatial and temporal scales. Importance of inhomogeneity, anisotropy, and stratification in natural media. Basic principles are illustrated by application to atmospheric, ground water, river, estuarine, coastal, and oceanic pollution problems. Case studies include urban smog, acid rain, Chernobyl fall-out, and stratospheric ozone depletion.

Prerequisite: MATH 13; ENGS 37 or permission

Cross-Listed as: EARS 66.01

Degree Requirement Attributes: Dist:TAS

ENGS 44 - Sustainable Design

Instructor: Kawiaka

An interdisciplinary introduction to the principles of design for sustainability, with emphasis on the built environment. Through lectures, readings, discussions, and a major design project, students will learn to design buildings and other infrastructure with low to no impact on the environment. Emphasis is on creative thinking, strategies for managing the complexity of the product life-cycle of the infrastructure, and the thorough integration of human and economic aspects in the design. Homework and project activities provide practice in relevant engineering analyses. Enrollment is limited to 20 students

Prerequisite: ENGS 21 and ENGS 22 or SART 65

Degree Requirement Attributes: TAS

ENGS 45 - Sustainable Urban Systems (Berlin)

Today, more than 50% of the world population lives in cities on less than 2% of the planetary surface. This urbanization is expected to remain a megatrend for the next decades. The resulting concentration of infrastructure and activities has created human ecosystems distinct from natural ecosystems, and their future depends not only on their internal sustainability but also on symbiotic interactions with the natural ecosystems on which they ultimately depend. This engineering course addresses the technological aspects of urban sustainability, including energy procurement, energy consumption and green energy, air quality, water supply, use and treatment, building infrastructure, transportation, resource conservation, decarbonization, city planning and the role of automation and information technology in modern sustainable cities. In the context of the triple bottom line (the framework that considers financial, social and environmental impacts), the course further addresses, but to a lesser extent, the aspects of sustainable economics,

socio-ethical aspects of urban sustainability and cities as a hub for innovation.

Prerequisite: MATH 3 or MATH 8; PHYS 13; and ENGS 37 (ENGS 37 may be taken concurrently)

Degree Requirement Attributes: Dist:TAS

ENGS 46 - Advanced Hydrology

Instructor: Renshaw

A survey of advanced methods used to analyze the occurrence and movement of water in the natural environment. The watershed processes controlling the generation of runoff and streamflow are highlighted, and used to explore the transport and fate sediment and contaminants in watersheds. Throughout the course the ideas and concepts are explored through the primary literature, with emphasis given to methods of observation, measurement, data analysis, and prediction.

Prerequisite: MATH 3 and EARS 16 or EARS 33 or BIOL 53 or ENGS 43 or permission of instructor

Cross-Listed as: EARS 76

Degree Requirement Attributes: TAS

ENGS 50 - Software Design and Implementation

Instructor: S. Taylor

Techniques for building large, reliable, maintainable, and understandable software systems. Topics include UNIX tools and filters, programming in C, software testing, debugging, and teamwork in software development. Concepts are reinforced through a small number of medium-scale programs and one team programming project.

Prerequisite: COSC 10 or equivalent.

Cross-Listed as: COSC 050

Degree Requirement Attributes: Dist:TLA

ENGS 52 - Introduction to Operations Research

Instructor: Santos

Basic concepts of optimization are introduced as aids in systematic decision-making in engineering contexts. Deterministic optimization is developed in the form of linear and integer programming and their extensions. Probabilistic models are introduced in terms of Markov chains, queuing and inventory theory, and stochastic simulation. The course emphasizes the application of these methods to the design, planning, and operation of complex industrial and public systems.

Prerequisite: MATH 8 and MATH 22 or equivalent

Degree Requirement Attributes: TAS

ENGS 53 - Intro to Quantum Technologies

In the early 1900s, quantum mechanics replaced the classical understanding of physics, leading to the first quantum revolution that harnessed quantum mechanical phenomena to create innovative new technologies like transistors and lasers. Today, we are witnessing the second quantum revolution, which requires exploiting quantum mechanics fully by isolating and controlling quantum systems. This course aims to prepare students for this second revolution and the transformative technologies that will be developed, which will significantly impact the future of electrical engineering, materials science, and computation. Through hands-on experience with actual quantum systems, we will explore the use of quantum mechanics in sensing, communication, and computation to develop an intuition for the subject and its applications.

Prerequisite: MATH 22 or ENGS 23 or PHYS 22

ENGS 56 - Introduction to Biomedical Engineering

This course will survey applications of engineering principles to medical diagnosis/treatment of disease, monitoring/measurement of physiological function, and rehabilitation/replacement of body dysfunction. Case studies will be used to highlight how engineering has advanced medical practice and understanding. Examples will be drawn from bioinstrumentation, bioelectricity, biotransport, biomaterials, and biomechanics. While investigations will focus primarily on the engineering aspects of related topics, issues surrounding patient safety, public policy and regulation, animal experimentation, etc. will be discussed as appropriate.

Prerequisite: ENGS 22, PHYS 13 and PHYS 14 (PHYS 14 may be taken concurrently)

Degree Requirement Attributes: Dist:TAS

ENGS 57 - Intermediate Biomedical Engineering

Instructor: Halter

The basic biomedical engineering concepts introduced in ENGS 56 will serve as the foundation for exploring technology in a clinical environment. The specific clinical setting to be explored will be the operating room (OR). This course will introduce a variety of surgical procedures and technologies from an engineering perspective. Areas of focus will include patient monitoring, biophysical tissue properties, general surgical instrumentation, tissue cutting and binding technologies, and optical visualization technologies. In addition, state-of-the-art procedures employing image-guided, minimally invasive, laparoscopic, and robot-assisted surgical technologies will be discussed. The first half of the term will include weekly seminars presented by surgeons describing a particular surgical procedure, the technologies currently used and a surgeon's "wish-list". During the second half of the term, students will undertake a design project aimed at

developing a technology that addresses a specific need within the OR. Enrollment is limited to 18 students.

Prerequisite: ENGS 23 and ENGS 56 or equivalent

Degree Requirement Attributes: TAS

ENGS 58 - Introduction to Protein Engineering

Engineered biomolecules are powering an array of innovations in biotechnology, and this course will familiarize students with key developments in the field. An overview of foundational principles will cover concepts such as the central dogma of biology, atomic scale forces in protein structures, and protein structure-function relationships. Strategies for modifying protein structures will be surveyed, with a particular emphasis on genetic techniques. The development of proteins with practical utility will be highlighted using case studies.

Prerequisite: ENGS 35 or CHEM 41

Degree Requirement Attributes: DIST: TAS

ENGS 59 - Basic Biological Circuit Engineering

Instructor: Sarpeshkar

This course will provide a comprehensive introduction to the design, modeling, and experimental implementation of synthetic bio-molecular circuits in living cells at an undergraduate level. Simple but sophisticated synthetic biological circuits will be implemented and tested in microbial cells in the laboratory including those involving molecular amplification, regulatory feedback loops with biological nonlinearities, and robust analog circuits. Computer aided design, modeling, and simulation will use CADENCE, an industry standard electronic circuit design laboratory tool. It will show them how to design, model, and fit actual experimental biological data such that engineering circuit theory and biological experiment agree.

Prerequisite: ENGS 22 or permission of instructor. Experience in Molecular Biology is useful (e.g. ENGS 35, BIOL 45, & BIOL 46 or equivalent) but not necessary.

Degree Requirement Attributes: Dist:TLA

ENGS 60 - Introduction to Solid-State Electronic Devices

In this course the physical and operational principles behind important electronic devices such as the solar cell and transistor are introduced. Semiconductor electron and hole concentrations and carrier transport are discussed. Carrier generation and recombination including optical absorption and light emission are covered. P-N junction operation and its application to diodes, solar cells, LEDs, and photodiodes is developed. The field-effect transistor (FET) and bipolar junction transistor (BJT) are then

discussed and their terminal operation developed. Application of transistors to bipolar and CMOS analog and digital circuits is introduced. The course is primarily intended for students interested in electronics, including digital, analog, power and energy, both at component and integrated circuit levels. The course may also be useful to students interested in electronic materials, device microfabrication and communications.

Prerequisite: ENGS 23

Degree Requirement Attributes: TLA

ENGS 61 - Intermediate Electrical Circuits

Instructor: Stauth

This course will build on ENGS 32, providing a foundation for transistor-level analog and digital circuit design. The course will start with an introduction to the semiconductor industry and how it has dramatically altered the modern way of life, resulting in diverse technologies such as telecommunications, lighting and transportation. This will lead into basic semiconductor theory and CMOS device models, two-port linearized models, and finally single- and multi-stage amplifiers with applications motivated by wireless communications and biomedical instrumentation. The second half of the class will focus on digital circuits. Topics will include designing and optimizing complex static CMOS devices in terms of energy, delay, and area of computational blocks and memory arrays. The class will have weekly labs and a final project that will utilize modern computer-aided tools. The course will prepare the student for advanced study of highly-integrated electrical circuits.

Prerequisite: ENGS 32

Degree Requirement Attributes: TLA

ENGS 62 - Microprocessors in Engineered Systems

Instructor: S. Taylor

Microprocessors and microcomputers are central components in an ever-increasing number of consumer, industrial, and scientific products. This course extends the experimental design methodology developed in Eng 50 to state-of-the-art System-on-Chip (SoC) architectures and explores the principles behind advanced embedded systems. SoC devices are highly-integrated components that combine high-performance multi-core processors, with Field Programmable Gate Array (FPGA), and a broad selection of industry standard peripheral interfaces -- all within a single chip. Students are introduced to concepts of event-driven finite state machines, peripheral interfacing via the processor and the FPGA fabric, and advanced hardware-software co-design tools that speed the design process. The course is based on a sequence of laboratory projects that incorporate SoC programming practices and debugging strategies, interrupt handling, FPGA and bus interfaces, and attached peripheral devices.

Prerequisite: ENGS 50

Degree Requirement Attributes: Dist:TLA

ENGS 63 - Electric Energy

Electric energy sources, systems, and applications are essential for reducing climate impacts of energy and for engineering high-performance systems and products. This course builds skills for designing and working with electric energy, including AC and DC electrical power and energy calculations; an overview of power systems; electric motor fundamentals and applications; electric power applications and opportunities for electrifications; electrical safety; and power distribution in buildings. Several laboratory exercises are included. Not open to students who have received credit for ENGS 85.12.

Degree Requirement Attributes: Dist:TAS

ENGS 64 - Engineering Electromagnetics

Instructor: Shubitidze

Conceptual development, techniques and engineering applications in electrostatics, magnetostatics and magnetic induction; displacement current and Maxwell's equations; transmission line analysis; propagation, reflection, refraction and dispersion of electromagnetic waves.

Prerequisite: ENGS 23

Degree Requirement Attributes: TAS

ENGS 65 - Engineering Software Design

Instructor: Santos

As a successor to ENGS 20, this course covers intermediate topics in programming and software design with an emphasis on engineering applications. Students will learn software design principles and basic data structures. Topics covered will include object-oriented design, user interface design, lists, stacks, queues, binary trees, hash tables, and simulation. Students will learn techniques for developing maintainable, extensible, and understandable software.

Prerequisite: ENGS 20 or COSC 1 and COSC 10

Degree Requirement Attributes: TAS

ENGS 66 - Discrete Mathematics in Computer Science

This course develops the mathematical foundations of computer science that are not calculus-based. It covers basic set theory, logic, mathematical proof techniques, and a selection of discrete mathematics topics such as combinatorics (counting), discrete probability, number theory, and graph theory. The mathematics is frequently motivated using computer science applications.

Prerequisite: COSC 1, ENGS 20, or placement through the Advanced Placement exam

Cross-Listed as: COSC 030

Degree Requirement Attributes: Dist:QDS

ENGS 67 - Programming Parallel Systems

Multi-core processors are now ubiquitous in most personal computers. These are the fundamental computer-engineering building blocks for high-performance servers, blade farms, and cloud computing. In order to utilize these devices in large systems they must be interconnected through networking and collectively programmed. This hands-on system-engineering course offers students the opportunity to explore problem-solving techniques on a high-performance multi-computer containing quad-core processors. The course involves weekly programming laboratories that teach POSIX thread, UDP and TCP network, and MPI style programming techniques. These techniques are explored in the context of scalable problem solving methods applied to typical problems in science and engineering ranging from client-server sensing and data repositories, to numerical methods, gaming and decision support. All laboratories will be conducted in the C programming language and proficiency in C is required. Enrollment is limited to 30 students.

Prerequisite: ENGS 20 or COSC 50 (formerly COSC 23)

Cross-Listed as: COSC 63

Degree Requirement Attributes: TLA

ENGS 68 - Introduction to Communication Systems

Instructor: Testorf

This course provides an introduction to communication systems. The focus is on the deterministic aspects of analog and digital systems. The student is introduced to modeling and analyzing signals in the time and frequency domains. Modulation techniques are addressed as well as, sampling, multiplexing, line coding, pulse shaping. Recent developments in communication systems are briefly discussed.

Prerequisite: ENGS 22, ENGS 27 and ENGS 92 strongly recommended.

Degree Requirement Attributes: Dist:TAS

ENGS 69 - Smartphone Programming

Instructor: Yang

This course teaches students how to design, implement, test, debug and publish smartphone applications. Topics include development environment, phone emulator, key programming paradigms, UI design including views and activities, data persistence, messaging and networking, embedded sensors, location based services (e.g., Google Maps), cloud programming, and publishing applications. Concepts are reinforced through a set of weekly programming assignments and group projects. Enrollment is limited to 50 students.

Prerequisite: COSC 10

Cross-Listed as: COSC 65, COSC 165

Degree Requirement Attributes: TAS

ENGS 71 - Structural Analysis

Instructor: May

An introduction to the behavior of structural systems (including examples of buildings, space structures, and mechanical systems), with an emphasis on modeling and approximating behavior. Classical and computational analysis methods for structural load flow through basic three-dimensional structures; methods of approximating the response of planar structures; methods of determining deformations in planar, statically determinate structure; actions and deformations in statically indeterminate structures, using both flexibility/compatibility methods and stiffness/equilibrium methods (including an introduction to matrix methods). A structural system of choice will be redesigned to improve performance.

Prerequisite: ENGS 20 or COSC 1 and COSC 10 and ENGS 33

Degree Requirement Attributes: TAS

ENGS 72 - Applied Mechanics: Dynamics

Instructor: Kokko

The fundamentals of dynamics with emphasis on their application to engineering problems. Newtonian mechanics including kinematics and kinetics of particles and rigid bodies, work, energy, impulse, and momentum. Intermediate topics will include Lagrange's equations, energy methods, Euler's equations, rigid body dynamics, and the theory of small oscillations.

Prerequisite: ENGS 22

Degree Requirement Attributes: TAS

ENGS 73 - Materials Processing and Selection

In this course the basic concepts of materials science introduced in ENGS 24 are applied to a variety of materials problems and processes. The course will treat processes and principles relevant to both mechanical and electrical engineering applications. Topics include solidification and crystal growth, joining and bonding techniques, deformation processing, surface coatings and thin film deposition, polymer processing, composite materials, magnetic and dielectric materials, powder metallurgy and ceramics processing, materials selection, failure processes, and quality control. The course will involve laboratory exercises and field trips to local industry. Materials applications will be considered on a case study basis, including aerospace and automotive structures, consumer goods, and high performance sports equipment, electric components, VLSI circuit fabrication and packaging.

Prerequisite: ENGS 24 and ENGS 33 or equivalent

Degree Requirement Attributes: TLA

ENGS 75 - Physical Product Design and Development: Prototype to Production

ENGS 75 is a blended laboratory and lecture course on the practices and analyses that guide the design and development of physical, engineered products. The scope addresses consumer and industrial mechanical and electro-mechanical products, including those with embedded electronics, biomedical instruments and devices (including drug delivery systems), chemical processing equipment, and more. Lectures will introduce engineering design and development practices, methods, and tools that are relevant from product inception, through prototyping, and into eventual production. Emphasis is placed on design for manufacturing, robustness, and environmental impact. Students will be challenged to synthesize creative and disciplined strategies that apply these practices and methods in each of two design projects. Working in a team-based environment they will identify needs and value, then plan, design, develop, and test prototypes. SolidWorks will be used extensively for models of individual components and assemblies. Students will prepare presentations and written reports of progress and deliverables at key milestones. Readings from texts and case studies, along with several guest lectures from visiting professionals, are included as well.

Prerequisite: ENGS 21 plus one of the following: ENGS 31, ENGS 32, ENGS 33, ENGS 35, ENGS 36, ENGS 37, or ENGS 56. Experience with SolidWorks is helpful but not required.

Degree Requirement Attributes: Dist:TAS

ENGS 76 - Machine Engineering

Instructor: Halter

An introduction to the analysis and synthesis of mechanical components and systems. Lecture topics focus on design and analysis of mechanical components subject to static and fatigue loading conditions, deformation, and buckling. Power transmission shafting, bearings, and gears will be studied in detail. A survey of design requirements for other components - springs, screws, belts, clutches, brakes, roller chains, and welded and riveted connections - will be provided. The class includes laboratory sessions for developing practical skills in design fabrication. A term project emphasizes the synthesis of a working machine to complete a specified task. The project involves the design or selection of components studied, and includes fabrication and demonstration of the machine. Solid modeling software is used as a design tool. Enrollment is limited to 25 students.

Prerequisite: ENGS 21, ENGS 33, and proficiency with solid modeling software

Degree Requirement Attributes: TAS

ENGS 84 - Reading Course

Advanced undergraduates occasionally arrange with a Thayer faculty member a reading course in a subject not occurring in the regularly scheduled curriculum. ENGS 84 may typically only be elected once and either ENGS 84 or ENGS 85 may be used toward the Engineering Sciences major, but not both. However, under extenuating circumstances a student may request approval from the Engineering Sciences Department Chair to take ENGS 84 up to three times and have more than one ENGS 84 courses count toward the Engineering Sciences major.

Prerequisite: Permission of the department chair. (Proposed courses should include a full syllabus, resources and student evaluation methods and must be submitted for approval prior to the end of the term preceding the term in which the course will be taken.)

ENGS 85.04 - Hybrid Powertrain System Design

The course involves a term-long project designing components and subsystems for a hybrid powertrain system. With information sessions and interactive brainstorming meetings, the students will gain practical understanding of the iterative design process, including prototyping and testing. In the second part of the course, this knowledge will be sequentially applied to design components of three specific subsystems of the powertrain, viz. the engine power block, the transmission system, and the engine management system. The design process will incorporate constraints such as cost, manufacturability, and compatibility with other system components (mechanical, electrical, thermal, and fluid interactions).

Degree Requirement Attributes: TAS

ENGS 85.05 - Biological Circuit Engg I

This course will provide a comprehensive introduction to the design, modeling, and experimental implementation of synthetic bio-molecular circuits in living cells. Simple synthetic biological circuits will be implemented and tested in microbial cells in the laboratory including those involving regulatory feedback loops and robust analog circuits. Computer aided design, modeling, and simulation will use CADENCE, an industry standard electronic circuit design tool.

ENGS 85.06 - Biological Circuit Engg II

This course will provide advanced techniques for the design, modeling, and experimental implementation of complex synthetic biological circuits. Advanced & complex synthetic circuits will be designed and tested in bacteria in the laboratory. Computer aided design, modeling, and simulation will use CADENCE, an industry standard electronic circuit design tool. Applications of synthetic biology to medicine and biotechnology will be discussed. In addition, the students will be expected to

design a synthetic biological circuit with feedback and control techniques for a class project.

ENGS 85.07 - Practical Electrified Vehicle Engineering

Implementation of electric vehicles, including hybrid-electric vehicles (HEVs), battery electric vehicles (BEVs), and plug-in hybrid electric vehicles (PHEVs) requires a wide range of engineering skills. This course focuses on practical aspects of this challenge that are rarely addressed in standard engineering curricula, including high-power wiring, circuit protection, electrical safety, and battery system safety. The course is designed to be accessible to both electrical and mechanical engineers. It draws on principles from both fields and fills in some of the gaps between the usual fields of expertise of each group, enabling them to work together more effectively.

Degree Requirement Attributes: Dist:TAS

ENGS 85.09 - Introduction to Computational Materials Science and Engineering

Instructor: Hautier

Computational modeling in materials science is a powerful tool that allows discovery of new materials and exploration of materials theory. This course introduces the use of computational modeling to understand and predict materials behavior, properties and processes. The course will introduce a series of common materials modeling approaches from molecular dynamics to Monte-Carlo simulations and Density Functional Theory. All methods will be illustrated using use cases from various fields of materials science (e.g., Li-ion batteries, structural alloys, ...). The students will learn to apply these methods hands-on on specific problems writing code and using open-source codes. A strong emphasis will be on the critical assessment of the limits of the models.

Prerequisite: ENGS 24, ENGS 20, and working knowledge of ordinary and partial differential equations. Students not meeting the prerequisites and non-engineering majors may seek instructor permission.

ENGS 85.11 - Computer-Aided Design and Kinematics

This course introduces computer-aided design and kinematics applied to study the geometry of motion in linkage systems that are components of machines ranging from vehicle suspensions to robotic arms. The principles and methods introduced include capturing design intent in parametric models, design communication with mechanical drawings, computer-based kinematic design, and design validation with rapid prototyping. A series of project-based learning activities focus on the design of linkage mechanisms to control the leg movements of walking machines where the objective is to transform the rotation of an input crank into a desired walking movement for the legs. The course aims to develop spatial and geometric thinking abilities while practicing

mechanical design within constraints and building prototypes of increasingly complicated walking mechanisms. The lessons and projects examine technologies that surround us and art that explores the boundary of mechanical animals and life.

Prerequisite: ENGS 21

ENGS 85.12 - Electric Energy

Electric energy sources, systems, and applications are essential for reducing climate impacts of energy and for engineering high-performance systems and products. This course builds skills for designing and working with electric energy, including AC and DC electrical power and energy calculations; an overview of power systems; electric motor fundamentals and applications; electric power applications and opportunities for electrifications; electrical safety; and power distribution in building. Several laboratory exercises are included.

Prerequisite: ENGS 22 and ENGS 32 or instructor permission

ENGS 85.13 - Fundamentals of Additive Manufacturing from Processing to Design

This course is a blended laboratory and lecture course that builds foundational knowledge of processing methodology, design, and materials selection. The course introduces the wide scope of additive manufacturing (AM) techniques and contextualizes their unique opportunities and considerations within the broader manufacturing space. Emphasis is placed on connecting fundamental processing concepts to both structural and materials engineering aspects of design with AM. Topics will include extrusion-, laser-, binder-, and synthesis-based methods for various material classes ranging from polymers to glasses, biomaterials, alloys, functional ceramics, composites, and more. Labs focus on the demonstration of lectured concepts through hands-on printing experience, characterization of AM components, and a team-based design challenge. Students will also apply their knowledge in a team-based project to analyze, assess, and pitch a new implementation of AM for an industrial application.

ENGS 85.14 - Principles of Causality

Helmets increase head injuries. The fastest people are the latest. Hospital patients are less likely to have cancer when their bones are broken. But don't throw out your helmet, break your leg, or invest in transportation inefficiency just yet... Causality is the beacon of science and foundation of policy, but causal relationships can be lost in a labyrinth of correlation. Instead of caveating correlative studies, this course establishes the principles on which scientists and engineers can answer true causal questions. At the core of this pursuit is experimentation. We will build a formal understanding of randomized control trials that allows us to generalize these principles to observational (i.e. non-experimental) data. These generalizations will give rise to

mathematical tools for learning (causal or non-causal) relationships when experiments aren't quite what we would want them to be.

ENGS 85.15 - Acoustic Waves and Devices

This course introduces the physical principles, mathematical modeling, and device engineering applications of acoustic wave propagation. Topics include bulk and surface acoustic waves, piezoelectric transduction, impedance, resonance, and wave-material interactions. Students will explore how acoustic waves are used in devices for sensing, imaging, signal processing, and energy harvesting, with an emphasis on biomedical and microelectromechanical system (MEMS) applications.

ENGS 86 - Independent Project

An individual research or design project carried out under the supervision of a member of the staff. Students electing this course will be expected to carry out preliminary reading during the preceding term. A major written report and oral presentation will be submitted at the completion of the course. ENGS 86 may be counted as an elective in the major if ENGS 89 is taken as the culminating experience. Only one of either ENGS 86 or 88 may be used in satisfaction of the combined A.B. major and B.E. degree requirements.

Prerequisite: Senior standing in the engineering sciences major or Bachelor of Engineering standing and permission of the department chair is required. (One-page proposal submission required and must be submitted for approval prior to the end of the term preceding the term in which the course will be taken.)

ENGS 87 - Undergraduate Investigations

An original investigation in a phase of science or engineering under the supervision of a Thayer School faculty member. Students electing the course will be expected to carry out preliminary reading during the preceding term and to meet weekly with the individual supervising the investigation. The course is open to qualified students intending to complete ENGS 86 or 88 and who have three or fewer terms remaining in their undergraduate (AB) program. Instructor and faculty advisor permissions are required, and it may be elected only once. A report describing the details of the investigation must be filed with the instructor and approved at the completion of the course. Grading is CT/NC and the course does not fulfill any major requirements, BE requirements, nor distributive requirements. A proposal is required. The template is available on the Engineering website and must be submitted for approval prior to the end of the term preceding the term in which the course will be taken.

Prerequisite: Permission of the department chair. (One-page proposal submission required and must be submitted

for approval prior to the end of the term preceding the term in which the course will be taken.)

ENGS 88 - Honors Thesis

Honors version of ENGS 86. A course normally elected by honors students in one term of the senior year. The student will conduct a creative investigation suitable to the major subject under the supervision and guidance of a member of the staff. Students electing this course will be expected to begin the project work at least one term prior to electing ENGS 88 and may choose to conduct the preliminary investigation under ENGS 87. A major written report and oral presentation will be submitted at the completion of the course. ENGS 88 may be counted as an elective in the major if ENGS 89 is taken as the culminating experience. Only one of either ENGS 86 or 88 may be used in satisfaction of the combined A.B. major and B.E. degree requirements.

Prerequisite: permission of the chair of the Honors program

ENGS 89 - Engineering Design Methodology and Project Initiation

Instructor: Diamond

This course explores elements of the engineering design process as a means of enhancing student ability in problem definition; development and evaluation of creative alternatives, application and methods of technical and economic analysis, identification and application of ethical and legal constraints, and effective presentation of technical information. Design projects are developed from specifications submitted by industry and other organizations and are pursued over the course of two quarters as a team project, 89/90. Written and oral proposal and progress report are required for the design project during the term. A project advisor is required for each design team to serve as consultant to the team's efforts. ENGS 89, is the first unit of a two-term course sequence 89/90 that must be taken consecutively.

Prerequisite: ENGS 21 plus five additional engineering sciences courses numbered 22 to 76 and 91 and above.

ENGS 90 - Engineering Design Methodology and Project Completion

Instructor: Diamond

This course is the second unit in the two-course, team engineering design sequence 89/90. The objective of the course is to develop the student's professional abilities by providing a realistic project experience in engineering analysis, design, and development. Students continue with the design teams formed in ENGS 89 to complete their projects. Design teams are responsible for all aspects of their respective projects, which involve science, innovation, analysis, experimentation, economic decisions and business operations, planning of projects, patents, and

relationships with clients. Mid-term and final oral presentations and written reports are required. A faculty member is assigned to each design team to serve as consultant to the team's efforts.

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Students register for ENGS-090 and typically receive a final letter grade at the end of the term. Students who wish to take the FE Exam in the spring as part of their coursework receive a grade of "ON" (ongoing) at the end of the term. These students do not register for the subsequent term. A final grade will replace the "ON" once the FE Exam is completed.

Prerequisite: ENGS 89

ENGS 91 - Numerical Methods in Computation

Instructor: Shepherd

A study and analysis of important numerical and computational methods for solving engineering and scientific problems. The course will include methods for solving linear and nonlinear equations, doing polynomial interpolation, evaluating integrals, solving ordinary differential equations, and determining eigenvalues and eigenvectors of matrices. The student will be required to write and run computer programs.

Prerequisite: ENGS 20 or COSC 1 and COSC 10; ENGS 22 or MATH 23, or equivalent.

Cross-Listed as: COSC 71

Degree Requirement Attributes: QDS

ENGS 92 - Fourier Transforms and Complex Variables

Instructor: Testorf

Survey of a number of mathematical methods of importance in Engineering and Physics with particular emphasis on the Fourier transform as a tool for modeling and analysis. Orthogonal function expansions, Fourier series, discrete and continuous Fourier transforms, generalized functions and sampling theory, complex functions and complex integration, Laplace, Z, and Hilbert transforms. Computational Fourier analysis. Applications to linear systems, waves, and signal processing.

Prerequisite: MATH 46 or ENGS 22 and ENGS 23 or the equivalent

Cross-Listed as: PHYS 70

Degree Requirement Attributes: QDS

ENGS 93 - Statistical Methods in Engineering

The application of statistical techniques and concepts to maximize the amount and quality of information resulting from experiments. After a brief introductory summary of fundamental concepts in probability and statistics, topics considered will include probability distributions, sampling

distributions, estimation and confidence intervals for parameters of statistical distributions, hypothesis testing, design and analysis of variance for single and multiple-factor experiments, regression analysis, estimation and confidence intervals for parameters of non-statistical models, and statistical quality control.

Prerequisite: MATH 13 or equivalent

Degree Requirement Attributes: QDS

ENGS 96 - Mathematical Foundations for Machine Learning

Mathematics for Machine Learning aims to lay the mathematical foundation that are key to understanding the motivations and the implementation ML algorithms. This course will cover the following four broad topics; namely, vector calculus, probability theory, matrix algebra and optimization, in so far as they are used in ML algorithms. The course will conclude with application of these topics to four prototypical ML tasks/algorithms – two in supervised learning (regression using linear models and classification using support vector machine), and two in unsupervised learning (clustering using expectation maximization (EM) and dimensionality reduction using Principal Component Analysis (PCA). Programming at the level of Python and ML software packages (PyTorch, Tensorflow, etc.) will be used to supplement the understanding of the mathematics and algorithms, though the focus of the course will be on developing mathematical foundations and intuitions for the ML algorithms, rather than on developing large-scale applications of ML algorithms.

Prerequisite: ENGS 20 or COSC 10, and MATH 8. MATH 20 and MATH 22 are recommended but not mandatory.

Degree Requirement Attributes: Dist:QDS

English and Creative Writing

Chair: Peter Orner (July 1 - December 31, 2025), George Edmondson (January 1 - June 30, 2026)

Vice Chair: Patricia Stuelke

Director of Creative Writing: Thomas O'Malley

Professors C. G. Boggs, M. A. Chaney, A. S. H. Chee, C. M. Dever, G. Edmondson, V. E. Francis, J. S. Kim, A. L. McCann, P. M. Orner, D. E. Pease, J. Sharlet, M. B. Taylor, B. E. Will; Associate Professors K. J. Brown, J. E. Dobson, A. L. Evens, S. A. Moodie, T. O'Malley, A. Raza Kolb, P. R. Stuelke, M. F. Zeiger; Assistant Professors J. C. Beckman, S. E. Dirks, A. Garrison, M. S. Olzmann, M. P. Ritger, N. Tanoukhi; Senior Lecturers W. H. Craig, K. A. Crouch, C. L. Harner; Lecturers R. Clark, S. Crane, J. Godley

To view English and Creative Writing courses, click here (p. 314).

The English Major

Requirements: The Major in English requires the successful completion of eleven major courses. Major courses, unless otherwise stated, are all courses with the ENGL (English) or the CRWT (Creative Writing) course code. These courses must meet the following distributive requirements:

1. Two courses from Group I (p. 313); two courses from Group II (p. 313); one course from Group III (p. 313); one course from Group IV (p. 313).
2. Two courses from the Literary History sequence (ENGL 1 (p. 314), ENGL 2 (p. 314), ENGL 3) (p. 314). These courses may also satisfy Course Group requirements.
3. One Junior Colloquium (p. 343) (ENGL 61 – ENGL 65). This course may also satisfy a Course Group requirement.
4. One Senior Seminar (p. 352) (ENGL 71 – ENGL 75, ENGL 97, CRWT 60, 61, or 62). This course may also satisfy a Course Group requirement.
5. One course designated as a Culminating Experience. For students seeking a degree with Honors, this will be ENGL 98 or CRWT 98. All other students will count a Senior Seminar (ENGL 71– ENGL 75, ENGL 97, CRWT 60, 61, or 62) in satisfaction of the Culminating Experience requirement.

Students electing the major in English should also note the following:

1. Transfer credits can be used in the major only with approval from the Department Vice Chair. Transfer credits normally do not satisfy any of the English major distributive requirements.
2. Two substitute courses (relevant courses from other Dartmouth departments) are permitted within the major, replacing two elective English classes. Substitute courses cannot satisfy English major distributive requirements. The Department Vice Chair, in consultation with the Committee on Departmental Curriculum (CDC), decides which courses are appropriate substitutes in the English major.
3. Students are encouraged to seek out a faculty advisor to consult about major planning prior to declaring the major. Any non-visiting English faculty member at the Assistant, Associate, or Professor level may serve as advisor. English majors should meet with a major advisor regularly, especially if they deviate from their original major plan.
4. Students formally elect the major in English by submitting a proposed plan of major courses through DartWorks (on DartHub), filling out a major planning worksheet (available in the English and Creative Writing Department offices as well as on the Department website),

and meeting with a faculty advisor to get approval. Once approved by the advisor, the signed worksheet must be submitted in the Department offices.

Concentration in Creative Writing

The Creative Writing Program's sequential course of study and small workshops allow students to pursue and develop their craft from the introductory level to the advanced. The creative writing experience at Dartmouth combines intensive writing workshops with the study of literature from a writer's perspective. The concentration in Creative Writing does not change graduating requirements for students majoring in English, but it is a prerequisite for honors with a focus in Creative Writing.

For students in the Class of 2023 and beyond, the Concentration consists of four courses taken as part of an English major plan of study as follows:

1. One introductory course, CRWT 10 (p. 359), CRWT 11 (p. 359), or CRWT 12 (p. 359). (Only one introductory creative writing course may count toward the Concentration in Creative Writing.)
2. One intermediate course, CRWT 20 (p. 360), CRWT 21 (p. 360), or CRWT 22 (p. 360).
3. One course from the range of creative writing special topics seminars, CRWT 40 and CRWT 41. (Substitute courses with a focus on creative writing from other departments may be considered. Please consult with the Director of Creative Writing.)
4. One advanced workshop, CRWT 60 (p. 360), CRWT 61 (p. 360), or CRWT 62 (p. 361). (The advanced workshop is a requirement for the completion of the Concentration in Creative Writing.)

All intermediate and senior workshop courses (CRWT 20, 21, or 22) and CRWT 60, 61, or 62) require application and permission of the instructor.

Students who wish to elect the Creative Writing concentration should contact a Creative Writing faculty advisor and request a meeting to plan their course of study. Students are encouraged to select an advisor based on the area of creative interest.

Modified Majors

Students may propose a modified major in English by designing a program of study in consultation with an English and Creative Writing faculty advisor. One may modify the major with a selection of courses from other departments and programs, or one may modify a major in another department or program with a selection of English and Creative Writing courses. In both cases the modifying courses must qualify for major credit in their home department or program. The Culminating Experience requirement should be satisfied according to the primary

department's rules. Proposals for modifying the major in English should explain the rationale for modifying the standard major.

A formal proposal for a modified major must be submitted to the Vice Chair of the Department of English and Creative Writing. Proposals to modify another major with English and Creative Writing courses must be approved by the Vice Chair of English and Creative Writing before going to the primary department or program for final approval as a major program. Proposals to modify the major in English with other courses must be submitted, along with an authorizing signature from the secondary department or program, to the Vice Chair of English and Creative Writing and the CDC. The Vice Chair's signature signifies final approval of a modified major in English.

Modified major in which English is the primary subject:

This major requires the successful completion of eleven major courses, including seven courses in the Department of English and Creative Writing. All of the distributive requirements governing the regular English major, as outlined above, apply to the modified major. Along with the English and Creative Writing courses taken in satisfaction of the major distributive requirements, a modified major includes four courses from the modifying department or program (or from multiple departments and programs), which substitute for four elective English and Creative Writing courses in the eleven-course major.

Major in another department or program modified with English:

To modify another major with English, a student must take four English and Creative Writing courses that count towards the major in English. These four substitute for four courses from the primary department or program, and cannot include transfer credits.

The Minor in English

The minor in English requires the successful completion of six courses in the Department of English and Creative Writing, selected from all English and Creative Writing courses qualifying for major credit. No substitutions and no more than one transfer credit will be permitted.

The Major in English with Honors

There are two Honors tracks within the English Major: Literary and Cultural Studies, and Creative Writing.

The Major in English with Honors – Literary and Cultural Studies

English majors who have completed at least six major courses by the end of their junior year and have a grade

point average (GPA) in the major of 3.5 or higher and an overall college GPA of 3.0 or higher may apply for the Honors program in literary and cultural studies. Eligible students should meet with their prospective thesis advisors and apply by submitting to the Committee on Departmental Curriculum (CDC) their record in the major along with a formal proposal of an Honors thesis in the spring term of their junior year.

The Honors Program in English in literary and cultural studies consists of the successful completion of the following requirements. Students who do not meet requirements 1, 2, and 3 will not be allowed to advance to ENGL 99.

- 1) Honors majors writing a thesis in literary and cultural studies must complete the Honors Seminar, ENGL 97, in the fall term of their senior year.
- 2) Students must complete a Senior Seminar in English (ENGL 70 – ENGL 75) in addition to ENGL 97 prior to or concurrent with enrollment in ENGL 98.
- 3) The Course Group IV requirement should be satisfied *before* the term in which the candidate completes the Honors thesis and submits it for evaluation.
- 4) The thesis is to be completed during two terms of ENGL 98 and ENGL 99. For students who satisfied their senior seminar requirement before their junior year, ENGL 97 or ENGL 98 may count as their Culminating Experience in the major. ENGL 99 constitutes a twelfth course in the major program, separate from all other requirements outlined above.

The Major in English with Honors – Creative Writing

English majors who have completed at least four courses in the creative writing concentration and six major courses by the end of their junior year and have a grade point average (GPA) in the major of 3.5 or higher and an overall college GPA of 3.0 or higher may apply for the Honors program in Creative Writing. Eligible students should apply by submitting their record in the major to the Creative Writing Honors Director along with a formal proposal of an Honors thesis and a writing sample in the fall term of their senior year.

The Honors Program in English in Creative Writing consists of the successful completion of the following requirements:

1. Students must complete an advanced workshop in CW (CRWT 60, CRWT 61, or CRWT 62) prior to enrolling in CWRT 98.
1. The Course Group IV requirement should be satisfied before the term in which the candidate completes the Honors thesis and submits it for evaluation.

2. The thesis is to be completed during two terms of CWRT 98 and CWRT 99. CWRT 99 constitutes a twelfth course in the major program, separate from all other requirements outlined above.

For complete information about the Honors Programs in Literary Studies and Creative Writing, including further regulations, deadlines, and advice, please consult the English Honors Director or the Director of Creative Writing.

English Study Abroad

The Department of English and Creative Writing offers one Foreign Study Program (FSP), offered bi-annually at Queen Mary University of London. The English and Creative Writing FSP takes place during the fall academic term. Participation in the FSP is open to all sophomores, juniors, and seniors. To participate in the program, students must have completed all first-year requirements and one English course (other than ENGL 7) with a grade of B or better. Students wanting to study creative writing in London must also complete an introductory creative writing course in the relevant genre (CRWT 10, CRWT 11, or CRWT 12) with a grade of B or better. In rare circumstances, the director of the FSP can authorize exceptions to these prerequisites.

Students enrolled in the English and Creative Writing FSP register for ENGL 90, ENGL 91, and ENGL 92, and those three courses will appear on the student's transcript when the FSP is completed successfully. ENGL 90 and ENGL 91 carry major and minor credit and may be used to satisfy Course Group requirements in the major; ENGL 92 carries one non-major college credit. A student may petition the Vice Chair to receive three major or minor credits in English for work completed during an English and Creative Writing FSP. The Course Group requirements satisfied by ENGL 90 and ENGL 91 depend on the particular courses taken at the FSP host institution and should be determined in consultation with the Department Vice Chair. For specific information on FSPs and major requirements please consult the FSP directors and the English and Creative Writing Department's website at <https://english.dartmouth.edu>.

The Department of English and Creative Writing website and the Registrar's Timetable of Class Meetings also have up-to-date information on course offerings.

COURSE GROUPS

Course Groups

I. Literature before the mid-seventeenth century (2 courses required for the major):

ENGL 1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 51, 61, 71.

II. Literature from the mid-seventeenth century to the end of the nineteenth century (2 courses required for the major):

ENGL 2, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 52, 62, 72.

III. Literature from the start of the twentieth century to the present (1 course required for the major):

ENGL 3, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 53, 63, 73, CRWT 40, 41.

IV. Criticism and Theory (1 course required for the major):

ENGL 44, 45, 46, 47, 48, 54, 64, 74.

Courses with a variable Course Group:

ENGL 90, 91.

Courses with no Course Group Assignment:

ENGL 5, 6, 7, 55, 65, 75, 96, 97, 98, 99, CRWT 10, 11, 12, 20, 21, 22, 60, 61, 62, 89, 98, 99.

Courses that do not count for major credit:

WRIT 2, 3, 5, ENGL 7, 92, 99, CRWT 99.

Courses that count for major credit if approved by the Vice-Chair

ENGL 6, 96

ENGL and CRWT - English and Creative Writing Courses

To view *English and Creative Writing requirements*, click [here](#) (p. 311).

Section I - Non-Major Courses

ENGL 6 - Narrative Journalism: Literature and Practice

This course will explore the role of print journalism in shaping the modern American literary, cultural and political landscape--from Nellie Bly's late 19th century undercover exposure to Seymour Hersh's coverage of the Iraq War. Students will also participate in an intensive weekly workshop on reporting and writing, with a short unit on radio commentary.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 7 - First-Year Seminars in English

Consult special listings

Offered: Spring, Winter.

Section II - Major Courses

ENGL 1 - Literary History I: Literature up to the mid-Seventeenth Century

This course will provide an overview of English literature from the Anglo-Saxon period through the Middle Ages and into the seventeenth century.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 2 - Literary History II: Literature from the mid-Seventeenth Century through the Nineteenth Century

This course will provide an overview of British and American Literature during the seventeenth, eighteenth and nineteenth centuries.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 3 - Literary History III: Literature in the Twentieth and Twenty-First Centuries

This course will provide an overview of literature in the Anglophone world from the beginning of the twentieth century to the present.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 5 - Reading with Attitude

This course introduces students to methods for reading literature and culture critically, including close reading, literary theory, and creative writing. Students will study traditional literary works, such as poetry and fiction, but they will also examine video games, graphic novels/comics, and genre fiction. Assignments will include traditional essays and creative projects. The course brings together considerations of art, philosophy, society, and politics in order to consider issues that range from identity in a globalized world to the pains and pleasures of romantic love.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 10 - Old English and Scandinavian Epic and Saga

An introduction both to Old English literature and to Old Norse sagas, setting "Beowulf" and poems like "The Wanderer" and "The Wife's Lament" in their North Sea/North Atlantic context. We will learn just enough Old English to enable us to read, translate, and savor some of the original poetry and to become savvy readers of the modern translations. Sagas will include "Völsunga," "The Saga of the People of Laxardal," and "Hrolf Kraki" (in translation).

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 11 - Chaucer: "The Canterbury Tales"

An introduction to Chaucer, concentrating on ten of the *Canterbury Tales*, and studying him as a social critic and literary artist. Special attention will be paid to Chaucer's language, the sounds of Middle English, and the implications of verse written for the ear.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 12 - Chaucer's "Troilus and Criseyde" and Other Poems

A study of Chaucer's major works other than the *Canterbury Tales*, focusing on some of the early dream visions (*Book of the Duchess*, *House of Fame*) and *Troilus and Criseyde*, which many consider to be the greatest love epic in the English language. Some attention will be given to the French and Italian context of these works (in translation). No familiarity with Middle English is required.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 13 - Medieval English Literature

An introduction to the literature of the "Middle English" period (ca. 1100 - ca. 1500), concentrating on the emergence of English as a literary language in the twelfth and early thirteenth centuries and on some of the great masterworks of the late fourteenth century. Readings will include early texts on King Arthur, the *Lais of Marie de France*, the satirical poem *The Owl and the Nightingale*, the romance *Sir Orfeo*, *Pearl*, and *Sir Gawain and the Green Knight*, the *Book of Margery Kempe*, and *The York Cycle*. Most readings in modern English translation, with some explorations into the original language.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 15 - Shakespeare

A study of about ten plays spanning Shakespeare's career, including comedies, histories, tragedies, and romances. Attention will be paid to Shakespeare's language; to his dramatic practices and theatrical milieu; and to the social, political, and philosophical issues raised by the action of the plays. Videotapes will supplement the reading. Exercises in close reading and interpretative papers.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 16 - Renaissance Drama

A study of commercial theater in London from about 1570 until the closing of the theaters in 1642. Anonymous and collaborative plays will be read as well as those by such playwrights as Kyd, Marlowe, Dekker, Jonson, Webster, and Ford. The course will focus on the economic, social,

political, intellectual, and theatrical conditions in which the plays were originally produced, on their continuing performance, and on their status as literary texts. Research into the performance history of a play or participation in a scene production is required.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 17 - Milton

A study of most of Milton's poetry and of important selections from his prose against the background of political and religious crises in seventeenth-century England.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 18 - Poetry, Prose, and Drama of the English Restoration, 1660-1689

Together, we shall study poetry, prose and drama written and performed during the reign of the last two Stuart kings, Charles II and James II. No period of English literature is so deeply and even obsessively concerned with both politics and religion. This makes the verse, drama and prose of John Dryden, Andrew Marvell, John Milton and John Bunyan particularly interesting. We will also take time for some comedies typical of the period by William Wycherly and William Congreve, and study Aphra Behn's masterpiece, *Oroonoko*. There will be two areas of special attention: the theater and the literary responses to public events, such as the Great Plague and Fire of 1666, the Popish Plot, and the Exclusion Crisis.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 19 - Writing, Resistance, and (digital) Revolution

This course explores a multicultural history of the technologies of "writing" in North America from 1500-1800. We study three strands of that history (the pre-Columbian world; conquest and religion; European settler colonialism and the Atlantic slave trade) by focusing on four figures: Benjamin Franklin, Thomas Jefferson, Samson Occom, and Phillis Wheatley. All used writing in different ways to make "revolutions." Finally, we consider and contribute to the recent turn to digital archives of Early America.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 21 - Reason and Revolution

Was there a British Enlightenment? In the age of the American and French Revolutions Britain seemed to hold steady. But in the literature of the period there are many social and literary struggles which took their tolls in the madness and suicide of writers such as Smart and Chatterton, the difficulties of attaining creative freedom, and the emergence of new literary forms such as the Gothic. This course will trace the fortunes of writers such as Samuel Johnson, James Boswell, Oliver Goldsmith, and

Edmund Burke as they grapple with the anxieties of their time. We will also consider how women thinkers and novelists such as Charlotte Lennox and Mary Wollstonecraft forged new roles for themselves, and we may include studies of the novel of political paranoia such as *Caleb Williams*, written by Wollstonecraft's husband, William Godwin.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 22 - The Rise of the Novel

A study of the eighteenth- and early nineteenth-century English novel, from Daniel Defoe to Jane Austen. The course will look at the major sub-genres of the period, including criminal biography, scandalous memoirs, epistolary fiction and the Gothic novel. It will also explore the relationship between narrative fiction and the changing cultural landscape of a period defined by commercial uncertainty, imperial expansion, and the threat of revolution. Finally, and most importantly, the course will ask why the novel became so central to modern conceptions of subjectivity, sexuality, social cohesion and transgression. Readings may include work by Daniel Defoe, John Cleland, Jonathan Swift, Henry Fielding, Samuel Richardson, Laurence Sterne, Fanny Burney, Ann Radcliffe, Matthew Lewis, Charlotte Dacre, Maria Edgeworth, and Jane Austen.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 23 - Romantic Literature: Aesthetics and Ideology from the French Revolution to Frankenstein

The modern conception of the imagination as a force for radical social change emerged, in large part, thanks to the aesthetic innovations of Romantic writers working in the wake of the French Revolution. At the same time, however, the prospect of revolutionary violence made the imagination a dangerous, and intensely debated faculty, as promising as it was potentially pathological, and as likely to produce a Gothic nightmare as a pastoral utopia. This course will examine the richly varied forms of literary and political experience that emerge out of this moment, and that continue to shape modern conceptions of creativity, sexuality, ecology and social transformation. Readings include works by William Blake, William Wordsworth, Percy and Mary Shelley, John Keats, and Thomas de Quincey.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 24 - Victorian Literature and Culture, 1837-1859

This course examines early Victorian poetry, prose and fiction in the context of cultural practices and social institutions of the time. We will locate cultural concerns

among, for example, those of capitalism, political reform, scientific knowledge, nation and empire. And we will consider revisions of space, time, gender, sexuality, class, and public and private life that characterized formations of British identity during this period. Texts may include work by Charles Dickens, Thomas Carlyle, Elizabeth Barrett Browning, Charlotte Bronte, John Ruskin, and Charles Darwin. We will also read selections from recent criticism of Victorian culture.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 26 - Social Justice and the Victorian Novel

The British novel achieved great popularity during the nineteenth century as it became a realist form with increasing complexities of plot and character. During a period of imperial and economic expansion, too, great works of fiction participated in widespread debates about progress, empire, Englishness, and evolutionary thought. We will look at fiction's contributions to such cultural debates, considering the novel's powerful critique of empire and dreams of progress; the importance of formations of English identity to plot and character; reactions in fiction to evolutionary revisions of history; and how Victorian fiction signals the importance of class, gender, and race to character development. Readings may include Charlotte Brontë's *Jane Eyre*, Charles Dickens's *Great Expectations*, Wilkie Collins's *The Moonstone*, George Eliot's *Middlemarch*, Thomas Hardy's *Tess of the d'Urbervilles*, and Oscar Wilde's *The Picture of Dorian Gray*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 27 - Tell It Slant: Female, Black, Queer Readings of Early American Poetry

This course is an introduction to reading poetry and also a survey of the early period of American poetry from 1650-1900. Although often seen as a tradition dominated by white men, this course emphasizes aspects of American poetry rooted in the "queer" sensibility of Puritan Edward Taylor, the female consciousness of Anne Bradstreet, the Black and female consciousness of Lucy Terry and Phillis Wheatley, the Puritan/queer inheritors Walt Whitman and Emily Dickinson, and the early modernism of Stephen Crane. Emphasizing close readings as well as historical and cultural contexts, this course examines the often obscured aspects of the American poetic tradition.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 28 - Making Americans: Hipsters, Tricksters and Geniuses

A survey of American non-fiction narrative and other prose from the early republic to the rise of modernism. The course examines how autobiographies (Franklin, Douglass, Larcom, Thoreau, Stein) and other prose genres construct individual selves and national belonging while negotiating

the pressures of transcendentalism, abolitionism, feminism, and class consciousness by means of aesthetic experimentation. Additional authors vary but often include Jefferson, Apess, Fuller, Hemingway, Adams, Hurston, Kerouac, and Agee.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 29 - American Fiction to 1900

A survey of the first century of U.S. fiction, this course focuses on historical contexts as well as social and material conditions of the production of narrative as cultural myth. The course is designed to provide an overview of the literary history of the United States novel from the National Period to the threshold of the Modern (1845-1900). To do justice to the range of works under discussion, the lectures will call attention to the heterogeneous cultural contexts out of which these works have emerged as well as the formal and structural components of the different works under discussion. In keeping with this intention, the lectures include the so-called classic texts in American literature, *The Last of the Mohicans*, *Moby Dick*, *The Scarlet Letter*, and *The Narrative of the Life of Frederick Douglass*, but also the newly canonized *Uncle Tom's Cabin*, *Incidents in the Life of a Slave Girl*, *Life in the Iron Mills*, and *Hope Leslie*. The configuration of these works will result in an understanding of the remarkable complexity of United States literary culture.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 30 - Early Black American Literature

A study of the foundations of Black American literature and thought, from the colonial period through the era of Booker T. Washington. The course will concentrate on the way in which developing Afro-American literature met the challenges posed successively by slavery, abolition, emancipation, and the struggle to determine directions for the twentieth century. Selections will include: Wheatley, *Life and Works*; Brown, *Clotel*; Douglass, *Narrative*; Washington, *Up from Slavery*; DuBois, *Souls of Black Folk*; Dunbar, *Sport of the Gods*; Chestnut, *House Behind the Cedars*; Harriet Wilson, *Our Nig*; Johnson, *The Autobiography of an Ex-Coloured Man*; and poems by F. W. Harper, Paul L. Dunbar and Ann Spencer.

Cross-Listed as: AAAS 34

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 31 - Asian American Literature and Culture

This course examines narratives of migration to, from, and between the Americas by groups from East, South, and Southeast Asia. We will analyze novels, short fiction, poetry, and films by twentieth-century artists (Joy Kogawa, Theresa Cha, Shani Mootoo, Jhumpa Lahiri, Bienvenido Santos, Wayne Wang) against the historical backdrop of imperialism in Asia and the Americas; periods of exclusion

and internment; and social movements that coalesce around intersections of race, class, gender, sexuality, and citizenship.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 32 - Native American Literature

Published Native American writing has always incorporated a cross-cultural perspective that mediates among traditions. The novels, short stories, and essays that constitute the Native American contribution to the American literary tradition reveal the literary potential of diverse aesthetic traditions. This course will study representative authors with particular emphasis on contemporary writers.

Cross-Listed as: NAIS 035

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ENGL 33 - Modern Black American Literature

A study of African American literature from the Harlem Renaissance to the present, this course will focus on emerging and diverging traditions of writing by African Americans. We shall also investigate the changing forms and contexts of 'racial representation' in the United States. Works may include those by Hurston, Hughes, Wright, Ellison, Morrison, Schuyler, West, Murray, Gates, Parks.

Cross-Listed as: AAAS 35

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 34 - From Anna Christie to Hamilton (and Donald Trump): Modern American Drama

In this course we'll take up iconic plays in modern and contemporary American Drama -- Eugene O'Neill's *Anna Christie* and *Long Day's Journey into Night*, Arthur Miller's *All My Sons* and *Death of a Salesman*, Lorraine Hansberry's *A Raisin in the Sun*, Tennessee Williams' *A Streetcar Named Desire* and *Cat on a Hot Tin Roof*, August Wilson's *Fences*, Tony Kushner's *Angels in America*, Suzan Lori-Parks' *Topdog/Underdog*, Lin-Manuel Miranda's *Hamilton* -- and consider the ways in which they were shaped by historical events even as they helped to shape (and in some cases reform) U.S. culture and politics. In the final week, the class will analyze the theatrical design, dramatic structure, and cultural efficacy of a Donald Trump rally.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 35 - American Fiction: 1900 to World War II

A study of major American fiction in the first half of the twentieth century. Works by Dreiser, Stein, Fitzgerald, Cather, Larsen and Faulkner, and a changing list of others.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 36 - Contemporary American Fiction

This course introduces students to the study of contemporary American fiction. How do writers and artists use fictional forms to participate in the urgent conversations of the present? How do we analyze and historicize literature and culture of the present and the recent past? To answer these questions, this course focuses on the last fifteen years (or so) of American literary and cultural production. We'll examine how American novels, short stories, television, and film from this period represent war, migration, financial crises, ecological disaster, pandemics, and racial violence; how they think about gender, sex, race, work, family, and money; how they play with form and popular genres; and how they are shaped by institutions such as the publishing industry and the university, as well as by digital platforms. Alongside our discussion of this fiction, we will explore related criticism and theory, and experiment with writing both literary criticism and fiction. Authors from recent iterations of the course have included Colson Whitehead, Tommy Orange, Raven Leilani, Ottessa Moshfegh, Ling Ma, Mohsin Hamid, Valeria Luiselli, Gillian Flynn, Carmen Maria Machado, Jesmyn Ward, and Jeff Vandermeer.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 37 - Contemporary American Poetry

This course explores the most exciting developments in American poetry from 1960 until the present. We will consider a wide array of poetic movements—the Beats, the New York School, the Confessionals, the Black Mountain group, the Black Arts Movement, Language poets, performance and conceptual poetry, rap and spoken word—in order to understand the aesthetic tendencies that inform American poetries being written today. In particular, we will examine key individual poets through close readings of their most exemplary work.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 38 - American and British Poetry: 1900-1960

A survey of modern American and British poetry since the First World War, with particular emphasis on the aesthetics, philosophy and politics of modernism. The course covers such canonical and non-canonical poets as Yeats, Pound, HD, Lawrence, Eliot, Stevens, Frost, Williams, Crane, Moore, Millay, Auden, and the Harlem Renaissance.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 39 - American Fiction: 1950 to 1990

This course examines movements in American literature from 1950-1990 as the United States was solidifying itself as a world power. These movements correspond to historical events that have shaped the world of contemporary fiction (the end of WWII, the civil rights movement, the fight for gender equity and gay rights, etc.), and have permanently marked the literary landscape. We will thus explore the varied nature of racial, ethnic, and gender identity through the writers who have shaped the vision of the nation and its different inhabitants. We will focus on iterations of American ideology (individuality, self-discovery, patriotism, opportunity), their detractors and believers, and the writers who have presented these concepts to us in prose meant to interrogate rather than celebrate. Our interest for the duration of the term is in the (real or imagined) hyphenated American, and the national imperatives that challenge literary production.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 41 - British Fiction: World War II to the Present

A study of the multiple currents within British fiction in a period characterized by major literary, cultural, and social transitions in Britain, including the emergence of a “post” (-war, -empire, -modern) sensibility. Writers may include Amis, Sillitoe, Greene, Golding, Burgess, Lessing, Wilson, Carter, Swift, Atkinson, MacLaverty, Ishiguro, Barker, Barnes, McKewan, Smith.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 42 - Introduction to Postcolonial Literature

An introduction to the themes and foundational texts of postcolonial literature in English. We will read and discuss novels by writers from former British colonies in Africa, South Asia, the Caribbean, and the postcolonial diaspora, with attention to the particularities of their diverse cultures and colonial histories. Our study of the literary texts will incorporate critical and theoretical essays, oral presentations, and brief background lectures. Authors may include Chinua Achebe, Ngugi wa Thiong'o, V.S. Naipaul, Merle Hodge, Anita Desai, Bessie Head, Nadine Gordimer, Paule Marshall, Tsitsi Dangarembga, Salman Rushdie, Earl Lovelace, Arundhati Roy.

Cross-Listed as: AAAS 65

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ENGL 44 - Introduction to Digital Studies

This course introduces digital studies, the scholarly engagement with digital technologies and the cultures that have risen alongside them. It is a commonplace to note that the digital is pervasive in our lives, and it therefore plays at least some role in almost every human activity, from the

mundane to the exotic. This course will chart the development of the digital from its growth in the twentieth century to its current hegemony, and will consider its relationship to communication, sociality, identity, media, arts, recreation, politics, the future, and more. Class meetings will focus on scholarly articles and book chapters, supplemented by some film, and by artifacts of digital technology and culture. Students will collectively shape the syllabus, aligning our readings with the interests of the class.

Degree Requirement Attributes: Dist:ART

ENGL 45 - Introduction to Literary Theory

The course will introduce students to some of the leading texts, concepts, and practices of what has come to be known as theoretical criticism. Topics to be considered may include some of the following: structuralism, deconstruction, psychoanalysis, feminism, new historicism, post-colonialism, post-modernism, queer theory, and cultural studies. Attention will also be given to historical and institutional contexts of this criticism. Intended to provide a basic, historically informed, knowledge of theoretical terms and practices, this course should enable students to read contemporary criticism with understanding and attempt theoretically informed criticism themselves.

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:LIT

ENGL 46 - Old and New Media

A survey of the historical, formal, and theoretical issues that arise from the materiality and technology of communication, representation, and textuality. The course will address topics in and between different media, which may include oral, scribal, print, and digital media. Readings and materials will be drawn from appropriate theorists, historians, and practitioners, and students may be asked not only to analyze old and new media, but also create with them.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 47 - History of the English Language

This course traces the development of English as a spoken and written language belonging to the Indo-European language family. We will work forward from Proto-Indo-European through Old English (Beowulf), Middle English (Chaucer), and Early Modern English (Shakespeare), up to contemporary American English. Our focus will be on the structural history of the language, especially changes in pronunciation and grammar, and the implications of those changes for English as spoken and written today. Open to all classes.

Cross-Listed as: LING 018

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP. This course has been renumbered to ENGL 55.24.

ENGL 48 - Critical Issues in Postcolonial Studies

This course charts one genealogy of postcolonial theory as it developed in the Anglo-American academy in the 1980s. Drawing on the two internationalist traditions of the late nineteenth and twentieth century, Marxism and Psychoanalysis, this course examines the ways in which these two theoretical frameworks helped construct postcolonial thinking while at the same time becoming the sites of its most rigorous critique. The course will begin with an introduction to some of the key concepts in Marxist and psychoanalytic thought, specifically as these two traditions understand colonialism. Then, we will read the work of postcolonial thinkers, such as Frantz Fanon, Edward Said, Gayatri Spivak, and Homi Bhabha, to consider their critiques of colonial thought and practices. Throughout the course, we will attend to the way in which racial and sexual difference is considered in the readings. The theoretical material for the course will be supplemented with our engagement with four films: *Xala* (Dir. Ousmane Sembène, 1975); *The Battle of Algiers* (Dir. Gillo Pontecorvo, 1966); *Fire* (Dir. Deepa Mehta, 1996); *Frantz Fanon: Black Skin, White Mask* (Dir. Isaac Julien, 1996).

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

Section III - Special Topics Courses

Special topics courses in Creative Writing (CRWT) are offered periodically, concentrating on particular issues in one or more fields of poetry, fiction, and creative nonfiction. Courses may require creative and critical papers and include workshops. Enrollment is limited to 18.

Special topics courses in English (ENGL) are offered periodically with varying content; one or more individual writers, a genre, or an approach to the literature of this historical period not otherwise provided in the English curriculum. Requirements will include papers and, at the discretion of the instructor, examinations. Enrollment is generally limited to 30.

CRWT 040 - Special Topics in Creative Writing

These courses are offered periodically, concentrating on particular issues in one or more of the fields of poetry, fiction, and creative nonfiction. Courses may require creative and critical papers and include workshops.

CRWT 40.01 - Imaginary Countries

This course introduces the techniques used in speculative fiction—literary novels and stories using either science fiction, magical realism, or myth, or a mix of these, so the author can reinvent a country’s history, the country itself—even the world. We will read for technique, and discuss the effects these fictions achieve with their structures and the narrative and aesthetic strategies deployed. Students will write and workshop two stories. Readings may include: Virginia Woolf’s *Orlando*, Andrew Sean Greer’s “Darkness”, Kazuo Ishiguro’s *Never Let Me Go*, Chris Adrian’s “Every Night For A Thousand Years”, Anne Carson’s *Autobiography of Red*, Yiyun Li’s “Immortality”, Jan Morris’ *Hav*, Toni Morrison’s *Sula*, and Carmen Machado’s “The Husband Stitch.”

Offered: Fall.

Degree Requirement Attributes: Dist:ART

CRWT 40.03 - Raising the Dead

How can we practice "immersion journalism," as creative nonfiction is sometimes described, when writing about people and events of the past? In this creative nonfiction writing course, we'll immerse ourselves in the kind of research that will allow us to recreate moments and moods for which we couldn't be present. We'll become witnesses at a remove; and, through careful attention to our own roles in the construction of our stories, participant-observers, as well. We'll learn how to use archives; make creative use of documents and artifacts; engage with scholarly historical writing as a source for creative writing; and interrogate our assumptions about research and representation, all in the service of character-driven narratives as vivid, nuanced, and dramatic as writing based on contemporary fieldwork. This course is an attempt to raise the dead, to resurrect truths from dormant facts, to find stories of the present within the past. You'll write two short nonfiction stories, of a person and a place, based on secondary sources, and one long narrative based on original research. The texts we'll be reading, by Lauren Redniss, John D'Agata, Svetlana Alexievitch, Joe Sacco, Maggie Nelson, and Michael Lesy, among others, vary radically in form and medium, as may your own experimental nonfictions

Degree Requirement Attributes: Dist:ART

CRWT 40.04 - Remains, Ruin, Repair, and Rapture: Trends in Urban Poetics

In the center of Detroit, Michigan sits the completely enclosed, far smaller city of Hamtramck, with its own mayor, police department, fire department and history of generations of Polish immigrants. Two urban centers connected by borders and across borders by rich poetics that place pressure upon stereotypes of the "urban."

In this course, we will consider essays, poetry and interviews that dare interrogate and upturn common

assumptions around the demographics and expectations of urban centers and the arts and letters that rise from them. We will write critical as well as creative responses to the readings. We will resist "outside" definitions and privilege the self-defining texts of the authors we study who are writing from their experiences within these sites of growth and failings, allegiances and loss, flight and fury. Readings will include work by: Jacek Dehnel, Francine Harris, Jamaal May, Matthew Olzmann, and Adam Zagajewski among others

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

CRWT 40.05 - Engaging Hybridity: Race, Gender, Genre

This course explores hybrid genres such as the prose poem, the lyric essay, and the graphic memoir, as well as other sites of artistic production that involve intersection, exchange, conflict, inhabitation, resistance, and cultural address. Students will consider the diverse and provocative creative work of Mat Johnson (*Incognegro*), Maggie Nelson (*Bluets*), Sebastian Matthews (*Beginner's Guide to A Head On Collision*), Claudia Rankine (*Citizen*), Tyehimba Jess (*Olio*), Kwame Dawes (*Duppy Conqueror*), A. Van Jordan (*The Cineaste*) and Dee Matthews (*Simulacra*), and based on these readings they will develop their own creative work in hybrid genres. The class will utilize both seminar and workshop formats, but the emphasis will be on the practice of writing as a way of thinking through forms of social, political and cultural engagement with this anxious moment in history, and of asking what kind of parameters, if any, art, particularly literature, truly requires? Are they porous enough? And what role does identity play in the choice to cross such borders?

Degree Requirement Attributes: Dist:ART

CRWT 40.06 - Uses of Fact: True Source Material in Prose, Poetry, & Film

This class will examine how a diverse group of artists work with factual material. One sometimes hears this sensible phrase: "You aren't entitled to your own facts." But the truth is artists do frequently work with what one might call their own facts. We'll look at what certain writers (Anna Deavere Smith, Eudora Welty, Joseph Brodsky), poets (Pedro Pietri, Elizabeth Robinson, Van Jordan) and filmmakers (Sarah Polley, Charles Burnett, and Earl Morris) do with true source material that interests, compels, perhaps repulses, above all, inspires them. Weekly writing exercises and workshops will help you develop our own ideas inspired by the works under discussion. The course will culminate in a final project where students will share own new work in prose, fiction or non-fiction.

Degree Requirement Attributes: Dist:ART

CRWT 40.07 - The Craft of Fiction: A Masterclass with Alaa Al Aswany

Fiction presents an abundance of rich and creative possibilities. Through the magic of imagination, fiction takes us deep inside worlds and into the lives of characters. This course trains students to recognize the qualities that make for spellbinding fiction, including the natural rhythm and tone, mapping the structure, and shaping the content. The Art of Fiction course teaches the essential elements of sketching a story, creating a great opening, devising structure and plot twists, incorporating tension, implementing flashback and viewpoint, and mastering the art of dialogue. Students learn techniques of crafting a story, originating colorful characters, and developing ways of bringing imagination and intrigue into a literary work. They will learn how their stories can be woven into unforgettable narratives by mastering rhythm, tempo, tone, and brevity. Students will explore the process of developing lively characters, mapping out a plot, describing realistic settings, adding subtext and layers of meaning, and penning captivating fiction.

Cross-Listed as: MES 15.01

Degree Requirement Attributes: Dist:LIT; WCult:NW

CRWT 40.08 - Dystopian Visions: Exploring the Fiction of Catastrophe and Apocalypse

What do dystopian fictions say about our world, our place in it, and the future before us? Are they merely reactions to damaging contemporary trends or richly imaginative, fully realized conceptions of what is to come? Via intensive reading, discussion of work in the genre in combination with contemporary essays, newspaper accounts, film and documentary, we will consider the power of fiction to shape and draw attention to the dilemmas that face humankind in the 21st century and beyond. We will touch upon and reference those earlier works that have shaped the genre, such as *We* by Yevgeny Zamyatin, Aldous Huxley's *Brave New World* and *1984* by George Orwell, but our primary focus will be on those fictions of the last forty years that ring prophetically and frighteningly true vis-à-vis events in our current world. We'll be reading a wide variety of authors, which may include, Harlan Ellison, Philip K. Dick, Cormac McCarthy, J.G. Ballard, John Wyndham, Richard Matheson, and Anthony Burgess. Students will write two short stories that extend a particular author's dystopian vision, and a longer fiction originating from their own imaginings.

Degree Requirement Attributes: Dist:ART; WCult:W

CRWT 40.09 - Obsessive Affinities Contemporary French & American poetry

This deeply experiential course examines the rich history of transatlantic desire, negotiated over the love of poetry. The United States has always figured heavily in the collective French imaginary ever since the American

Revolution, for instance in the works of Tocqueville and Chateaubriand. American literature, however, gains particular prominence toward the mid-twentieth century with the transatlantic travels of Simone de Beauvoir, André Breton, Jean-Paul Sartre, and Philippe Sollers among authors, to the point that French writers began wondering how one can even be French in the first place. The course explores this crisis in national identity through a series of important poetic Franco-American friendships and collaborations: Edmond Jabès and Rosmarie Waldrop; Emmanuel Hocquard and Michael Palmer; Serge Pey and Allen Ginsberg; the Fondation Royaumont; the poetry collective *double change*; among others.

Cross-Listed as: COLT 31.02 FRIT 37.08

Degree Requirement Attributes: Dist:LIT; WCult:W

CRWT 40.10 - James Joyce's Ulysses

This is a class for creative writers *and* creative readers interested in studying, and more importantly enjoying, James Joyce, the storyteller. No previous experience with Joyce is required. Though the class will begin with an intensive examination of Joyce's seminal long story, "The Dead," our focus during the term will be an intensive, close reading of his second novel, *Ulysses*, a book that, generally speaking, is more famous than actually read. A colossal influence on generations of writers, and readers, including T.S. Eliot, Derek Wolcott, Edna O'Brien and countless others, *Ulysses* is, among many other things, challenging, irreverent, thought-provoking, political, technically virtuosic, and above all wildly entertaining. Students will read some outside sources on Joyce but for the most part our primary text will be Joyce's own words – wherever they lead us. Prepare to meet a fascinating and chaotic cast of characters featuring – Lilly, Kate and Julia Morkan, Gabriel Conroy, Stephan Dedalus, Leopold and Molly Bloom, and many others. Assignments will include critical and creative responses to both "The Dead" and *Ulysses*, as well as a final essay.

Degree Requirement Attributes: Dist:LIT; WCult:W

CRWT 40.11 - Nature Writing

This writing workshop provides an interdisciplinary exploration of literary works operating within the realm of Black environmental thought. Following Ed Roberson's claim that "the world does not run the earth, but the earth does run the world" we will linger with the writings of those who have been forced to theorize from the underside of modernity, those who view black literary studies not only as an institutional enterprise, but as planetary thinking, as a commitment to *care for the earth*. Together, we will think critically about what it means to write at the intersection of race and environment in a social and political moment marked by climate catastrophe, and what's more, put that thinking into practice within the workshop space by creating works of poetry and criticism in ensemble. All toward the aim of collaboratively

engaging in what we might call—in keeping with the Combahee River Collective, Sylvia Wynter, Fred Moten and others—theory in black, black thought, *black study*.

Degree Requirement Attributes: Dist:LIT; WCult:W

CRWT 40.12 - The Novels of Virginia Woolf:Radical Innovator

This is a class for creative writers and creative readers interested in reading and above all, enjoying, the strange, beautiful novels of Virginia Woolf, a radical innovator of English prose whose work, since the moment it first appeared – through to today – has opened up new, and fascinating storytelling possibilities for writers (and readers) ever since. Woolf’s singular work has inspired countless writers, including Eudora Welty, W.H. Auden, Toni Morrison (who wrote her master’s thesis on Woolf), Edna O’Brien, Michael Cunningham, Jhumpa Lahiri, and Zadie Smith, among many, many others. Woolf’s great subjects were memory and time and we’ll be examining, through close reading, the many technical innovations Woolf developed, as well as the emotional risks she took, in order to capture memory and time on the page, such as her use of a unique combination of interiority and lyrical intensity. The class will begin with a look at Woolf’s landmark, book-length essay on the women’s struggle for independence and creative opportunity, *A Room of One’s Own*. We’ll be also be reading excerpts from a creative biography of Woolf and various essays by and about Woolf that concern, directly, her development as a writer who challenged much of what had come before. In order to trace, through three pivotal novels, Woolf’s creative development, our primary texts will be: *Mrs. Dalloway*, where Woolf breaks away from the constraints of traditional narrative, *To The Lighthouse*, perhaps her most beloved and most autobiographical book, and *The Waves*, arguably the most poetic, resonant, and challenging of her later works. Written work will be a combination of critical and creative responses to Woolf’s fiction.

Degree Requirement Attributes: Dist:LIT; WCult:W

CRWT 40.13 - Contemporary Queer and Trans Asian American Poetry

Amidst grief and inheritance, migration and abandonment, is a name one gives oneself. In this poetry workshop, we will examine poetry collections by queer and trans Asian Americans from the late twentieth century to the present, discussing questions of translation, borders, crossings, and reconstructions of the self through second languages and first histories. What are the silences of queer futures? What does it mean to write from or of an identity? How does one write while disowned from one or more identities? Participants will be asked to contemplate these questions in a creative and analytical writing practice culminating in critique workshops and a final poetry portfolio. (Non-exhaustive) readings may include works by Ching-In

Chen, Leah Lakshmi Piepzna-Samarasinha, Pamela Lu, Kazim Ali, and Nhu Xuan Nguyen, among others.

Degree Requirement Attributes: Dist:ART; WCult:CI

CRWT 40.14 - Black and Latino Poets Creative Writing Course

This course is designed to help you improve your ear and eye for writing poetry, your skill in discussing poetry, and your ability to read poetry as a writer. To that end, the course will alternate between reading and discussing the craft of published poets and workshopping your own thoughtful creations.

Great writers are also great readers. For this reason, we will read with care various styles of accomplished poets. Exploring the ways that certain writers simultaneously negotiate/live in multiple worlds, we will focus on the poems of several critically acclaimed and innovative Black (African, Afro-Caribbean, African American) and Latino (Puerto Rican, Cuban, Dominican, Mexican) poets. We will repeatedly ask, how they represent multilayered experiences and complex realities. Yet in moving beyond the tendency to *focus* on the “politics” and “polemics” in Black and Latino writers’ work, we will pay particular attention to these poets’ craft, to their unique approaches, formal innovations, and skill. How do they put their poems together? What poetic and other literary devices are in use, and how are they suited to the poem in question, to the world(s), in question? What makes the particular poem powerful? What makes it memorable?

Throughout the course, we will alternate between reading and discussing these poets work and workshopping students’ original work.

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

CRWT 40.15 - Tell Me A Story: Introduction to Nonfiction Radio and Podcasting

This hands-on workshop in audio storytelling will prepare students to create broadcast quality radio stories and podcasts. It will cover all the steps of narrative journalism, including story development, research & reporting, interviewing, writing and editing for the ear, and, of course, production. Special attention will be paid to how the limitations and strengths of the audio medium guide story choice, story structure, and interviewing.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

CRWT 40.17 - Workshop in Literary Translation

The course will function as a specialized workshop for students who would like to explore the craft of literary translation. In addition to opportunity to hone their translation skill by practicing the craft, students will get the chance to take part in discussions about the merit and

quality of works of literary translation by studying and providing feedback on translations prepared by their peers. Occasionally, the instructor will distribute short samples of published translations or selections of texts of translation theory for consideration, to complement questions that emerge from classroom discussion

Cross-Listed as: COLT 19.05

Offered: Summer.

Degree Requirement Attributes: Lang:LRP; Dist:INT or LIT

CRWT 40.18 - Writing Love Poems: Bewilderment, Anxiety, and the Art of Wonder

This writing workshop will study the craft techniques used by poets to heighten and/or make tangible a specific emotion. To study this, we'll focus our attention on the contemporary love poem. To develop an understanding of this unique artform, we'll consider the numerous traditions that writing in this mode extends from, embraces, and/or challenges. We'll also be asking questions about poem's broader intentions. For context, we'll study it in relation to two other traditional types of lyric poetry—the elegy and the ode—to see what these approaches have in common. In examining these poems, we'll be paying close attention to the strategies used by their authors that can be applied to your own creative work. This is a creative writing course, but no prior experience is necessary.

Degree Requirement Attributes: Dist:ART

CRWT 40.19 - Developing The Novel

Ever thought of writing a novel? Many of us have. But deciding how to start—and how to keep going—can be daunting. In this class, you will start a novel from scratch and learn the practice of writing “long” while wrapping your brain around a large story. We will be reading and studying great novels, as those are our most useful tools. Readings will include short novels by James Cain, Ocean Vuong, Jean Rhys, Chinua Achebe, and others. Class will consist of workshops and in-depth craft discussions plot, structure, characterization, point-of-view, sense of place, and voice. By the end of the class, you should have a polished Chapter One, as well as rough drafts of Chapters Two and Three and an outline.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

CRWT 40.20 - Writing the Young Adult Novel

This is an intensive reading and writing workshop for students interested in writing a novel aimed at young adult or middle grade readers.

During the term, we will discuss what the term “Young Adult” means in terms of literature. Are standards different for books for children and teens, as opposed to those

written for adults? In fact, are we, as writers, charged with aiming our work at a certain audience in the first place? And if we are, do certain responsibilities come with that effort?

Degree Requirement Attributes: Dist:ART

CRWT 41.01 - Writing for Television

This workshop course introduces students to the art and craft of writing for television. We're living in the midst of the (second) Golden Age of Television. More and more Americans are turning away from the traditional movie theater experience and embracing long form, character driven, small screen stories. In the film world, directors are king, but in television, the writers reign. It is their vision that gets put on the screen. Throughout the course, each student will workshop and develop a thirty minute pilot script and Show Bible, as well as read and analyze contemporary pilot scripts to see what exactly makes a pilot

Cross-Listed as: FILM 44.10

Degree Requirement Attributes: Dist:ART

ENGL 51.01 - Plays, Playing, and Publicity

We will read plays by Shakespeare and his contemporaries including Marlowe, Dekker, Heywood, Jonson and others. Rather than considering them primarily as authored, literary texts, however, we will investigate them as products of a professional and commercial system—not unlike Hollywood—and as popular media in an age without journalism. Plays will be grouped in clusters that foreground roughly contemporary texts and/or performances in dialogue and competition with each other. Readings will also address the physical and social spaces of performance and the controversies about theater. Students interested in twentieth century productions of early modern plays or more general twentieth century issues of media and performance are welcome.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 51.02 - Shakespeare's King Lear and Macbeth: Text and Film

This course offers students the luxury of focusing exclusively on just two of Shakespeare's tragedies--*King Lear* and *Macbeth*--which constitute the final two of Shakespeare's most famous four tragedies. Over the past 10 years, there have been no fewer than three major films made of each play, the latest being the brand new *Macbeth*, starring Michael Fassbinder. That each play still invites yet another way of imagining the play suggests both the suspicion that maybe the play hasn't yet been done right, and simultaneously the sense that these two plays offer some kind of especially important statement for audiences in 2015. This class will focus on all such issues, textual and film production-oriented. There will be two papers and one final project.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 51.04 - Stories At the Edge of the World: Conquest and Contact in the Age of Shakespeare

When did the world become global? Living an age of commerce and contact, the writers of Shakespeare's England were also diplomats, explorers, soldiers, colonizers, and cosmopolitans. They composed poems and plays with one hand and foreign dispatches with the other, each time wondering at the encounters and tensions of a rapidly expanding world. In this course, we'll explore stories of borderlands, wildernesses, colonies, voyages, and migration. As we read widely in literature and travel narratives—including Shakespeare's defense of refugees from the forgotten play, *Sir Thomas More*—we'll consider what these borderlands and exchanges offer the early modern imagination and what they looked like in reality. Along the way, we'll be challenged to consider how we tell stories about marginalized people and contested spaces in our own rapidly globalizing time.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 51.13 - Gender and Power in Shakespeare

The course will begin by defining the varieties of power inscribed in Shakespeare's plays, and proceed to explore the following questions. Is language gender-inflected? Do men and women speak "different" languages? How do power and gender affect each other? How do women negotiate power among themselves? How do men? How is power exerted and controlled in sexual relationships? How do unspoken social definitions exert their power over the politics of gender? Possible works studied will be drawn from *The Rape of Lucrece*, *A Midsummer Night's Dream*, *The Taming of the Shrew*, *The Merchant of Venice*, *Much Ado About Nothing*, *As You Like It*, *All's Well That Ends Well*, *Othello*, *Macbeth*, *Troilus and Cressida*, *Coriolanus*, *Antony and Cleopatra*, and *The Winter's Tale*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.02 - The Civil War in Literature

Surveys in American literature often omit the Civil War. Yet the war called forth a vast range of literary responses, in genres as diverse as poetry, popular song, novels, and other prose genres. This course will examine how literature depicts the war, and where the limits of that depiction lie. Readings include Walt Whitman's *Drum Taps*, Herman Melville's *Battle Pieces* and *Aspects of the War* (1866), Louisa May Alcott's "Hospital Sketches," Stephen Crane's *Red Badge of Courage*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.03 - Dave the Potter: Slavery Between Pots and Poems

This course examines the work of David Drake, a South Carolinian slave who made some of the largest ceramic

storage vessels in America during the 1850s, signing them and etching sayings and poems onto them as well. This seminar engages with Drake's poetry-pottery through critical and historical research, interpretive writing, and our own creative adventures in ceramic handicrafts. In addition to writing your own updated imitations of Dave Drake's poetry and attempting ceramic facsimiles of his earthenware, students will also spend time in the letterpress studio as a means of acquiring a deeper historical and aesthetic appreciation of Dave's life and work; it was while working as a typesetter for a regional newspaper that Dave acquired literacy. As a culminating assignment, students will contribute chapters to a scholarly book on Drake, which the instructor will edit.

Cross-Listed as: AAAS 82.05 COCO 03.01

Degree Requirement Attributes: Dist:ART

ENGL 52.04 - The American Renaissance at Dartmouth

F. O. Matthiessen coined the term "American Renaissance" in his groundbreaking book, *The American Renaissance: Art and Expression in the Age of Emerson and Whitman* (1941). At the outset of the nineteenth century American writers struggled with a sense of cultural inferiority and artistic belatedness. The "American Renaissance" demarcates a period as well as a cultural movement marked by intense literary activity between the 1830s and 1860s that aimed at the formation of a distinctively *American* literature. Matthiessen restricted the American Renaissance to the years between 1850 and 1855, an "extraordinarily concentrated moment of literary expression" (vii) that saw the publication of Nathaniel Hawthorne's *The Scarlet Letter*, *House of the Seven Gables*, and *The Blithedale Romance*; Ralph Waldo Emerson's *Representative Men*; Herman Melville's *Moby-Dick*; Henry David Thoreau's *Walden*; and Walt Whitman's *Leaves of Grass*. In the years since the publication of Matthiessen's important work, teachers and scholars in American literature have extended the American Renaissance's chronological provenance at least as far back as the anti-slavery debates in the 1830s and as far forward as the termination of the Civil War. In the past several decades, Matthiessen's argument has been challenged for its exaggeration of the originality of his coterie of male authors, for the exclusion of women and African-American and popular authors from his account of the United States during a period of remarkable social and cultural transformation, and for its seemingly uncritical acceptance of the doctrine of American exceptionalism. In light of these criticisms, scholars have added Emily Dickinson, Frederick Douglass, Margaret Fuller, Harriet Beecher Stowe, and Mark Twain (among others) to Matthiessen's American Renaissance pantheon.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.05 - Desire and Difference in 19th Century British Fiction

This course will examine the phenomenon of moral panic in nineteenth-century British literature and culture through two linked but distinctive forms of sexual subjectivity: female heterosexuality and male homosexuality, connected forever in the 1885 Criminal Law Amendment Act that set the stage for the imprisonment of Oscar Wilde. We will consider the relationship between realist and sensationalist literary forms to trace the emergence and regulation of distinctly modern sexual subjectivities in mid- and late-nineteenth-century Britain.

Cross-Listed as: WGSS 48.08

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.06 - Media & Monstrosity

The vampire, the doppelganger, the automaton, the femme fatale, the serial killer, even the city itself as a pathological public space: these figures inhabit popular fiction at the end of the nineteenth century, expressionist cinema at the start of the twentieth century, and have been staples of mass culture ever since. Focusing on the relationship between fin-de-siècle Gothic fiction and its early cinematic adaptation, this course will explore the images of monstrosity that embody anxieties about changing media landscapes, emerging media forms, and the increasingly mediated character of human relationships between the 1880s and the 1920s. Primary texts and films will include R.L. Stevenson's *The Strange Case of Dr. Jekyll and Mr. Hyde*, Bram Stoker's *Dracula*, F.W. Murnau's *Nosferatu*, and Fritz Lang's *Metropolis*. We will also read theoretical work by Hugo Münsterberg, Laura Mulvey, Otto Rank, Siegfried Kracauer, Walter Benjamin, and Friedrich Kittler.

Cross-Listed as: COLT 62.04

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.10 - Vox Clamantis: Wilderness in 19thC American Literature

Inspired by the motto of Dartmouth College, this course examines tropes of wilderness in nineteenth-century American literature and the types of voices that cry out within them. While helping to establish a national literary tradition, the American 'deserto' or wilderness has also functioned as a kind of rhetorical staging area, in which various (often competing) notions of individualism, community, and political philosophy emerge. As a result, the novels, poems, slave narratives, and short stories of nineteenth-century American literature abound with landscapes as social and psychological as they are physical. Authors will include Nathaniel Hawthorne, Edgar Allan Poe, Frederick Douglass, Emily Dickinson, Herman Melville, Henry David Thoreau, Charles Chesnut,

Mark Twain, and Willa Cather. Dist: LIT; WCult: W. Course Group II.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.11 - Daniel Webster and the Dartmouth College Case

Two hundred years ago, in 1819, Daniel Webster argued a case in front of the Supreme Court defending his alma mater, Dartmouth College, against the predations of the State of New Hampshire. The Court found in favor of Dartmouth, which preserved the College as a private entity. Perhaps more importantly, it also laid the legal foundation for the modern economy, where corporate firms are to some extent free of state control. This course aims for a comprehensive understanding of the Dartmouth College Case and Daniel Webster by integrating the perspectives of American studies, history, political theory, and law.

Cross-Listed as: COCO 024 GOVT 60.18 HIST 90.06

Degree Requirement Attributes: Dist:TMV

ENGL 52.15 - Transatlantic Gothic

From crumbling monasteries and crafty priests, to bleeding nuns and fake hauntings, gothic novels exploded in popularity in late eighteenth century British print culture. But what happens when the strange tropes, figures, and rhetorical techniques of the gothic travel across the Atlantic to adapt to the dark pathologies and monstrous histories of the Americas? This course will expand notions of the gothic to frameworks that understand late eighteenth to early nineteenth century gothic literature as a transatlantic phenomenon.

Degree Requirement Attributes: Dist:LIT

ENGL 52.16 - God, Darwin, and the Literary Imagination

The publication of Charles Darwin's *The Origin of Species* in 1859 caused a crisis in religious faith. Evolution brought God to his knees, or so the story goes. Yet this claim oversimplifies the situation. It underestimates how the Christian God and evolutionary theory both shaped debates and structures of thought in the nineteenth century. How did these "divergent" systems of belief shape how people understood the world and their place in it? How did writers use religious faith and/or scientific evidence to structure narrative and tell new types of stories? How did Darwin and other scientists use literary techniques to convey their ideas to a widespread audience? This course emphasizes close reading as well as historical and scientific context, focusing on five themes that arose from the juxtaposition of God and Darwin in nineteenth-century British literature and culture: Creation and Design, Selection and Extinction, Heredity and Development, Time and Progress, and Human/Animal.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 52.17 - Victorian Children's Literature: Fairytale and Fantasy

It is said that the Victorians “invented” childhood: a state of freedom, play, creativity, and innocence. The orphans, adventurers, tricksters, and runaways in Victorian children’s books make friends with pirates, talk to animals, fly through the sky, and fall down rabbit holes. What made these stories so popular in the nineteenth century, and why do they continue to enchant readers? This course explores the genre of Victorian children’s literature in relation to such themes as Romantic innocence, nature and animal studies, climate change, sexuality and queerness, evolution, colonialism and race, disability studies, global economics, and play. Throughout the course, we’ll think about how stories for children are constructed and how writers and artists have adapted these Victorian texts for later audiences (e.g. through film, graphic novels, and fan fiction). The course will include both critical and creative assignments. Texts may include: *Alice’s Adventures in Wonderland* and *Through the Looking Glass* (Lewis Carroll), *Treasure Island* (Robert Louis Stevenson), *The Jungle Books* (Rudyard Kipling), *Peter Pan* (J. M. Barrie), *The Secret Garden* (Frances Hodgson Burnett), and fairytales by Oscar Wilde.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.18 - Netflix and the Victorian Serial Novel

How does the shape of a narrative change the way we experience it? Beginning in 1836 with Charles Dickens’ first novel, Victorian audiences often read texts as weekly and monthly ‘parts’ rather than as literary ‘wholes’. In 2007, Netflix introduced streaming, and in 2013, the company began producing original content. Instead of waiting a week for the next television episode, audiences could binge watch entire seasons (or more). Both the serial and digital streaming have been called revolutionary, but what does this mean? This course pairs Victorian serial novels and Netflix original series in order to think critically about structure and form. How does the play between serial part and whole necessitate new temporalities, strategies of characterization and narration, and types of suspense? How does binge-watching disrupt or reshape narrative time and sequencing? How have both new forms altered cultural discourses on gender, social consciousness, crime, and politics? How do narratives intersect with other types of seriality, including evolution, reproduction and inheritance, election cycles, and the #MeToo movement? This course emphasizes close reading and watching as well as narrative theory and reception and moves between nineteenth-century novels and twenty-first century series.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.19 - Poverty in American Literature, 1861-1925

From accounts about the streets being paved with gold to tales that take characters from rags to riches, success stories form an important part of American literary and national identity. Some eras especially seem to embrace such narratives, such as the “Gilded Age” which owes its name to Mark Twain. Yet the term itself was tongue-in-cheek, and many of the works produced in that “age” are as -- if not more -- concerned with rags than riches. Taking material possessions – or their absence – as a lens through which to examine economic and cultural conditions, these texts don’t work from as much as they work towards a definition of what poverty is and what it does – to individual people and whole classes (with gender and race as salient categories). In this class, we will read key literary works, especially in the genres of Realism and Naturalism, alongside theoretical texts to shed new light on the way in which American Literature portrays, critiques, embraces as well as reimagines the material and cultural conditions of Americans’ lives and livelihoods.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 52.20 - Reading Between the Color Lines in 19th-Century American Literature

How are persons racialized as both Black and White portrayed in nineteenth-century American literature? What cultural or political meanings do interracial experiences convey? And what hopes and fears are aroused by stories of people whose lives straddle a color line defined by slavery, racial capitalism, anti-blackness, border war, indigenous dispossession and genocide? Informed by Black Studies approaches to literary representations, this course examines life writing, short stories, poems, and novels about mixed-race, interracial, and biracial subjects of the nineteenth century, a period of tumultuous change for those misnamed by the racializing logics of the time as mulatto/mulatta, metis, mestiza/mestizo, quadroon, or octoroon. Assignments and readings in the course are designed to inspire students to question how these identities were central in shaping American racial imaginaries, cultural ideologies, material realities, and political possibilities.

Cross-Listed as: AAAS 82.11

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 52.21 - Popular Fiction and the Culture of Empire

The nineteenth century saw an explosion in the diversity and commercial potential of popular fiction. Detective fiction, science fiction, and the Gothic novel are a few of the genres that came into their own during this period, partly as a result of their ability to evoke the fantasies and anxieties of Victorian Britain and its empire. In this course we will think about the relationship of popular texts to

imperial visions of race, sexuality, exploration, evolution, extinction, and invasion. We will also look at the relationship between fiction, the commercialization of publishing and the emergence of new media technologies like photography and film. Writers may include Mary Braddon, H. Rider Haggard, Bram Stoker, H.G. Wells, Robert Louis Stevenson, Arthur Machen, Arthur Conan Doyle, and Marie Corelli.

Degree Requirement Attributes: LIT

ENGL 52.22 - The Last Man: Race, Empire, Disease

What do race and empire have to do with disease? We may have intuitive answers, especially about how xenophobia, anti-Asian racism, and anti-Black policies in the US impacted the spread and severity of the COVID-19 pandemic. In this course we'll encounter the weird and wild literary-historical foundations that will help us explore and support our intuitions. This class is centered around a deep and careful reading of Mary Shelley's apocalypse novel *The Last Man*, in which a world-destroying plague emerges, serpent headed, from the shores of the Nile, and wends its way through Asia and eventually to Europe. Together we will think about how this book reflects and shapes ideas about race and disease in the age of empire, and how these ideas resonate in the present—including how we have lived through, explained, and understood the pandemic. We will punctuate our reading of Shelley with very recent literature by a diverse slate of authors, including Ling Ma's New York pandemic thriller *Severance*, Ilya Kaminsky's long poem of disability subterfuge *Deaf Republic*, and Colson Whitehead's putatively "postracial" zombie novel *Zone One*. Mid-quarter, we'll also do a zombie/pandemic/apocalypse film fest with panel discussions. Main questions will include how stories determine actual outcomes of natural phenomena like disease; the shift from a Romantic to a Victorian sense of self and social connection; contagion as a material and discursive phenomenon; and the roles of labor, class, and global trade in the creation of modern epidemiology. This course may be particularly interesting to pre-medical students.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53 - Topics in Course Group III: Literature of the Nineteenth Century

These courses are offered periodically with varying content: one or more individual writers, a genre, or an approach to the literature of this historical period not otherwise provided in the English curriculum. Requirements will include papers and, at the discretion of the instructor, examinations.

ENGL 53.01 - The Black Arts Movement

This course explores the literature, art, and criticism of the Black Arts Movement. The artistic corollary to the Black Power movement, the Black Arts Movement flourished in the 1960s and 1970s as artists/activists sought to put a revolutionary cultural politics into practice around the country. The Black Arts Movement had far-reaching implications for the way artists and writers think about race, history, authorship, and the relationship between artistic production and political liberation. We'll explore these issues in work by Amiri Baraka, Sonia Sanchez, Larry Neal, and others who forged the traditionally-defined Black Arts Movement in Harlem. We'll also trace the movement's flowering around country, where local political struggles and artistic traditions in Chicago, Newark, Los Angeles, and Detroit shaped distinctive regional variations of the Black Arts Movement. We'll consider how the literature of the Black Arts Movement intersected with other cultural currents of the time, its critics, and the persistence of its themes in contemporary culture.

Cross-Listed as: AAAS 81.01

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.04 - Telling Stories for Social Change

Telling My Story for Social Change uses readings in theory and practice (journals, exercises, performance) to explore the difficult themes of Race, Class, and Gender. By practicing listening, speaking and withholding judgment in a group, we build relations based on trust, communication, and dialogue. To do this, we must first identify and dismantle the visible and invisible walls of preconception and bias that surround us, which many times we actively help to create and maintain.

Cross-Listed as: WGSS 66.05

Degree Requirement Attributes: Dist:ART; WCult:CI

ENGL 53.05 - Writing Dublin: On Saints, Sinners, and Rebels

Joyce famously asserted that should Dublin burn to the ground future planners and architects would be able to rebuild it perfectly through the blueprint of the city described in his novel *Ulysses*. In this course we will, via the close reading of its literature and its history, create our own distinct blueprint of Dublin, and attempt to write our own narratives of the city. We will study the ways in which literature contributes to a particular imagined cosmopolitan that is not only necessary to the vital life of the city but also to the cultural identity of its people. Some of the writers to be considered include: James Joyce, Sean O'Casey, Samuel Beckett, Flann O'Brien, Aiden Higgins, Brendan Behan, Patrick Kavanagh, Emma Donoghue, Claire Keegan, Roddy Doyle, Colm Tóibín, John Banville, Eavan Boland, Anne Hartigan, Kevin Barry, Bernard

McLavery, Patrick McGabe, Neil Jordan, Edna O'Brien, Sebastian Barry, Colum McCann, Eilís Ní Dhuibne and Anne Enright. Students planning to enroll in the Dublin FSP are especially encouraged to take this course; all students are welcome.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.06 - Women's Literature and Technologies of Transmission from the Long Nineteenth Century to the Present

In this course, we will explore women's writing and different technologies that transmit those texts from the long nineteenth-century to the present. Our goal is to think about how these works - their genres, forms, circulation, and content - shape impressions of and access to women's writing. Our analyses will traverse a range of works and media from nineteenth-century poetry and serial novels to contemporary electronic editions.

Cross-Listed as: COLT 18.01

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.07 - Black Noir

In this course, we will study black American literature that focuses the noir genre on black people themselves. We will read gritty, urban crime novels that attempt to expose inequities in black American lives and dispel the notion that a descent from whiteness results in blackness. Rather, the black people in these texts exist in darkness because they are living in alienated communities. We shall investigate how the noir genre is altered when "noirs" are the subjects and the authors. In addition to primary texts, the course will engage critical responses to these works.

Cross-Listed as: AAAS 81.07 FILM 47.25

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.08 - Weird Fiction and the Limits of the Human

What makes the dark so terrifying? Why do humans use fiction to invent strange creatures and supernatural threats? How does horror contribute to what it means to be human? What does the weird or the strange tell us about society? This course examines the literary, philosophical, and social aspects of weird fiction, a tradition of literature and genre fiction running from the early nineteenth century up to the present. It examines the most well-known writer of the weird, H.P. Lovecraft, but it also looks at work by Mary Shelley, Edgar Allan Poe, Octavia Butler, Victor LaValle, Kelly Link, Jeff VanderMeer, and others. The course introduces students to the study of genre fiction, theoretical approaches to literature (including posthumanism, psychoanalysis, and ecocriticism), and cultural studies (including critical race theory and feminism). It asks students to consider how weird fiction challenges racism, misogyny, homophobia, and colonialism. While no prior

training in critical theory is necessary, students are encouraged to have some familiarity in analyzing and writing on literature. The class will also offer opportunities for creative efforts and experimental writing.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.10 - Immigrant Women Writing in America

In responding to the obstacles facing America's immigrants -- problems of xenophobia, dislocation, split identity, family disunity and claustrophobia, culture shock, language barriers, economic marginality, and racial and national oppression -- women often assume special burdens and find themselves having to invent new roles. They often bring powerful bicultural perspectives to their tasks of survival and opportunity seeking, however, and are increasingly active in struggles for cultural expression and social and economic justice. We will examine the different conditions for women in a variety of immigrant groups in America, reading in several histories, anthologies of feminist criticism, interdisciplinary surveys, and relevant texts in critical theory, and on the words, in autobiography, poetry, and fiction, of foreign-born women writers. We will read such works as Maxine Hong Kingston's *The Woman Warrior*; Bharati Mukerjee's *Darkness*; Marilyn Chin's *The Phoenix Gone*; Jamaica Kincaid's *Lucy*; and Shelly Oria's *New York 1, Tel Aviv 0*.

Cross-Listed as: WGSS 47.01

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.16 - African Literatures: Masterpieces of Literature from Africa

This course is designed to provide students with a specific and global view of the diversity of literatures from the African continent. We will read texts written in English or translated from French, Portuguese, Arabic and African languages. Through novels, short stories, poetry, and drama, we will explore such topics as the colonial encounter, the conflict between tradition and modernity, the negotiation of African identities, post-independence disillusion, gender issues, apartheid and post-apartheid. In discussing this variety of literatures from a comparative context, we will assess the similarities and the differences apparent in the cultures and historical contexts from which they emerge. Readings include Chinua Achebe's *Things Fall Apart*, Naguib Mahfouz's *Midaq Alley*, Calixthe Beyala's *The Sun Hath Looked Upon Me*, Camara Laye's *The African Child*, and Luandino Vieira's *Luanda*.

Cross-Listed as: AAAS 051 COLT 51.01

Offered: Summer.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ENGL 53.17 - The Graphic Novel

What happens when normally separate symbol systems like pictures and words converge? This course investigates that question by examining graphic novels and the theoretical insights they have elicited. Discussions will explore issues of autobiography, counterculture, parody, and fantasy. Typical authors include Art Spiegelman, Alan Moore, Chris Ware, Marjane Satrapi, Daniel Clowes, Alison Bechdel and several others. In addition to a presentation, students will write two formal essays and several short responses.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.19 - Faulkner

The course will focus on Faulkner's fiction of the American South: its haunted culture, its racism, its legends. We will read *The Sound and the Fury*, *As I Lay Dying*, *Absalom Absalom!*, *Light in August*, selections from *Go Down, Moses*, and *The Hamlet*. Faulkner's place in the history of modernism will be a continuing concern, as will important critical readings of the novels.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.20 - Indian Killers: Murder and Mystery in Native Literature and Film

This course explores the abundant crime fiction and murder mysteries by contemporary Native American artists. These works imagine a democratized space where colonial violence is avenged, American law is malleable, and intellect triumphs over racism. While most critics applaud such decolonizing efforts, we will ask more difficult questions: do these sensational narratives do real cultural work? Do they suggest that colonial violence begets only more violence? And in the end, who are its true victims?

Cross-Listed as: NAIS 032

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.22 - Science Fiction Studies

This class will examine the development of science fiction as literature, considering the distinctive characteristics of the genre. We will read critical perspectives on scifi that connect it to both modern and postmodern themes; we will think through the politics of scifi, focusing especially on its utopian and dystopian elements; we will articulate the many subgenres of scifi; we will investigate the unusually strong influence of the community of readers on the published texts in scifi. But primarily we will read representative examples, novels, stories, and even some films, from well-known classics to little-known and marginal texts. Authors may include John Campbell, Isaac Asimov, Ursula Le Guin, Arthur Clark, Philip Dick, Octavia Butler, William Gibson, James Tiptree, Jr.,

Stanislaw Lem, Yevgeny Zamyatin, Samuel Delaney, Bruce Sterling, Neal Stephenson, Greg Egan, Ted Chiang, and still others. The class will have an opportunity to shape the syllabus somewhat according to the preferences of enrolled students.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT

ENGL 53.23 - Caribbean Lyric and Literature

This course will examine the work of a variety of Caribbean writers from former British colonies. We will look at several issues that reappear throughout the work of these authors. The class will move from early twentieth century writers like Claude McKay to the important contributions of later writers such as Kamau Brathwaite, Jamaica Kincaid, George Lamming, V.S. Naipaul, Sam Selvon, Olive Senior and Derek Walcott. We will examine the more recent innovations in form, as musical elements are introduced by writers such as Mikey Smith and Kwame Dawes. Each week's readings will be supplemented with seminal critical writings including excerpts from the text *The Empire Writes Back*.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.25 - Contemporary Native American Poetry

Muscogee poet, Joy Harjo has stated that Native Peoples are "...still dealing with a holocaust of outrageous proportion in these lands...Many of us...are using the 'enemy language' with which to tell our truths, to sing, to remember ourselves during these troubled times." This course examines the ways contemporary American Indian and other indigenous poets employ literary gestures of resistance and creativity to outlive the ongoing effects of colonialism. We explore how their poetry contributes to the reclamation and continuity of tribal memory and the regeneration of tribal traditions and communities. Our course includes lyric voices from the reservation, from the city, and from indigenous spaces in diasporic and global contexts. We will examine the combined influences that oral tradition, ritual life, and tribal values have on these contemporary poets. The indigenous poetic voice occupies a unique position in contemporary American poetry, but also in the discourse of settler colonialism. This course traces how the themes of these poetic voices bring forward images of past and contemporary experience, to craft a poetic tradition that is distinctly indigenous. Open to all classes.

Cross-Listed as: NAIS 047

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.26 - From More Fun to Fun Home: A History of the U.S. Comic Book

This course examines the development of the American comic book in its historical, cultural, and political contexts. Key topics include: pre-comics visual storytelling and the conceptual problems with seeking such precedents; the explosion of the American comic strip during the Yellow Journalism period; the formats, forms, and genres of the early comic book industry; the rise of DC Comics, home to Superman; artist-run “shops” and the development of romance and horror comics; the 1950s Kefauver hearings and the introduction of the Comics Code; the “Silver Age,” the decline of DC and the rise of Marvel Comics; Underground Comix and Sixties counterculture; censorship and creative rights skirmishes of the 1980s and 90s; and the legitimization of comics as “graphic novels.” Along the way, we will read historical comics (in reprint anthologies) to explore the comics form: visual narration, the development and assignment of distinct styles to different genres, and the historical import of individual creators from Jerry Siegel and Will Eisner to Alison Bechdel and the Hernandez Brothers.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.27 - The African American 1960s

The decade of the 1960’s brought the Voting Rights and Civil Rights Acts to American politics. What did it bring to African American literature and culture? This course will take a year-by-year approach to understanding the artistic and cultural transformations of Black culture during this turbulent decade. Beginning with Lorraine Hansberry’s play *A Raisin in the Sun*, we will examine major social and artistic issues of the decade by reading a variety of fiction, poetry and memoir. Writers we will study may include Amiri Baraka, Robert Hayden, James Baldwin, Dick Gregory, John Williams, Lucille Clifton, Sonia Sanchez and Eldridge Cleaver. Topics may include the rise of African American popular culture (such as Motown and Stax Records), Vietnam, the Civil Rights Movement, feminism and Black nationalism.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.28 - James Baldwin: From the Civil Rights Movement to Black Lives Matter

The 2016 film *I Am Not Your Negro* encourages a new generation to explore the life and work of James Baldwin (1924-1987). Directed by Haitian-born filmmaker Raoul Peck, *I Am Not Your Negro* is a provocative documentary that envisions a book Baldwin never finished by providing insight into Baldwin's relationship with three men who were assassinated before their fortieth birthdays—Medgar Evers, Malcolm X, and Martin Luther King, Jr.

In this course we will interrogate questions of race, sexuality, violence, and migration. Our current political moment encourages the examination of these issues while

Baldwin's life and work provides the ideal vantage point for their investigation. Using *I Am Not Your Negro* as our starting point, Baldwin's life and work will allow us the opportunity to explore transatlantic discourses on nationality, sexuality, race, gender, and religion. We will also explore the work of other writers including Richard Wright, Frantz Fanon, Audre Lorde, and Ta-Nehisi Coates.

Cross-Listed as: AAAS 81.10

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

ENGL 53.29 - Introduction to African American Environmental Thought: The Black Outdoors

The persistence of black life, and blackness as a way of thinking about the organization of both human and nonhuman forms of life, has been absolutely central to the story of the United States and the Americas more broadly. This course provides an interdisciplinary exploration of the writing of thinkers from across the African diaspora, with special emphasis on literary works and criticism centrally concerned with the intersections of black literary studies and African American environmental thought. We will draw on a range of texts in order to wrestle with some of the key concerns of African American writers from the 19th century through the present. Students will be introduced

to a range of methods and approaches to the meta-disciplinary work of black literary studies. By the end of the course, students will be expected to possess a working knowledge of several major themes, figures and moments within the black expressive tradition.

Cross-Listed as: AAAS 35.50

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.30 - Women Writing Memoir

This course examines the autobiographical writing of a variety of women from across the globe. Paying attention to the socio-political contexts within which these women write, we will discuss the ways in which these authors negotiate different worlds while being marginalized along vectors such as race, class, and gender. For this reason, the class is inherently interdisciplinary. Most of the works we will examine have achieved significant critical acclaim, and we will also examine the artistic innovations in these narratives. Texts will include works such as Staceyann Chinn’s *The Other Side of Paradise*, Jackie Kay’s *Red Dust Road*, Julie Marie Wade’s *Wishbone*, Jesmyn Ward’s *Men We Reaped*, Jeanette Winters’ *Why Be Happy When You Could Be Normal?*, Malala Yousafzai’s *I am Malala*, Janet Mock’s *Redefining Realness* and Dorothy Allison’s *Bastard out of Carolina* Dist: LIT. Course Group III

Cross-Listed as: AAAS 88.13

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ENGL 53.32 - Literature and Culture of the Americas

This course surveys a series of critical paradigms for studying the literature and culture of the Americas. We'll explore a variety of approaches to hemispheric literary and cultural studies, which may involve analyzing comparative and shared romantic and revolutionary discourses; border cultures; state-sponsored literary institutions that cross national borders; inter-American attempts to imagine solidarity; and hemispheric aesthetic strategies and genres for mapping US empire, global capitalism, and settler colonialism. Authors may include Leonora Sansay, Martin Delany, Carmen Lyra, Gabriel García Márquez, Jamaica Kincaid, Valeria Luiselli, Fernanda Melchor, and Silvia Moreno-García. All texts are available in English or in translation.

Cross-Listed as: COLT 52.08 LACS 45.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:W

ENGL 53.33 - Gender and Sexuality in Asian American Literature

Focusing on contemporary Asian American literature, film, and popular culture, this course emphasizes a diverse range of engagements with gender and sexuality that disrupts binary thinking on the topic. Through close analysis of cultural texts, students will examine the formation of Asian American genders and sexualities alongside histories of racialization, migration, and labor. Texts may include: Monique Truong's *The Book of Salt*, David Henry Hwang's *M. Butterfly*, R. Zamora Linmark's *Rolling the R's*, Justin Lin's *Better Luck Tomorrow*, as well as episodes of *Battlestar Galactica* and *24*. We will also read critical essays by Gayatri Gopinath, David Eng, Yen Le Espiritu, Karen Tongson, Lisa Nakamura, and Martin Manalansan.

Cross-Listed as: WGSS 36.06

Degree Requirement Attributes: Dist:LIT

ENGL 53.34 - The Wire

Though David Simon's Baltimore cop drama was not the popular sensation when it aired (2002-2008) that "Breaking Bad" or "Game of Thrones" are today, it is widely considered one of the best shows in television history. Over sixty episodes the fascinating and often disturbing series explores a range of social and political issues familiar in contemporary American cities, but it does so with unusual literary ambition and success. In the course, we'll treat the series as a work of literature—asking how its use of plot, narrative, character, conflict, etc. recalls the artistry of Sophocles, Shakespeare and, especially, Dickens. Readings will include texts from each of these authors and all five seasons of the show, as well as analyses of individual episodes.

Degree Requirement Attributes: Dist:LIT

ENGL 53.35 - From Diaspora Practices to Theory

What is an epic and how do its imaginary, cultural, and rhetorical impulses of displacement, unknown cartographies, madness, new identities, conceptual crossroads and translation lead to an eventual theorization of diaspora? The course has three inter-related goals: to study six examples of epic in the Black Diaspora moving from West Africa to the Anglo-Franco-Hispano-phone Caribbean; 2. to relate these texts to diaspora pathogen and food-ways, spiritual practices and converging African and New World histories; and 3. to consider diaspora and chaos theory.

Cross-Listed as: AAAS 88.12

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.36 - Game of Thrones: Re-Imagining Medieval History as an Allegory of the Present

This course is scheduled to coincide with the airing of the eighth (and final) season of *Game of Thrones*, and with Dartmouth Alumnus David Benioff's tenure as Montgomery Fellow. Class participants will devote scrupulous interpretive attention to the six published works in *A Song of Ice and Fire -- A Game of Thrones: A Clash of Kings, A Storm of Swords, A Feast for Crows, A Dance with Dragons, The Winds of Winter*. During the first five weeks of the course, students will be asked to explain what elements of the first of George R.R. Martin's medieval romance, *A Game of Thrones*, Benioff and Weiss revised, or deleted in adapting it to each of the ten episodes in first season of *Game of Thrones*. The second five weeks will be devoted to discussions of each of the ten episodes of the eighth and final season of *Game of Thrones*. In conducting these investigations, students will draw on a trove of library documents -- sagas, medieval romances, travel narratives, histories, legal documents, hagiographies, political tracts, philosophical discourses -- and learn how the aforementioned disciplinary perspectives alter and enrich their understanding of these artifacts.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.37 - Global Comic Strip

The course focuses on comic strips from around the globe as a means of studying critical and literary theory, problems in visual translation, and a range of conventions for expressing caricature and visual humor. Topics will move from classic American comic strips to the Franco-Belgian and Japanese Manga traditions; thereafter, students will examine other traditions both collaboratively and independently.

Cross-Listed as: COLT 40.06

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.38 - Narratives of Un-belonging: Bad Asians, Queer Texts

What makes an Asian/American “bad” and what makes a text “queer”? How does one shed light and offer insight on the other? How might the “bad” and the “queer” name the refusal and failure to assimilate and align oneself with racial capital, settler colonial logics, and reproductive futurity? How might both terms require us to rethink what narratives of belonging look, feel, and sound like and in turn, become the grounds for alternative solidarities, affiliations, and intimacies across lines of minority difference? To answer these questions, we will engage with primarily contemporary Asian/American works of literature, poetry, film, performance, and art that alters, disrupts, and varies Asian/American narratives of migration, assimilation, and upward mobility. Through these works, we will address historical processes of Asian/American racial, gender, and sexual formation by way of the “bad” and the “queer,” as transformative political and aesthetic categories of inquiry that risk failing to fit in, being wrong, and not belonging.

Cross-Listed as: WGSS 51.10

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.39 - Haunted Houses in American Literature

This course takes a tour of haunted houses in American literature and film. What happens when the specter-filled estates of the European Gothic novel are transposed from the wild and windy moors of England into the corn fields of middle America? Or the hallways of the apartment building? Or the bungalows of suburbia? What does it mean to be haunted? What does it mean to be a house? Visiting mansions and plantations, churches and asylums, apartments and cabins, wombs and spaceships, we will consider who—and what—has been haunting the dwelling places of the 20th century and contemporary American imaginary. Authors will include William Faulkner, Toni Morrison, Edgar Allan Poe, and Shirley Jackson.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.40 - The Historical Philosophy of W.E.B. DuBois

This course will examine the historical philosophy of the towering Black scholar and great freedom fighter of the 20th Century. We shall engage in close readings of Du Bois’ classic work, *The Souls of Black Folk* (1903) as well as subsequent essays in his magisterial corpus, especially his classic autobiography, *Dusk of Dawn* (1940).

Cross-Listed as: AAAS 80.10 PHIL 01.13

ENGL 53.41 - Black Love & Its Discontents: Barry Jenkins

How might we think about the shape, tenor, and texture of something like black love, its core principles and practices, in a world where anti-black sentiment serves as a structural logic? In the midst of such unrelenting violence, how have black people managed to love each other, love themselves, love living? What language have they crafted, historically, to describe such an expansive, radical project? For the purposes of this course, we will linger with a wide range of cinematic and literary moments with the aim of framing a much larger conversation about the uses of black art-making as a means through which we might access a critical vocabulary for black feeling; might assert the breaking into the world of a black love that is both resistance and that which exceeds it, love as a sort of black operation, black love as an act of *marronage*. Towards that end, this course will employ the films of contemporary writer and director Barry Jenkins, and place them in direct conversation with a larger constellation of writings within the African American literary tradition. Through our collective investigation of these texts, we will work together toward the elaboration of an aesthetics of black love.

Degree Requirement Attributes: Dist:ART

ENGL 53.42 - Postmodern" Britain: Fictions of Pluralism, Dystopia (and Brexit)

Contemporary Britain can be seen as a divided state: leave versus remain, cosmopolitan urbanism against conservative rural communities, post-imperial malaise and the rise of global Anglophone influence. Britain is also a literary hotbed, home to the Man Booker Prize for Fiction and an arena in which cultural production (and social debates) still take the form of narrative. What is “Britain” at the start of the twenty-first century, in what is ostensibly a post-war, post-imperial, and post-modern era? How do fiction writers respond to the twin pulls of national nostalgia and multicultural, intersectional identities? How do experiments in narrative form and genre speak to the emergence of new social and political formations? How does contemporary British fiction adapt or respond to a longer (and well-established) lineage of UK novelists (from Austen and Dickens to Virginia Woolf)? This course focuses on British fiction published after 1980, including works by authors who identify as Black British, queer, feminist, Muslim, and immigrant. Possible authors include Zadie Smith, A. S. Byatt, Ian McEwan, Sarah Waters, Kazuo Ishiguro, Jeanette Winterson, and Hanif Kureishi.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.43 - Race and Modernity: W.E.B. DuBois, James Baldwin, Lorraine Hansberry

This course will examine the classical works of three towering modern intellectuals: W.E.B. Du Bois, James

Baldwin, and Lorraine Hansberry. We will wrestle with the rich formulations, subtle arguments, and courageous visions of three Black thinkers who continue to speak with power and passion to our turbulent times.

Cross-Listed as: AAAS 21.10 PHIL 01.17

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.44 - Indians in American Literature

Indians are uncanny absences in the American narrative and yet persistent fixtures in our national literature from its origins to the present day. This course examines the pervasive appearance of the seductive, strange, and evolving Indian figure in works by prominent American authors such as Nathaniel Hawthorne, Herman Melville, James Fenimore Cooper, William Faulkner, Ernest Hemingway, Willa Cather, and Toni Morrison. We will explore the shifting and ideological role of the Indian as tragic emblem, savage defender, spiritual ally, and modern foil. We will explore the complicated ways that the literary Indian has served to both authenticate and trouble the nation's founding narratives and desires, and more recently, to stand as a mythical antidote to postmodern crises of value, economics, ecology, and spirituality. We will consider the appeal of such tropes in particular regional and historical contexts, such as the Reconstruction South, as well as racial or ethnic ones, such as the African American appropriation of Indian resistance, nobility, and genealogies.

Cross-Listed as: NAIS 031

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.45 - Storytelling in Novels and Community

This course will focus on the role of storytelling and its importance to community in works of literature and anthropology. Rather than study short stories, we will consider why novels, as longer forms of fiction, nevertheless include storytelling by characters. How does such storytelling work? We will read several twentieth-century novels in which characters telling stories function as means of reforming community. In novels and anthropological study, we will pay particular attention to the ways that storytelling can reconceive identities of individuals and of history, at times opening up both so that persons and history become diverse and extensive. The boundaries of community may also become extensive, resisting containment and refusing to conform to a common cultural identity. We will read Walter Benjamin's essay "The Storyteller" as well as several critical essays focusing on storytelling. Novels will include William Faulkner's *The Hamlet* and *Absalom, Absalom*, Michael Ondaatje's *The English Patient*, and Toni Morrison's *Paradise*. Works of anthropology will include Kathleen Stewart's *A Space on the Side of the Road: Cultural Poetics in an "Other" America*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.46 - New York and the Metropolitan Imagination in Twentieth-Century American Jewish Literature

This course will offer an introduction to American Jewish culture by focusing on the perception of New York City among successive generations of Jewish writers, performers, and cultural activists. Although our focus will be primarily on literary sources, in English and translated from Yiddish, we will also consider memoirs, political documents, journalism, music, and film. The topics we will consider include: How are the ambivalences of immigration expressed among Jewish immigrants writing, alternately, in English or in Yiddish?

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How does the city provide new modes of expression for Yiddish writers?

How does music offer a venue for Jewish performers to enter an American "mainstream" while preserving an audible sense of Jewish difference?

How do Yiddish writers address the Holocaust, and what challenges emerge when translating Yiddish into English after the Holocaust?

How do post-War Jewish intellectuals, the children of immigrants, critique their society and influence the development, and denouement, of American liberalism? How does the "sexual revolution" challenge notions of a distinct Jewish ethnicity and ethos, and what strategies do Jewish authors develop to critique changing mores and morals from a specifically Jewish perspective?

How does an avant-garde Jewish theatre contribute to a contemporary understanding of American culture as multi-cultural, hybrid, and hyphenated?

Cross-Listed as: JWST 021

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.47 - African Diaspora Women Writers

This course will be organized around four themes prevalent in contemporary portrayals of Black women across the African diaspora. The themes, *Body*, *Voice*, *Memory*, and *Movement* provide a center from which discussions of agency, representation and counter-narrative can be situated within a larger discourse of canon formation. We will explore various parts of the United States and the Caribbean through analyses of literature and visual culture, paying particular attention to shifting dialogues of culture and identity. Among the central questions posed will be: What constitutes a feminist ideology in black women's literature? How are images of subjection and victimization re-appropriated by Black women writers and image-makers and utilized for their own empowerment? What are the penalties inherent when a Black woman "comes to voice" in the arena of self-representation?

Cross-Listed as: AAAS 67.06 WGSS 66.07

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.48 - Poetry for the People

The central concern of this class is the historical relationship between the social lives of everyday people and U.S. American poetics, with a special emphasis on what June Jordan once termed the “difficult miracle of Black poetry in America.” How does poetry help us to know one another? And how might we better understand the particular role of poetry, of *poesis*, for those historically barred from the very practice of reading or writing, from ownership (even of one’s own body), and various generally recognized forms of belonging? For the purposes of this course, these will be some of our animating questions.

As a group, we will study the works of Audre Lorde, Toni Morrison, Tongo Eisen-Martin, Jericho Brown, and Claudia Rankine, among others. Largely toward the end of elaborating, in concert, a working theory of social poetics, a poetics of sociality, a new way for us to be together in a cultural moment marked by distance, as well as the disintegration of the public commons. In the midst of this ongoing catastrophe, this state of emergency and emergence, this course will seek to chart a way forward using the instruments left to us by luminaries both dead and living, a cloud of witnesses beckoning us toward a future with room enough for all of us to flourish.

Cross-Listed as: AAAS 35.60

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.49 - Graphic Medicine

What does sickness look like? What do personal picture-stories of illness and recovery tell us that traditional medical narratives cannot? In this course, students will read graphic narratives depicting first-hand experiences of physical (dis)ability, mental illness, disease, and neurodivergence. Discussion and readings will explore autobiography, word-image theories and comics analysis, as well as competing conceptions of illness and recovery within and across primary texts. Other readings will include scholarship on the ethics of storytelling and patient-centered perspectives on medicine. Authors may include David B., Ellen Forney, Art Spiegelman, Cece Bell, Harvey Pekar, Frank Miller, and others.

Cross-Listed as: COLT 49.09

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.50 - Black Testimony

This lecture course surveys testimonial forms produced throughout the African diaspora. Along the way, we will

ask a number of questions: What constitutes an act of witness? Who are its addressees, and to what does it testify? On whose behalf might it speak? We will encounter diverse examples of Black testimonial expression, including works of autobiography, fiction, ethnography, legal theory, literary criticism, visual art, film, and musical performance. These works will be drawn from the United States, Canada, Brazil, Haiti, South Africa, Senegal, and Sudan. Students will also have the opportunity to produce a creative testimonial project.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.51 - The Idea of Black Culture

The Idea of Black Culture offers a reading of conceptualizations of the subject of black culture across a historical time line that begins with W.E.B. DuBois’s *Souls of Black Folk* (1903) and proceeds through successive periods of black cultural apprenticeship in the geopolitical context of the Americas. Those eras may be characterized according to four broad rubrics or temporal themes as follows: 1) the Pan-African movement, pursued as a practice by black activists at the turn of the twentieth century and after the end of WWI; 2) the era of decolonization and the mounting of the Civil and human rights campaigns in the United States, the Caribbean, and independence movements on the Sub-Saharan African Continent, which events share the global context of the “Cold War” (from the Marshall Plan to the collapse of the Berlin Wall, 1989, and the dismantling of the Soviet Union, 1991); 3) the birth of the Black Studies movement (alongside the resurgence of black nationalism) and the development of the new epistemologies of the post-‘sixties and beyond, and finally 4) the emergence of the concept of the African Diaspora and the post-race/post-colonial thematics of the late twentieth-early twenty-first century, marked by the presidency of Barack Obama. Each of these eras of human and social engagement has engendered its own distinctive work on the idea of black culture. This seminar will examine some of those ideas by analyzing selective texts by W.E.B. DuBois, C.L.R. James, Aimé Césaire, and Frantz Fanon. The course will be taught in two halves, beginning with the seminal texts of canonical figures like Du Bois, and proceeding to a critical inquiry into the projects of contemporary scholars and theorists that will include selective work by Saidiya Hartmann, Fred Moten, Nahum Chandler, Denise da Silva, and Frank Wilderson, as well as other representative figures of the schools of Afro-Pessimism and Critical Race Theory.

Cross-Listed as: AAAS 35.03

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.52 - Living a Feminist Life: Archive, Text, Action

This class will examine how “knowledge” about women’s, femmes’ and non-binary people’s lives have been constructed in text, and how this knowledge determines

and impacts the choices we have and make about loving, working, thinking, and living. Over the first six weeks we'll do a deep reading of Sara Ahmed's book, *Living a Feminist Life*, putting her ideas in conversation with thinkers like Jamaica Kincaid, Audre Lorde, Gayatri Spivak, Valerie Solanas, Angela Davis, Jose Muñoz, and bell hooks. In the second half of the course, we'll work together *through discussion and student suggestions to construct a corpus of women's and femmes' life "writing"*—TV, poetry, music, journalism, memes, theory, and memoir—to discover how image and the written word continue to shape feminist lives, and how femmes' and non-binary people's lived experience in turn shapes feminist, pro-femme, and queer discourse. Through weekly short writing exercises, students will consider how their own intimate relationships—with parents, partners, children, neighbors, or friends—can become sites of intersectional feminist activism, and sources of strength and knowledge to be carried into the broader world of public engagement and intervention. In the final weeks of the course, we will think seriously about the relationship between learning and living, and collectively interrogate the boundary between writing and living as modes of feminist praxis.

Cross-Listed as: WGSS 66.35

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.53 - Modern American Women Poets

This course focuses on the emerging counter-tradition, within American modernism and within the larger tradition of poetry in English, of American women poets in the twentieth century. Taking our cue from Adrienne Rich, who ambiguously titles one book of essays *On Lies, Secrets and Silences* (is she for or against?), we will follow debates about what makes it possible to break previous silences—and to what degree and in what ways it is useful or satisfying to do so. Topics within this discussion will include sexuality, race, illness, literary modes, female literary succession, and relations with the literary tradition. We will read in the work of eight or nine poets and recent critical and theoretical writings, with some attention in the first weeks to important female and male precursors. The syllabus will include such writers as Edna St. Vincent Millay, HD, Gertrude Stein, Elizabeth Bishop, Gwendolyn Brooks, Sylvia Plath, Anne Sexton, Audre Lorde, Adrienne Rich, Marilyn Hacker, Louise Gluck, Rita Dove.

Not open to students who have received credit for ENGL 55.01.

Cross-Listed as: WGSS 47.03

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.54 - Disability and Madness in African American Literature and Film

Disability and madness are often overlooked analytic and lived experience in African American Studies and African American criticism, though recent work in Black disability studies is shifting this. The goal of this course is to pull disability and madness to the center of course readings to understand the complexities of Black life, such as: grief, sexuality and gender identity, geography, and the impact of incarceration and institutionalization. Students will be asked to approach canonical texts and less familiar texts for messier readings, unraveling(s) and ravings that complicate Black life. Likewise, we will watch film adaptations that also represent disability and madness on screen. Because disability and madness are recurrently represented visually, as is race, this course will trace representation from the page to the screen as part of a deeper understanding of how disability and race become co-constituted in American culture. Lastly, we will ask, again and again: what does disability and madness look like in literature? What images, language, etc., are used to represent disability and madness as it intersects with Blackness? And finally, what things are made possible through a disabled and mad lens? How are freedom, injury (and healing), and salvation better imagined through disability and madness?

Cross-Listed as: AAAS 35.02 WGSS 66.27

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 53.55 - Theater in the Barrio: Introduction to Chicano Theater

Arising from a climate of progressive social movements during the 1960s and 1970s, such as protests against the Vietnam War, the United Farm Workers (UFW) mobilizations, the Chicana/o Movement, Civil Rights Movements in the US, and liberation movements in Latin America, there came a need for a uniquely Chicana/o artistic expression. Teatro Chicano [Chicano Theater] would serve as a tool to vindicate the cultural identity of the agricultural Chicana/o workers, challenge power relationships, and unite and mobilize its working-class audience. El Teatro Chicano's capacity to be in direct contact with its audience, speaking in the people's language, its accessibility to artists and audiences who could quickly set up and dismantle the stage and scenery on a truck's flatbed, and the performers' ability to shape their acting and dialogue in response to the audience's reaction/interaction made it the quintessential artistic expression of the Chicana/o movement.

This course begins by analyzing how elements of the European popular theater tradition, such as *Commedia dell'arte* and *agitprop*, were reimagined by the Teatro Chicano artists while emphasizing the influence of the Mesoamerican oral tradition in their artistic philosophy, playwrighting, and performance. In learning about the

historical background of the Teatro Chicano, we will discuss how the plays of the TENAZ (Teatro Nacional de Aztlán) companies interrogate the role of art in the US and international class struggle, how Indigenist philosophy and decolonial frameworks inform Chicana/o esthetics, and how plays perpetuate *machista* (male supremacist) tropes or defy them through Chicana feminist outlooks. Through the analysis of selected works that represent the cultural production and philosophies of Teatro Chicano, such as plays, *teatro* memoirs, music, ephemera, and film, we will explore the themes of Chicana/o subjectivity, aesthetics, performance, decolonization, feminism, class politics, and anti-imperialism.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.56 - Female Monstrosities

This course will explore how the concept of the female monster has been foundational to the construction of gender as well as of race, class, and sexuality. We will begin in Ancient Greece by analyzing female monstrosities like Medusa and Medea, as well as the Lilith figure from the Hebraic tradition, in order to then explore Black feminist reworkings of these figures. Particular attention will be paid to the figure of the witch and to the female vampire, as these figures travel from the heart of Europe to its peripheries in the modern world, to what Katherine McKittrick has termed the “demonic grounds.” The course will cover texts by authors that include Maryse Condé, Toni Morrison, Jewelle Gomez, and Octavia Butler. We will explore how these authors offer a feminist embrace of monsters as an imaginative way to combat heteropatriarchy as well as white supremacy.

Cross-Listed as: WGSS 37.01

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 53.57 - Black Speculative Worlds

This course will explore futuristic speculative worlds as they are imagined by major Black women writers in the field of science fiction and fantasy, specifically focusing on works by Octavia Butler, Nalo Hopkinson, and N.K. Jemisin. We will explore utopias/dystopias and post-apocalyptic alien worlds in order to interrogate the ways in which they reflect and comment on our own human condition. Understanding each literary text as a thought experiment in its own right, we will unpack various themes associated with the reconfiguring of the constructs of race, class, gender and sexuality as well as Black women’s reproductive rights and politics. We will closely analyze alien invasion contagion narratives that comment on the histories of slavery, settler colonialism, and imperialism, and that speak to the operations of white supremacy. Lastly, we will examine how a revisionist mode of writing functions as an essential part of Black feminist speculative thought.

Cross-Listed as: AAAS 35.05 WGSS 66.31

ENGL 54 - Topics in Theory in Course Group IV: Criticism and Theory

Special topics classes in course group IV.

ENGL 54.01 - Shakespeare Adaptations

What happens when movie writers and directors adapt Shakespeare’s plays for the screen? How does an audience’s awareness of a literary precedent influence reception? What kinds of adaptations do we value and what role does their faithfulness to originals play? This course will look at twelve adaptations of major plays that most consider somewhat radical (e.g. *Chicken Rice War*; *Omkara*, *Ran*, *Forbidden Planet*, *Scotland, P.A.*) exploring the conceptual and cinematic strengths of the adaptations, as well as what their attempts to preserve or recast elements of Shakespeare’s plays reveals about the energies of the originals. Each film should thus prove a site of discussion in its own right, as well as an interpretive text that both critiques and argues the merits of the source text. Students can expect to read seven plays and see at least two adaptations of each, writing short responses to each play and film on canvas. Course Group IV

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 54.02 - Arts of Laughter: Comedy and Criticism

What makes us laugh? Does laughter have the power to change the world? Can comedy transform society? These are only some of the questions that this course addresses. This course examines literary works, stand-up comedy, rom-coms and classic Hollywood comedy, and sit-com television (among other comedic forms) in order to consider the capacity for comedy to criticize the status quo and effect social change. It also investigates theoretical approaches to comedy and laughter, such as Sigmund Freud’s psychoanalytic interpretation of jokes and Henri Bergson’s philosophy of laughter, which ask why we laugh in the first place. Literary works and films may include Shakespeare’s *Twelfth Night*, Samuel Beckett’s *Waiting For Godot*, Charlie Chaplin’s *Modern Times*, and Judd Apatow and Amy Schumer’s *Trainwreck*. We will also discuss stand-up performances by the likes of Aziz Ansari, Louis C. K., and Margaret Cho; sit-com programs including *I Love Lucy*, *Blackish*, and *Fresh Off The Boat*; and skit shows such as *Saturday Night Live* and *Chappelle’s Show*. Students will have the opportunity to not only write about comedy but also produce and perform comedy. *Enrollment limited to 30.*

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 54.03 - Young Adult Literature

This course explores the genre of young adult fiction in the 20th and 21st centuries. While the course will begin with a brief consideration of the conventions and early history of the genre, most of the course will examine post-1970s (mostly American) young adult novels. We’ll trace the

evolution of the genre in relation to ideas of racial innocence, sentimentality, consent, queer childhood, and revolutionary girlhood, and position the novels within historical contexts such as the rise of mass incarceration, settler colonialism, fantasies of post-racial politics, and environmental disaster. At the end of the course, we'll consider how young adult novels have created not just reading but creative communities, and explore the kinds of fan productions that have emerged in relation to young adult novels. The course will include critical and creative assignments. Texts may include *The Hunger Games*; the *Harry Potter* series; *Are You There God? It's Me Margaret*; *The Outsiders*; *The Astonishing Life of Octavian Nothing*; *Vivian Apple at the End of the World*; *Fangirl*; *Aristotle and Dante Discover the Secrets of the Universe*; *Absolutely True Diary of a Part-Time Indian*; *The Fault in Our Stars*; *Ship Breaker*; *Long Division*; *Monster*; *Akata Witch*; *Make Your Home Among Strangers*.

Cross-Listed as: WGSS 51.09

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 54.04 - Beautiful, Ugly, Cute, Dumpty: An Introduction to Aesthetics

This course is an introduction to literary aesthetics, beginning with Immanuel Kant's *The Critique of Judgment* (1790), a foundational text of Western aesthetics which provocatively and systematically explains how people enjoy and judge art, and why they discuss it together. Careful analysis of Kant's *Critique* will be followed by revisions and extensions of his theory of taste in 20th and 21st century aesthetics and literary theory. This includes Austin, Genette, Adorno, Zangwill, Ngai, among others.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 54.05 - Animal Studies: Theory, Literature, Politics

The emergent field of animal studies tackles pressing philosophical and ethical questions about who we are as a species. How are the distinctions between "animal" and "human" understood, destabilized, and/or deconstructed? What does it mean to recognize animals as sentient beings endowed with their own agencies rather than objects for use by humans? This course provides an introduction to animal studies, including such questions as inter-species communication, extinction, animal rights, ecologies, and species identities. Students will study texts across the interdisciplinary field by such authors as Lacan, Derrida, Deleuze, Haraway, Wolfe, Chen, and Moore, as well as foundational texts by Darwin, Montaigne, and Freud. As a class, we will discuss how theoretical perspectives on animals alter our readings of literary texts—including fiction by such authors as Rudyard Kipling, J. M. Coetzee, Karen Joy Fowler, Virginia Woolf, Yann Martel, and

Franz Kafka—even as we raise contemporary concerns about climate change, extinction, and species justice.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 54.11 - Poetry and Poetic Theory

In this course, we will primarily examine theories of poetry, relying mainly on *The Norton Anthology of Criticism and Theory and Poetry in Theory, 1900-2000* (Blackwell). These volumes provide a rich, comprehensive overview of poetic theory from its beginnings in Greek antiquity virtually to the present, covering Anglo-American, Continental, and other theorists. No single poetry anthology will be used, but poetic examples will be studied at every stage, generally posted on Blackboard. We will consider the "philosophy" of poetic composition in different historical periods and contexts, and will examine the continuing interplay between poetic theory and practice. The point of the course will be to get a grip on ways in which people have thought about poetry from the earliest times to the present, and to consider the sometimes antagonistic interplay between theorizing about poetry and writing it.

Degree Requirement Attributes: Dist:LIT

ENGL 54.13 - Digital Game Studies

This course explores digital gaming. Reading academic and popular texts, we will situate digital gaming in relation to new media, visual, and literary studies. Class discussion will focus on outstanding problems in digital game studies: Where do the histories of technology and gaming meet? How do games change players and how do games shape culture? What about designers and programmers? In what ways are digital games playful and what aspects of them are expressive? What is the future of gaming? Of course this class will also study particular games, and, in addition to writing academic essays, students will invent individual and group projects in the game domain.

Degree Requirement Attributes: Dist:TAS

ENGL 54.15 - History of the Book

This course examines the book as a material and cultural object. We'll consider various practical and theoretical models for understanding the book form and investigating the materials, technologies, institutions, and practices of its production, dissemination, and reception. We'll focus primarily on the printed book in Western Europe and North America, but we'll also discuss the emergence of the codex (book), medieval manuscript books, twentieth and twenty-first century artist's books and the challenges posed by digitality to the book form. The readings for the course will be balanced by frequent use of exemplars drawn from Rauner Library and practical experience setting type in the Book Arts workshop.

Cross-Listed as: COLT 40.01

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 54.16 - Literary Classics

Hamlet, Paradise Lost, Pride and Prejudice, Wuthering Heights, The Waste Land: These texts are among the cornerstones of a literary canon that still exerts enormous influence even as it is intensely contested. How does a play, a novel, or a poem become a “literary classic”? In this course, we will read a series of indisputably “great” texts in order to understand the complex forms of evaluation (aesthetic, political, moral, and commercial) that both underpin and revise notions of canonicity. Drawing on theoretical work by Gauri Viswanathan, Pierre Bourdieu, Theodor Adorno, and Pascale Casanova, we will also consider the varied institutional contexts (from the colonial civil service to the liberal arts classroom, from small presses to multinational publishers, from *Masterpiece Theatre* to contemporary Bollywood) that govern these processes.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 54.17 - Psychoanalysis and Philosophy

This class will stage an encounter between psychoanalysis and philosophy, introducing students to both fields by placing them side by side. Drawing on the complementary expertises of the two-person teaching team, weekly readings will pair at least two texts, including one from each primary field, to illuminate similarities and differences between psychoanalytic theory on the one hand and philosophical concepts on the other, noting where appropriate the mutual influence of the two fields. Because psychoanalysis is also a clinical practice, this interdisciplinary encounter raises the question of the practical dimension of philosophical thought, and we will ask about philosophy’s potential impact on lived experience, as well as whether the practice of psychoanalysis remains a valuable mode of treatment or an aid to everyday living. To help organize the broad questions at the intersections of psychoanalysis and philosophy, we will divide the class loosely into four thematic units, the unconscious, Oedipus, interpretation, and transference. Class will proceed mostly through guided discussion; assignments will include reading responses plus midterm and final papers, with opportunities for additional credit so that students might pursue their own interests within the course subject matters.

Cross-Listed as: COCO 034

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 54.40 - Literary Culture in an Age of Digital Distraction

This course is organized around two main projects that will investigate the interesting and compelling ways that “traditional” forms of literacy are evolving to coexist with

digital and social media. First, students will choose a contemporary practice, tool, or genre in which print and digital media have converged (e.g. book lists on Goodreads, e-book hardware, “Twitter fiction”), exploring what if anything is “new” about it. Next, student groups will design and prototype a digital technology that reimagines the ways that literature is produced or consumed in the context of digital media. This project will accommodate students with varying levels of technical expertise, though no programming experience is presumed. Throughout the course, readings on the history of media, the ethnography of literacy, and human-computer interaction will guide both our writing and production.

Degree Requirement Attributes: Dist:ART

ENGL 54.41 - Critical AI

While the rapid improvement in generative AI over the past two years, especially as seen in interactive tools like OpenAI’s ChatGPT and Google’s Bard, caught many people by surprise, these technologies have a long history. The course takes up artificial intelligence as not a single technology or even a class of technologies, but rather a discourse concerned with the automation of perception (image, sound, text) originating in the mid-twentieth century. Critical AI examines the beliefs, theories, methods, and practices of machine learning as well as the social and cultural significance of these transformative technologies. Giving special attention to the intersection of humans and AI, we will examine the inputs and outputs of machine learning and the ethical issues related to training and using these tools. The large-scale AI projects of the present would not be possible without what critics have called digital dispossession and the extractive function of new forms of capital. In this course we will apply cultural critique to artificial intelligence while learning the fundamentals of how these technologies work and how they fail.

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

ENGL 54.42 - Literature and Theory of the Supernatural

The wager of this class is that telepathy, ghosts, the afterlife, and even gods are real. That is, when people speak of these things, what they are describing is not strictly speaking imaginary, nor only metaphorical, conventional, rhetorical, or illusory. Something happens—to a body, to a community, or to an entire society—that cannot be explained by the preexisting frames of reference of human experience. In other words, the real of the supernatural is not intelligible just like that; hence, it is not a matter of naively “proving” the existence of ghosts, etc (though we will consult the work of psychical researchers). Instead, the occurrence of the supernatural requires us to more carefully define what it means to exist in the first place.

Degree Requirement Attributes: Dist:LIT

ENGL 55 - Special Topics Classes with No Course Group

Special topics classes with no course group.

ENGL 55.01 - Modern American Women Poets

This course focuses on the emerging counter-tradition, within American modernism and within the larger tradition of poetry in English, of American women poets in the twentieth century. Taking our cue from Adrienne Rich, who ambiguously titles one book of essays *On Lies, Secrets and Silences* (is she for or against?), we will follow debates about what makes it possible to break previous silences--and to what degree and in what ways it is useful or satisfying to do so. Topics within this discussion will include sexuality, race, illness, literary modes, female literary succession, and relations with the literary tradition. We will read in the work of eight or nine poets and recent critical and theoretical writings, with some attention in the first weeks to important female and male precursors. The syllabus will include such writers as Edna St. Vincent Millay, HD, Gertrude Stein, Elizabeth Bishop, Gwendolyn Brooks, Sylvia Plath, Anne Sexton, Audre Lorde, Adrienne Rich, Marilyn Hacker, Louise Gluck, Rita Dove.

Cross-Listed as: WGSS 47.03

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.05 - Book Arts Studio Seminar

A studio-based seminar in which students explore the relationship between text, image, and form through letterpress relief printing techniques and the creation of book structures. Lectures and readings will familiarize students with historic and contemporary literature on the book form. Students will study exemplars from the extensive holdings of Rauner Special Collections and the Sherman Art Library in historical hand press and contemporary artist books. Limited enrollment. Supplemental Course Fee.

Degree Requirement Attributes: Dist:ART

ENGL 55.06 - Reading and Publishing the Literary Magazine

The course offers students instruction and opportunities in literary journal operations from the editorial process to defining and maintaining the journal and its agenda. Ethical questions of blind review and the diversity of contributors will also be discussed, as well as issues of promotion and social media and the use of other digital tools. Students will gain invaluable experience in publication systems, copy editing, professional communications, and marketing. Field trips to other campuses or events to meet with representatives of similar student-run publications will be a means of cultivating not only new ideas but also a developing sense in the students

of professionalism and community. Enrollment is limited to 15.

Degree Requirement Attributes: Dist:ART

ENGL 55.07 - The Arts of War

Walt Whitman said of the American Civil War: "the real war will never get in the books." This course will raise core questions about how war is remembered and represented through text, performance, and visual culture. Our questions will be anchored in concrete case studies but will also raise far-ranging philosophical, ethical, and historical questions that examine instances of war in relation to the aesthetics of war.

Degree Requirement Attributes: Dist:INT or ART

ENGL 55.08 - Neuroscience and the Novel

Over the past few years it has been suggested that since the 1990s there has been a major shift in how novels represent characters and consciousness. This new type of novel has been called the "neuronovel." This course takes up questions at the intersection of psychology, neuroscience, and literary studies to explore this thesis. We'll read contemporary work by neurologists and psychologists (Damasio, Sacks, Gazzaniga, Schacter) as well as their late-nineteenth and early-twentieth century precursors (Freud, James, Brentano, Beard) alongside a wide range of literature that allows us to think about the intersection of race, gender, and sexuality with the universalist claims of various scientific and pseudoscientific accounts of the self. Key literary texts include Shelley, McEwan, Lethem, James, Poe, Woolf, Roth, and Wright.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.09 - Hope? How Feelings Shape American Culture

Barack Obama defined hope as a culturally transformative feeling that required "audacity." Yet scholars have questioned hope's ability to bring about change, leading Lauren Berlant to speak of "Cruel Optimism." Hope, Optimism, Audacity, Cruelty: how does affect impact American culture? We will develop frames for thinking historically and analytically about feeling's influence on class, gender and ethnicity. Students will develop final projects that integrate imagination into an analysis of the questions hope raises.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 55.11 - Hamilton: The Revolution as a Work of Art

In *Hamilton: The Revolution* (the book of annotated lyrics and account of the musical's production), Lin-Manuel Miranda and his collaborators create two frames for their work's significance. One is the historical American Revolution of the 18th century, which the musical rereads via the figure of the orphan-immigrant; the other references

their own musical, which they describe as an act of cultural revolution in its engagement with the racial politics of the early millennium. What does it mean to read revolution as a work of art, and *Hamilton* as its artistic reinterpretation? In this course, we will develop frames for thinking analytically about *Hamilton's* artistic engagement with class, gender and ethnicity in the historic past as well as our own moment.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ENGL 55.12 - Dartmouth Fictions

This is a course about the campus novel and literary representations of Dartmouth College. Dartmouth, as both a setting and object of analysis, has appeared in numerous cultural objects as alumni, students, and those looking in from the outside have reflected on the intellectual and social life of the College. Many major cultural works—from Ralph Waldo Emerson’s “Literary Ethics” to August Wilson’s *King Hedley II*—were written or first performed at Dartmouth. But the College’s campus and its students have also inspired countless fictional and autobiographical works. Throughout the term, we’ll examine the myriad ways in which Dartmouth has been represented by reading a selection of novels and memoirs set on our campus. We will also read a selection of poetry and examine digital productions depicting Dartmouth and Dartmouth students, including memes and textual forms of social media. Finally, we will visit Rauner’s special collections to examine primary materials, including artifacts and texts from the College’s past, to produce a research paper that locates a text within its historical context.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.13 - South African Literature in English

This course will examine works by South African men and women of various ethnicities who have chosen to write in English since the publication of Olive Schreiner's *Story of an African Farm* in 1883. This richly diverse literature will be tracked through the cultural and political history of South Africa with primary emphasis on the twentieth and twenty-first centuries before and after the fall of Apartheid. Confrontation between black militancy and white oppression characterizes much writing and social interaction in South Africa before the fall of Apartheid, but complex forms of multi-ethnic coexistence and interchange have also been evident since the first white settlement of the country in 1652. Recent work by J.M. Coetzee and Zakes Mda among others explores the difficult, unmapped terrain of post-Apartheid South Africa. Works by the following writers may be included in the course: Olive Schreiner, Solomon Plaatje, Bessie Head, Nadine Gordimer, Zoe Wicomb, Alan Paton, J.M Coetzee, Njabulo Ndebele, Athol Fugard, Nelson Mandela.

Cross-Listed as: AAAS 85.01

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 55.14 - Native American Oral Traditional Literatures

Native American oral tradition constitutes a rich and complex dimension of the American literary heritage. This course will examine a range of oral genres from several time periods and tribal sources. Oral traditions and the textual sources into which they are anthologized provide valuable insights into the nature of human creativity. They are also full of unique hermeneutical challenges. This course will include some contemporary theoretical approaches to orality and the metaphysics of the voice to unpack some of these questions.

Cross-Listed as: NAIS 034

Degree Requirement Attributes: LIT

ENGL 55.15 - The Merchant of Venice: The Jew in the Protestant Imagination

This seminar is an interdisciplinary study of Shakespeare's *The Merchant of Venice* that will examine the history of Christianity's attitudes toward Judaism, the fate of Jews within Christian Europe, especially in England prior to the expulsion of the Jews in 1290, and the effect of these histories on the composition of the play, the representations of its main characters, particularly Shylock and Portia, and its reception through the centuries, with attention to its role in modern attitudes toward Jews and toward anti-Semitism. We will approach the material as scholars of history, literature, and religion. We expect to attend closely to the gendered and racialized representations of Jewishness and Christianness in the play and in English culture more generally. The impact of the play will be examined with particular reference to modern German and English literary traditions. We will also examine some major developments in the staging of the play, with particular attention to Yiddish versions, Israeli productions, and Nazi-era German stagings, as well as several film versions. A selection from the major critical literature on the play will be studied.

Cross-Listed as: JWST 070 REL 74.12

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.16 - Prehistoric Worlds: Science Fiction and Geological Time

Ever since natural historians like Charles Lyell and Charles Darwin radically expanded the time scale of Earth’s history, modern writers and filmmakers have looked for new ways to mediate “deep time.” This course is an introduction to their work. During the semester, we discuss the techniques they use to portray the passage of geological time. We also question the political implications of these representations—what they tell us about society in the present. Finally, we consider deep time as an inspiration for new philosophical concepts. The course has three sections: “Deep Time and Early Science Fiction”; “Cold

War Countercultures”; and “The Anthropocene.” In addition to essays and exams, we complete a field project about the Harvard Museum of Natural History.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 55.17 - Disability and Literature

This course introduces students to an emerging canon of literary autobiography and criticism devoted to the experience of disability. Critical works read in this course will cover such issues as physical access, ableism, neurotypicality, deaf political activism, and intersections of disability and other categories of identity such as race, class, gender, and sexuality. Major authors and texts to be read include Temple Grandin, Oliver Sacks, Thomas Couser, Simi Linton, Rosemarie Garland Thomson, *Bartleby*, *Of Mice and Men*, *Autobiography of a Face*, and *Curious Incident of the Dog in the Night*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.18 - Research As Picture Books

In this course, students will convert cutting-edge scholarship by a select group of participating Dartmouth researchers into picture books for children, complete with characters and stories (even when the research primarily involves scientific data). Students will learn the basics of picture book composition and design by analyzing classics in relevant sub-genres (there’s a bird laboratory at Cornell that puts out a regular series of picture books that will also be useful as models). In collaborative teams and working closely with the professor and their assigned researcher, students will pitch and defend their ideas, produce mock-up picture books, and present other documents simulating the professional experience of seeking publication for their projects.

Degree Requirement Attributes: Dist:ART

ENGL 55.19 - Maroons to Marley: Jamaica's Role in Worldwide Revolutions from Slavery to the Present Day

In 1738, a hundred years before legal emancipation came to England’s New World slave colonies, Jamaica’s Maroons forced the colonial power to sign a treaty granting sovereignty to Maroon communities across the Caribbean island. As the first Africans in the New World to achieve this feat, Maroon warriors directly and indirectly influenced abolitionist and revolutionary movements throughout the Americas—including, of course, revolts in Haiti and the United States. These warriors continued to inspire the revolutionary actions of other oppressed and/or enslaved individuals for generations, and indeed, a revolutionary ethos pervades Jamaican culture and artistic production from the colonial period to the present moment. This course traces the impact of “Jamaican” revolutionary figures on other revolutionary figures and events worldwide. Moving chronologically, from colonialism to

the present day, the course examines influences such as African/Jamaican Maroon *leaders* direct impact on other revolutions throughout the Americas; Mary Seacole’s exchanges with and impact on Florence Nightingale during the Crimean War; Marcus Garvey’s impact on the Harlem Renaissance and the Rastafari religion; Claude McKay’s revolutionary impact on vernacular poetics and on the “Red Scare;” Louise Bennett’s mid-twentieth century revolutionary, feminist, vernacular poetics and her impact on female performers in the Americas, Europe, and Africa; Bob Marley and Damian Marley’s impact on politics and revolutionary movements in Liberia and Ghana; and finally, the impact of Staceyann Chin’s outspoken poetics on LGBTQ rights in the Caribbean and in other marginalized African diasporic communities.

Cross-Listed as: AAAS 91.05

Degree Requirement Attributes: Dist:SOC

ENGL 55.20 - The Case Study: Crime, Medicine, and Modern Society

What does Sherlock Holmes have in common with Sigmund Freud? What unites binge-worthy Netflix fare with Charles Dickens? The course investigates the case study, which plays a crucial role in criminal, legal, and medical contexts alike. While case studies are certainly familiar from tv series or podcasts, the form has a rich literary history. We will survey works from a range of national traditions, examining the features of the case that enable it to operate in and across multiple genres and fields. Our discussions will center on questions of epistemology and form, as we ask *what kind* of knowledge cases transmit and *how* they transmit it. Do they depict exceptional phenomena, or do they seek to delineate the qualities that are representative of a given phenomenon? Who has the authority to tell stories about whom? Why are cases so often relayed in serial form?

Cross-Listed as: COLT 39.04

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.21 - Epidemics: Vortex of Fear and Wisdom

This course will focus on learning difficult lessons of experiential wisdom from global Infectious Disease Epidemics 1982-2020, including through on-the-ground experiences, literature, and documentaries. Students will reflect and write about insights that may apply to their own lives.

Epidemics are characterized by fear. Fighting epidemics requires the courage to act in the face of that vortex of uncertainty and fear, the empathy and compassion to understand and feel motivated to alleviate suffering, the imagination to figure out the possible paths of action, and the cognitive and emotional skills need to actually take action. The experiential wisdom it takes to act well in such fearful and uncertain circumstances is the *framework* of

this course. The Smithsonian Museum Exhibition on Epidemics will be presented.

As the faculty of this course we believe that each generation should help transmit the experiential wisdom to the next generation to help fight the fear linked with all types of epidemics near and far, large and small.

Cross-Listed as: MALS 373

Degree Requirement Attributes: Dist:LIT

ENGL 55.22 - Socio/Poetics: Sociological Method and Literary Form

This course introduces students to a cultural history of the relationship between Sociology and Literature in America from the early twentieth century to the present. Taking inspiration from recent scholarly approaches to literary interpretation that draw on sociological methods for interpreting texts quantitatively, relationally, and descriptively, we will also examine the ways in which sociology has long been occupied by phenomena often associated with literature: subjectivity, uncertainty, and linguistic form. Beginning with the institutionalization of sociology in the 1920s and 1930s, we will explore aesthetic texts alongside sociological works and other cultural documents. In doing so we will situate ourselves in a historical milieu and reconsider conventional literary categories and lineages such as documentary and docupoetry, the photo-essay, and New Journalism through the lens of their response to and use of sociological methods and tropes.

Cross-Listed as: SOCY 79.13

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 55.23 - Analyzing Content: From Tik Toks to Tweets

The internet is awash with new popular cultural forms, from listicles and lolcats to Ted Talks and makeup tutorials. And yet scholars have only just begun to analyze this new digital “content”: what makes it unique, and how it is reshaping our culture. In this course, we’ll look at new forms of popular digital content in detail—reading tweets as closely as if they were poems, or exploring the substance of 100,000 Instagram images. We’ll survey the methods that have been developed, in different disciplines (media theory, art criticism, sociology), for analyzing content in this way, as well as those that have yet to be attempted (questions that haven’t been asked; material that hasn’t been addressed). To put theory into practice, students will develop 10-12 page research projects on popular digital artifacts of their choosing. They will also be introduced to computational methods of analyzing content, and have the opportunity to pursue these methods further.

Cross-Listed as: FILM 48.07

Degree Requirement Attributes: Dist:LIT

ENGL 55.24 - History of the English Language

This course traces the development of English as a spoken and written language belonging to the Indo-European language family. We will work forward from Proto-Indo-European through Old English (Beowulf), Middle English (Chaucer), and Early Modern English (Shakespeare), up to contemporary American English. Our focus will be on the structural history of the language, especially changes in pronunciation and grammar, and the implications of those changes for English as spoken and written today. Open to all classes.

Not open to students who have received credit for ENGL 047.

Cross-Listed as: LING 18

Offered: Summer.

Degree Requirement Attributes: Lang:LRP; Dist:QDS; WCult:W

ENGL 55.25 - Friends, Enemies, Lovers: Civil War and Revolution (in English)

Equality, freedom, justice—we tend to think of these values as bringing about reconciliation and unity, as foundational to political communities. But surprisingly, the most canonical thinkers in political theory have favored a different set of concepts: strife and civil war. For Plato, Hobbes, Marx, Arendt, Freud, Lenin, Schmitt, and many others, it is not the social contracts of government and laws that hold people together, but *love* and *hate*, the most intense passions of our closest human relationships. Of course, these passions are highly unstable, which leads us to many of the most profound paradoxes of philosophy and art: Why are tragedies dangerous to public morale and yet indispensable for public education? What do we do when families are torn apart by unreconcilable beliefs? How can a foe be a better friend than your friends? Similarly, the idea of “fraternity,” so central for modern revolutions and the birth of the nation, is fraught with enmity and quarrel. This course will pursue these problematics in key texts of philosophy, literature, and contemporary critical theory, and bring the philosophical paradigm of civil war to bear in relation to US and German culture.

Cross-Listed as: COLT 08.01 GERM 46.05 HUM 03.08

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 55.26 - Sufism as World Literature

In his book, *What is World literature?*, David Damroch argues that world literature is not a canon of texts but rather a mode of circulation and reading that gains in translation. Sufism, often referred to in English as “Islamic mysticism”, has long appealed to many literary traditions and informed multiple aesthetic projects around the globe—evolving in significance as it circulated through translation. This course offers an introduction to Sufism as

world literature. It explores its universal appeal (in such languages as Arabic, English, Persian, Spanish, Turkish, Urdu etc.) and its many aesthetic manifestations and transformations around the world. In addition to the thematic, the course offers an extensive and diverse (but not exhaustive) survey of Sufism's impact on literary genres.

Advanced reading ability in a second language is preferred but not required as all class materials are available in English.

Cross-Listed as: COLT 35.06 MES 15.13

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

ENGL 55.27 - Introduction to Literature and Medicine

This course will introduce you to the many ways that medicine and literature shape each other, both historically and in our present. In class, we will discuss classic works of history and fiction that are considered foundational in how Western culture imagines and interprets disease. Our reading list, however, will be centered on a *new* canon of literature and medicine, beginning, as we must, with intersectional and social justice concerns: chiefly how race, class, gender, sexuality, and disability determine health outcomes and our broader understanding of health and disease in a global context.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT

ENGL 55.28 - Digital Language Theory

It has long been a goal to merge computation with natural language, and by many measures the latest AI systems seem to have achieved this. But how do models like ChatGPT enable us to talk with our computers? While this is partly a technical question, AI's facility with natural language also presupposes a broader theory about what language is—and what, therefore, terms like “writing,” “communication,” and “understanding” (among others) mean. This course will survey various attempts to make language computable over the past two hundred years. We will consider the above terms as we sample from the history of natural language processing, various literary theorists and linguists, as well as artistic uses of language modeling. Readings range from semiotics and post-structuralism to computer science and language art, language models from Markov chains to GPT.

Cross-Listed as: QSS 30.26

Degree Requirement Attributes: Dist:QDS

Section IV-Junior Colloquia

Limited to 20 students, these courses will vary in content. They are intended to introduce students to advanced research and prepare them for their senior seminars and

honors theses. Coursework and instruction will build toward a substantial paper of 12-15 pages of sustained inquiry with a research component. Recommended: two completed major courses or permission of the instructor.
Dist: LIT.

ENGL 61.01 - Chaucer: Dream Poems and Troilus

Chaucer's *Canterbury Tales* get all the hype, but his other works are every bit as exciting. From a gorgeously beautiful elegy (*Book of the Duchess*) to a biting satire (on fake news, no less—the *House of Fame*) to the engaging-but-problematic romance of *Troilus and Criseyde*, we will have multiple encounters with Chaucer's voice, his thought, his wit and humor. We will think about the intriguing genres of the Dream Poem and the Romance, both of which Chaucer complicates in interesting ways. We will also hone our research skills and talk about the conception and execution of a major literary paper. Prior knowledge of Middle English is not required.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 61.02 - Sound, Music, Literature in Medieval England

In this course, we will consider various ways of approaching medieval literature as an acoustic event, and embedded in everyday soundscapes. We will introduce ourselves to the theory contemporary sound studies, and its practical and theoretical study in a medieval context. We will explore the connections between music, poetry, and oral performance of literary texts. Readings will range widely from Old English poems and epics to Middle English poems, plays, and romances. Our investigation will culminate in two of Chaucer's shorter poems, in which he specifically (and ironically) investigates the nature of sound and its social functions. At the same time, we will hone our research and paper-writing skills; each student will plan and execute an individual research project and present it to the class.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 61.03 - Early Modern Literature and the History of Sexuality

Throughout the twentieth century and especially since the 1970s, the literature and drama of the English Renaissance has provided a crucial archive for scholars studying the historical formation of sexuality, sex practices, and gender in pre-modern society. Shakespeare's sonnets, for example, with their erotic address to both a "sweet boy" (or "master-mistress of my passion") and the so-called Dark Lady, remain a flashpoint. On the English stage, cross-gender identification and same-gender romance was a constant presence, while in the streets of London, "catamites," "tribades," or acts of "sodomy" were supposed to be completely absent—from the eyes of the law, at least. What can the poetry and plays of William Shakespeare, Amelia Lanyer, Christopher Marlowe, Margaret

Cavendish, John Donne, or Katherine Phillips teach us, not only about the historically-distant practices of the past, but about our methods, theories, terms and changing paradigms for studying such topics today? What does it mean to read imaginative literature as an archive within an historically contingent body of knowledge? Students should prepare to engage with significant primary and secondary historical readings as well as the social theories of Michel Foucault, Eve Sedgwick, and others.

Cross-Listed as: WGSS 66.20

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 61.04 - Madness, Magic, Metamorphosis: Unstable Character in Early Modern Drama

"Fair is foul and foul is fair," chant the witches of Shakespeare's *MacBeth*. Following their ominous words, this course explores how physical and psychic transformations reflect the uneasy coexistence of religion, myth, science, and the supernatural in Shakespeare's England. We begin with a slow reading of *King Lear*, in which a monarch's stormy madness destabilizes the natural world. Each week thereafter, we'll explore how playwrights use altered bodies and states of consciousness to reflect competing views of justice, truth, authority, and embodiment. As we test various critical approaches to the idea of literary character, we will weigh how well they account for the figures before us, who are defined by the mystical, the metaliterary, and the unnatural.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 61.05 - The Faerie Queene: Speculative Fiction circa 1590

This course will read Edmund Spenser's 16th century poem, *The Faerie Queene*, through the lens of the modern practices of speculative fiction, that is, fiction that explores or created alternative worlds. Despite the title of the poem, the queen never appears. Instead there are knights, ladies, magicians, mythic and fantastic beings, human-animal hybrids and robots (for starters) in a landscape that features a wide range of social relations and conditions. Shakespeare, Milton, James Joyce, Monty Python, Neil Gaiman, and Angela Carter are on the long list of the poem's keen readers. In addition to *The Faerie Queene*, we'll read short essays on speculative fiction and brief extracts from 16th-18th century discussions of poetry as a way of writing and thinking. Spenser's language is deliberately archaic, but it is not difficult for modern readers. Experience with sixteenth century literature is not necessary.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 61.11 - Reel Imaginary: Early American Literature in Film

Walter Benjamin argues that we can only awaken from "that dream we name the past" by passing through it, looking simultaneously at both past and future. We can attempt this by reading historical literature, but in the last few decades, film has become a major mediator of our experiences of the past. This course encourages us to think critically about how films represent our past to us in forms that shape our experience of our present identity and influence the future. To think dialectically, we will read primary source material from 1000 AD to 1757 and see what some of the major American filmmakers do with it and why.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.01 - British Fictions of Revolution

The year 1848 was, for most of Western Europe, a year of revolution. In England, one of the few countries to escape widespread violence, 1848 was a year of rampant publication. The texts published in the UK, ranging from Marx and Engels' *The Communist Manifesto* to Gothic novels and Pre-Raphaelite poems, do not always seem obviously radical or even similar to one another in theme and mood. Are these texts in fact revolutionary? Are any of the texts politically or socially conservative, or do they represent conservative characters or perspectives? Do they take revolutionary forms or structures? To what extent are the texts participating in the same public sphere and historical moment? In responding to these questions, this colloquium will read literary texts (by Gaskell, Dickens, Emily Bronte, Christina Rossetti, Browning, and Tennyson) alongside artistic and political manifestos, popular political poetry, visual images, scientific and critical prose, and contemporary literary criticism (feminist, Marxist, psychoanalytic, poststructuralist). Students will work toward a substantial research project (12-15 pages) focused on a topic related to the course and of their choosing.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.02 - The New Emily Dickinson: After the Digital Turn

This colloquium offers an in-depth study of the poetry of Emily Dickinson with a particular focus on how the tools of the digital humanities have renovated our views, including unsettling just what a Dickinson poem is. Since her death in 1886, rival editors have fought over Dickinson's canon, producing *their* versions of her poetry. Likewise, biographers have romanticized her life, characterizing her as "The Belle of Amherst," eccentric, reclusive and even a bit mad. This colloquium will introduce students to the "new" Dickinson that is emerging from the plethora of materialist, feminist, post-modernist, and cultural studies approaches. We will use digital archives to *reread* and *reconsider* Dickinson's work and

life. Finally, we will study the year 1862, an immensely productive time for Dickinson and the height of the Civil War, also the focus of an annual daily blog I am preparing. For their final projects, students will examine one week of poetry in this tumultuous year, producing research that will be vetted for inclusion on the blog.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.03 - Nineteenth-Century British Women Writers

For the first time in literary history, women writers found commercial and critical success in England during the nineteenth century. Women writers of this time were keen observers of the social codes that formed—and constrained—their identities. Though women wrote in many genres in this period, this course will focus on major novels of the nineteenth century because of the particular strategies female novelists used to open up hard questions about social identity, and particularly social possibilities for women. Questions about gender clearly implicate sexuality, class, ethnicity, race, and power, as well, in complex, compelling, and unexpected ways. We will read works by Jane Austen, Mary Shelley, Emily Brontë, Charlotte Brontë, Elizabeth Gaskell, and George Eliot, and we will end the class by reading substantial excerpts from the private, unpublished diaries of the women writers who published as “Michael Field.”

Cross-Listed as: WGSS 48.09

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.04 - Trauma and Enjoyment in Early American Literature

Trauma is omnipresent today, but so is confusion about its signs, symptomatology, and long-term effects. Is trauma an event, a process, or a condition of being? Is sex or power more predominant in human relations? Why do we put ourselves in harm’s way despite our better intentions? Are life’s worst experiences always inimitable injustices, or are they potentially transformative? Early American literature might seem an unlikely guide here, but the distinction between violence and pleasurable excitement was crucial to the way American settlers encountered natives, how slavery became a definitive moral issue, and how literary history evolved from cautionary narratives of seduction to intensified engagements with reality. This dual survey course examines classic works of American literature from the first encounter to the Civil War, alongside pivotal works in trauma theory.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.05 - The Horrors of Survival: American Literatures of Modernity

There is a significant period of modernization in US culture from about 1850-1920—a decade before the Civil War to the aftermath of World War I, encompassing

Reconstruction, the Gilded Age, the devastating relocation of indigenous Americans, and the development of film and photography—which coincides with one of the most definitive and transformative passages in American self-identity, yet which is under-studied compared to the antebellum period (late 18th-early 19th century) and the period of “high modernism” (1920s-40s). Perhaps part of the reason is that what counts as *modernity* in these years is not yet *modernism*, but a process (always debatable) of “becoming-modern,” as if half the time there is a lingering preoccupation with pre-Civil War modes of life and the other half looks forward to a period of explosive economic growth and cultural change. Notably, this transitional period is when philosophical and scientific theories of survival, evolution, and inheritance of various sorts became predominant, alongside experiences of renewed racial violence, horrific catastrophes, economic turbulence, and political (dis)enfranchisement. By the early twentieth century, the psychiatric language of “trauma” dominated the understanding of subjectivity and the language of survival accordingly expands to include various forms of lingering, shock, strangeness, and disturbance that would soon take their place as hallmarks of the aesthetics of modernism. Tracking these currents, this course investigates episodes of survival from the personal (war, sexual assault, grief), the institutional (Jim Crow, Social Darwinism), historical (survivals of the Civil War, slavery) and media-technological (photography and film), in search of a definition of US modernity as a mode of transitional experience.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.06 - Dickens and Narrative Theory

Bleak House, *David Copperfield*, *Great Expectations*, *A Tale of Two Cities*, etc. Charles Dickens’s novels are “classics” today but were popular, experimental fictions in the middle decades of the nineteenth century, playing with literary form and distribution models. This colloquium reads Dickens’s work slowly, serially, as a way to understand and analyze key concepts in narrative theory, including narrative time and space, causality, characterization, focalization, diegesis, emplotment, narrative voice, and paratextuality. Alongside analyzing one of Dickens’s major novels, we will read texts by thinkers such as Mieke Bal, Roland Barthes, Peter Brooks, Dorrit Cohn, Gérard Genette, Caroline Levine, James Phelan, and Alex Woloch. We will also use case studies from film and television, including adaptations and streaming services, to better unpack narrative forms across media.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.12 - Jane Austen

As novels, and translated into film and television, Jane Austen's fiction has recently achieved extraordinary

popularity, much greater than she experienced in her lifetime. In this course, discussions will focus on the times and the culture in which she wrote and on her more recent popularity. Topics will include Austen's reactions against Romanticism; her continuing exploration of the moral and emotional dynamics of domestic life; her concern with the freedom of middle-class women; her use of history; her innovations in fictional narrative; and translations of her fiction into film. We will read *Northanger Abbey* (written 1797, published 1818), *Sense and Sensibility* (1811), *Pride and Prejudice* (1813), *Mansfield Park* (1814), *Emma* (1816), and *Persuasion*, (written 1816, published 1818), and view film versions of *Pride and Prejudice*, *Emma*, and *Persuasion*. Dist: LIT; WCult: W Course Group II

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.16 - Victorian Faces/Facial Politics

In Victorian England, a person's face was his or her calling card: a clue to social identity, a signifier of inner personality, or a mask, a socially-constructed and performed persona. The period witnessed the expansion of photography, the popularity of pseudo-sciences such as physiognomy and phrenology, and the "scientific" study of race—disciplines that focused on the policing of a material body. At the same time, the Victorian period witnessed the emergence of an alternative vector of realism that rejected an emphasis on the "seen" and expanded the categories of who and what could be represented: women, industrial workers, and people of color. In analyzing these competing fields of realism, this colloquium will read literary texts alongside artistic manifestos, scientific and pseudo-scientific prose, visual images, and contemporary literary criticism (poststructuralist, psychoanalytic, feminist, queer, performance theory, critical race). Possible authors include Mary Elizabeth Braddon, Elizabeth Gaskell, Charlotte Bronte, George Eliot, Amy Levy, and Bram Stoker.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 62.22 - Atlantic Slavery/Atlantic Freedom

When does slavery find itself chiasmatically mirrored in freedom? From the recent Hollywood blockbuster *12 Years a Slave* (2013) to the streets of Ferguson and Baltimore, the legacies of slavery and racial violence continue to cast their shadow over horizons of emancipationist history even as America commemorates the sesquicentennial of the U.S. Civil War. In this course we will revisit the literatures of slavery and antislavery in the Atlantic world from the eighteenth century to the present. Our novels and stories imagine episodes of slavery, slave rebellion, and fugitive flights to freedom across two centuries: from early transatlantic crossings of slaves and servants to the New World; to Tacky's Revolt and its place in what Vincent Brown has recently called the "Coromantee Archipelago" in eighteenth century slave rebellion; to the spectacular soundings of the Haiti Revolution in the Age of

Revolutions; to the messianic prophecies of Nat Turner in the early nineteenth century; to slave rebellions at sea; and finally to fugitive slave fictions in the abolitionist decade leading up to the Civil War.

Cross-Listed as: AAAS 88.11

Degree Requirement Attributes: Dist:LIT; WCult:NW

ENGL 63.01 - Modern Jewish American Women Writers

This course will explore the literature of Jewish American women from the late nineteenth century to the present; topics for discussion will include feminism, sexuality, identity politics, activism, and literary transmission. Among the readings will be poetry, fiction, memoir, and essays by such writers as Lazarus, Antin, Yeziarska, Stock, Stein, Olsen, Rukeyser, Paley, Ozick, Rich, Piercy, Levertov, Gluck, Goldstein, Wasserstein, Goodman, Klepfisz, Feinberg, Chernin. *Enrollment limited to 20.*

Cross-Listed as: WGSS 66.24

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 63.02 - Toni Morrison

This course is an in-depth study of Toni Morrison's major fictional works. We will also read critical responses by and about the author. We will examine Morrison's earliest and arguably most foundational and influential works. Required texts will include, *The Bluest Eye*, *Sula*, *Song of Solomon*, *Tar Baby*, *Beloved*, *A Mercy*, and *Conversations with Toni Morrison*. Central to our exploration will be an analysis of Morrison's observation that "the past affects the present." Therefore, we will explore the social and historical factors that contribute to Morrison's artistic constructions. Some of the issues we will examine include, alternative constructions of female community and genealogy, and representations of race, class, nationhood, and identity.

Cross-Listed as: AAAS 26

Offered: Winter.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

ENGL 63.03 - Fictions of Finance: For Love or Money

Love or money? It is difficult to decide which of these forces influences our lives more greatly. While money may not buy happiness, love seldom manages to put food on the table. This course examines literary texts, films, and other kinds of cultural objects in which romance and finance overlap and come into conflict. It examines the ways in which both finance (especially speculation) and literature believe in the reality of fiction. The course broadly considers the social ramifications of the financialization of daily life, drawing on anthropology, sociology, political economy, and cultural studies to thicken our understanding

of what it means to live in a world where finance determines so much. Students will have the opportunity to design a project dealing with issues of financial literacy. Possible readings/viewings include: Theodore Dreiser's *The Financier*, Gary Shteyngart's *Super Sad True Love Story*, William Gibson's *Peripheral*, *The Big Short* (dir. Adam McKay), *The Wolf of Wall Street* (dir. Martin Scorsese), and Alissa Quart's *Monetized*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 63.04 - Arts Against Empire: Fictions of Revolution and Solidarity in the Americas

Anticolonial struggle and movements for social justice have always been accompanied by a range of cultural practices, including fiction, art, music, film, murals, theater, graffiti, and theory. This course explores that tradition of cultural activism, considering attempts to narrate revolutionary formation, imagine solidarity, and write decolonial theory. We will begin by examining revolutionary nationalist and anti-imperialist culture in the Americas—ranging from the memoirs of Che Guevara and Malcolm X to Nuyorican and Chicano Movement literature—in order to consider the formation of revolutionary subjects, and how 20th century ideas of revolution were raced and gendered. We will then consider how novelists, artists, photographers, filmmakers, and activists attempted to imagine solidarity with revolutionary movements and suffering others in the Americas, from Central America solidarity photography to performance art in solidarity with Guantanamo Bay prisoners. We will pay special attention to the work of feminist and queer solidarity artists, writers, and performers. Finally, we will examine contemporary activist cultural projects, such as PanAmerican public art road trips and hashtag-activism. Students will have the opportunity to produce a creative or multimedia final project.

Cross-Listed as: LACS 35.07 WGSS 52.04

Offered: Summer.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ENGL 63.05 - Nobel Prize Writers

A study of Nobel Prize writers from various Anglophone countries, this course examines authors' aesthetic innovations alongside their engagement in cultural, socio-political, and national discourses. Although the focus will be on poetry, the course will also explore the relationship between different genres (including essays, plays, and novels) and various socio-historical moments. Authors will include William Faulkner, Nadine Gordimer, Seamus Heaney, Wole Soyinka, Rabindranath Tagore, Derek Walcott, Patrick White, and W.B. Yeats.

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Degree Requirement Attributes: Dist:LIT

ENGL 63.06 - The Undead South: Horror and Haunting in U.S. Southern Literature

This course explores the many forms of horror and haunting—racial, cultural, historic, economic, political—in the region known as the U.S. South, a national space where the possibilities of regeneration are continually thwarted by the aftershocks of a harrowing past. “Undead” tropes encompass numerous varieties of posthumous horror: the dead rising from graves; mourning and funerary practices; the glorification of lost causes and heroes; the excavation of unsuccessfully repressed crimes and bodies. We will consider both traditional forms of Gothic representation (in works by Poe, O'Connor, Faulkner, etc.) as well as contemporary resurgences in the vampires, zombies, and other necrotic forms of recent literature, television, film, and other media. Along the way, we will seek to identify the disturbing ways that the U.S. South has served—both consensually and coercively—as a kind of purgatorial space for America's most haunting histories.

Cross-Listed as: NAIS 036

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 63.07 - Cosmopolitanism and the Fictions of Exchange

What forms of exchange are possible in a world fast integrating, but increasingly uneven and unequal? What motivates “give and take” between individuals culturally or geographically distant, or separated by wealth? World fiction that grapples with these questions will provide queues for reflection on the ethics and pragmatics of cosmopolitanism. The readings imagine forms of friendship, dialogue, love, and goodwill which will be assessed against Enlightenment, Post-Enlightenment, and Democratic conceptions of rights, property, and community.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ENGL 63.08 - Electronic Literature

This course examines the burgeoning field of electronic literature, including electronic prose, poetry, and many non-traditional literary artifacts. We will look at the antecedents of electronic literature, culturally specific subgenres, technical and material underpinnings, and the relationship between electronic literature and other literary forms. Assignments will include close reading, critical examination of e-lit as a genre, and opportunities to author electronic literature.

Degree Requirement Attributes: LIT

ENGL 63.09 - Queer Literatures of Slavery

This junior colloquium asks how and why we might bring the perspectives and methods of queer studies to bear upon

the history of slavery—and vice versa. We will examine questions of gender and sexuality, kinship and belonging, desire and the erotic, and history and futurity through readings in fiction, poetry, and drama alongside key works in the history of gender and sexuality, queer theory, and queer of color critique. Students will also develop critical skills and strategies for producing scholarship in literary and cultural studies, culminating in an original research paper.

Cross-Listed as: AAAS 82.10

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 63.10 - Contemporary Science Fiction

In this course, students will read a wide selection of speculative fiction written since the 1980s, and mostly in the past decade. These texts imagine the births of artificial minds and bodies and the deaths of natural worlds, voyages through outer space and travels through time. We will think about the relationship between sex, race, gender, technology, and power both within the pages of these books and in the ongoing creation and disputation of science fiction canons. Authors will include Octavia Butler, Ursula Le Guin, NK Jemisin, Jeff VanderMeer, and Ling Ma.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 63.11 - Race, Sex, Sensation

This course engages with theories of race, sex, and sensation in critical race and ethnic studies, black and women of color feminism, and postcolonial studies. How does the violence enacted on racialized, sexed, gendered subjects exclude such subjects from the category of the individual, rights-bearing human cemented in Western philosophy? How is this exclusion enacted on the very surface of the skin and distinctly felt on one's body? Who gets to claim humanity and subjecthood, and who has never been able to make such a claim? The readings in this course give an account of how racialized, sexed, gendered subjects are made to bear histories of enslavement, dispossession, genocide, and colonialism in ways that might not always be visible, but instead are sensed, felt, and embodied. We will work with literature, performance, and art that elucidates the political, social, and aesthetic possibilities found in the nonhuman, animality, objecthood, flesh, viscera, and touch.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 63.12 - Labors of Love: Mothering in Chicana/Latina and Asian American Communities

The practice of mothering is too often deemed a universal, innate experience that binds women together across time and space. Yet motherhood shares an intimate relationship with shifting, culturally specific histories of colonialism, nationalism, militarism, and more recently, globalization. Motherhood, and social reproduction more broadly, has

served as a critical domain of power and knowledge production in these contexts. Because the experience of mothering connects the intimate experiences of individuals to larger structures and forces, and because reproduction is such a fundamental (if varied) biological and social experience, the topic lends its especially well to comparative analysis.

This specific course employs the framework of mothering to compare the experiences of two communities constructed as “foreign” to the United States: Chicana/Latina and Asian Americans. In situating motherhood as an ideological and cultural construction rather than a universal or natural phenomenon, we will compare closely affiliated histories of miscegenation, transracial adoption, domestic migrant labor, and assisted reproduction across the Americas and the Asian diaspora. How are these phenomena given especially potent life in Chicana/Latina, Asian American, and Asian diasporic cultural representations such as literature, documentary film, and television? In analyzing major scholarship and theories about mothering alongside these cultural texts, we will learn how differing notions of motherhood have been constructed, contested, and negotiated.

Cross-Listed as: WGSS 66.17

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

ENGL 63.28 - Rethinking Frost: Robert Frost in a Declining Landscape

In a famous exchange, long-time “frenemies” Wallace Stevens and Robert Frost traded barbs:

“The trouble with you, Robert, is that you write about – subjects.”

“The trouble with you, Wallace, is that you write about – bric-a-brac.”

Neither man was correct, but their characterizations hit a nerve, honing in on the kinds of superficial attributes that may render a first impression lasting. And while no one reads Stevens for his “bric-a-brac” many readers come to Frost for his subjects, which have been misunderstood and sentimentalized over time. It is important to remember, reading him now, that Frost's New England was no Transcendental retreat, and no rural paradise; poor, depopulated by western expansion on the one hand, and the industrialization of mill towns on the other, it was a landscape of failed and abandoned farmsteads, old people and misfits left to fend on their own, worn-out fields, harsh climate, intellectually moribund and spiritually enervated. Frost came to this “subject” without illusions or bitterness and it is through this subject that we will begin to rethink his poetics and ideas. Using the extensive Frost archives in Rauner, students will be encouraged to undertake primary research alongside their reading of poems and criticism. The course will culminate in a substantial research paper or

project, individually designed in consultation with the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 63.29 - Self, Subject, Photography

Before the oft-reproduced social-media mechanism of the selfie, there existed (and still does) the artistic self-portrait. Utilized in the creative realm to create a representation of the artist as both subject and object, self-portraits can be whimsical, grim, tantalizing, performative, or combative. In this course we will examine gendered constructions of self-portraiture as they exist in poetry, memoir, and photography. Specifically, our task will be to examine the registers of possibility present when women use their bodies and stories to claim authorial space. Our goal during the term will be to think through all of the mechanisms of the self that are deployed in the context of artistic practice. Students will produce their own photographic self-portraits and write an analytical paper on a contemporary writer or visual artist.

Cross-Listed as: AAAS 67.09 WGSS 66.08

Degree Requirement Attributes: Dist:ART; WCult:CI

ENGL 63.30 - Trans Gender Literatures

Is there such a thing as trans literature? If so, what makes literature “trans”? Is there a way to theorize distinctions between trans literature and non-trans literature? From queer literature? This class will consider various incursions into United States trans literature, from mid-century pulp and sleaze, to documentary film, to recent popular novels and small press poetry to collectively theorize what, if anything, we might say about trans literature and its aesthetics influences, interventions, and possibilities.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 63.31 - Big Game: Adventure, Empire, Ecology

This course asks how the era of imperial expansion and the study of “natural history” feeds our contemporary ecological crisis. We will begin with readings of influential colonial travel and adventure narratives like *Robinson Crusoe*, the captivity narrative of Mary Rowlandson, sections of Darwin and Captain Cook’s travel journals, and in-class work with archival materials like the Indian Botanical Survey Flora. In the first weeks, we will consider how the aesthetics of adventure circulated throughout the British empire in both the East Indies and India, and ramified elsewhere in the Dutch, French, Spanish, Portuguese, and Belgian holdings. We’ll end with a suite of readings and films that help us locate productive intersections between ecocriticism and postcolonial studies, drawing together sensationalist disaster journalism with environmental activism emerging from the Global South. This course will be especially of interest to students with a focus in environmental studies, nineteenth century

history and literature, history of science, or environmental activism.

Offered: Summer.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ENGL 63.32 - Fictions of Indigeneity

Indians are tragic footnotes in the American narrative and yet persistent fixtures in its literature. Largely anachronistic, indelibly other, and conceptually unstable, Indigenous representations convey complex attitudes of guilt, fear, repression, and desire. These “Indians” surface vividly at times of cultural, economic, and ecological crisis; they are not “real,” but they profoundly alter reality, even for Indians themselves. Readings will include works by William Faulkner, Ernest Hemingway, Willa Cather, Cormac McCarthy, Toni Morrison, and others.

Cross-Listed as: NAIS 81.06

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 64 - Junior Colloquia in Course Group IV

Limited to 20 students, these courses will vary in content. They are intended to introduce students to advanced research and prepare them for their senior seminars and honors theses. Coursework and instruction will build toward a substantial paper of 12-15 pages, of sustained inquiry and with a research component. Prerequisites: two completed major courses, or permission of the instructor. .

ENGL 64.01 - Hysteria, Paranoia, Schizophrenia: The Case Study as Literary Genre

Dora, Schreber, the Wolf Man: Freud’s famous psychoanalytic case studies are organized around his patient’s words and symptoms, and yet they all have the narrative complexity and lurid family drama of the greatest nineteenth-century and early twentieth-century novels. This course explores the psychoanalytic case study as a unique literary genre in its own right, one that falls between the medical case history and the novel proper. We will read Sigmund Freud’s case studies through three modes of reading: psychoanalytic feminist criticism; paranoid and reparative reading from queer critique; and, symptomatic reading from Marxist criticism. The readings of the cases will therefore be supplemented by texts in queer and feminist theory, continental philosophy, and literary criticism. Throughout the quarter, we will use the cases to explore questions of racial and sexual difference, the body, trauma, the psyche, and memory.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 64.02 - Garden Politics: Literature, Theory, Practice

What do gardens have to do with sexuality, empire, race, class, environmental degradation, the history of poetry, the social role of religion, and the future of art? In discussion of various literary, critical, theoretical, and eco-critical texts, we will attempt to answer this question over the course of the term. While based in literary readings, the course supplements and contextualizes these with other readings and websites. We will also consider broader issues and discourses connecting humans and the environment. Authors may include Jamaica Kincaid, Olive Senior, T.S. Eliot, Derek Jarman, Francis Hodgson Burnett, Paul Fleischman, Willa Cather, and Kage Baker.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 64.03 - Deconstruction: An Introduction to the Work of Jacques Derrida

This course is an introduction to the work of Jacques Derrida, an Algerian-French philosopher, whose thought has been important for a number of disciplinary formations, including the study of literature. In the course, we will engage with Derrida's archive by reading some of the interviews that he gave over the course of his life, from the very early interviews on philosophy, philosophical heritage, and the status of writing in western thought to his late interviews, which focus more on ethics, the political, sexual difference, the animal, and the death penalty. Throughout the course of the term, we will study the method of deconstruction, placing Derrida's thought within a philosophical and literary archive and exploring the potentiality of deconstruction towards an ethical and political project. Readings will oftentimes be supplemented with filmic texts.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 64.04 - Jacques Lacan and Psychoanalytic Thought

This course is an introduction to the teachings of Jacques Lacan, a French psychoanalyst who turned to the texts of Sigmund Freud in order to bring back to psychoanalysis the radicality of its intervention. In the course, we will read some of the key texts in Lacan's *Ecrits* alongside excerpts from his seminars as well as commentaries on his writings by prominent Lacanians, including but not limited to, Jacques-Alain Miller and Slavoj Žižek. The course is located at the intersection of literature, psychoanalysis, and critical theory and will act both as introduction to psychoanalytic thought as well as its unique development by Lacan. The psychoanalytic texts will be supplemented by reference to filmic texts, including: *Psycho* (dir. Hitchcock, 1960), *Shame* (dir. McQueen, 2011), and *Black Swan* (dir. Aronofsky, 2010).

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 64.05 - Cultural Analytics

This course is an introductory course and assumes no prior knowledge of literary studies, critical approaches, statistics, or data analysis. It provides an overview of emergent quantitative methods and theories used by humanists to study data in text and text as data. As we examine these objects, we'll ask questions about the differences, in terms of methodology and interpretive practices, between the social sciences and the humanities. In developing answers to these questions, we will explore recent quantitative methods alongside traditional methods of humanistic inquiry. The goal of the course is to enable students to evaluate data, methods, and interpretations produced from quantitative research in the humanities and to conduct their own research.

Cross-Listed as: QSS 30.16

Degree Requirement Attributes: Dist:QDS

ENGL 64.06 - Animal, Vegetable, Medium: Writing Nonhuman Sentience and Communication

What do animals see, hear, and smell with their different senses? Through what media do they communicate? Do plants have a kind of sentience? Given that we can never get inside the head (or leaf) of another species, can we really know anything about their consciousness? Writers and theorists have been asking these questions for centuries, often in dialogue with the science of animal behavior. This course looks at a contemporary multidisciplinary tradition that attributes sentience and communication to animals, plants, and fungi. Over the course of the term, we address three interlocking problems as they appear in a varied archive of print and visual media 1) the problem of accessing the subjective experience of other species 2) the problem of communicating with other species, and the question in what media it might be possible 3) the problem of communicating with other human beings about 1 and 2, and the question of what media best serve this purpose. We also ask what these aesthetic and theoretical traditions offer us now, during the "Anthropocene" or the current epoch when humans have become a geological force shaping the Earth. We ask whether or not they have the potential to interpret it from a different perspective, whether or not they can inform environmentalist politics, and what their implications might be for social justice. This advanced course in environmental media studies also incorporates readings that reflect on the field's particular theories and practices.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 64.07 - Theory Before "Theory"

The twentieth century saw the rise of what has come to be called "literary theory"; but people have been writing theories about literature — about its purpose, its effects, its

operations and mechanisms, even its very existence — for as long as other people have been writing literature. Students in this class will study the works of some of the canonical figures in that centuries-old tradition — Plato, Aristotle, St. Augustine, Kant, Schiller, Hegel, Nietzsche — alongside some other figures, such as Matthew Arnold, T. S. Eliot, and Erich Auerbach, who fall just outside the literary-theoretical canon but whose influence on literary studies has nonetheless been profound. Ideally, students will take this class as a complement to English 45: Introduction to Literary Theory rather than as an alternative to it.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 64.08 - Matters of Life and Death: A Theory Course

The universal right to live is one of the basic precepts of modern morality. But everyone knows that this sole declaration guarantees nothing, that too often this principle, and the idea that life is inherently valuable, has been made into an alibi behind which atrocities are committed, such as murderous colonial practices, racially motivated executions, human bondage, cultures of rape, and war profiteering. But hypocrisy or faithlessness aside, is it possible that we have never really understood what we mean when we speak of an entitlement to life, or even the *value* of life such? If life is valuable, and supremely significant, could it be because we think nonliving matter is *without* value? And yet, no living being is entirely independent of the nonliving—we are composed as much of nonliving matter as of thriving communities of microorganisms. Moreover, as subjects of law, institutions, and culture, we regularly invest ourselves in non-vital symbolic systems that will outlive us, like building a future for others or leaving a legacy behind. And just as often, these symbolic forms of life can be used *against* the living and decide the conditions of what *counts* as life. In this course, we will rigorously inquire about the hidden processes behind the "mattering" of lives (and deaths) in different contexts. Consulting works of philosophy and theory, as well as a few literary "cases," we will explore topics such as nihilism, the impact of capital on the "worth" of existence, the value of nonwhite lives, the death drive, suicide, the politics of grieving, and the pursuit of death as a way of life.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 64.09 - The Frankfurt School: An Introduction to Critical Theory

From its origins in the Weimar Republic through to the present day, the thinkers associated with the Frankfurt School of critical theory have been central to our understanding the relationship between authoritarian political structures, industrial capitalism, aesthetic experience, and the mass media. This course situates the work of these thinkers in the arc between the rise of

fascism in the 1920s and the revival of fascist structures of thought and feeling in the 2020s. We will focus on work by Theodor Adorno, Max Horkheimer, Walter Benjamin, Siegfried Kracauer, Ernst Bloch and Herbert Marcuse, with the goal of approaching the forms of cultural critique that can help us conceptualize and navigate the often catastrophic experience of modernity.

Cross-Listed as: COLT 73.05

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 64.10 - Heidegger's Being and Time

Martin Heidegger's most significant contribution to philosophy is his great 1927 book, *Being and Time*, among the twentieth century's most influential and controversial philosophical works. This junior colloquium will primarily undertake a term-long reading of this book (in English), supplementing that text, according to the interests of the class, with other writing by Heidegger, secondary commentary on *Being and Time*, and works by authors influenced by or critical of Heidegger.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 65.01 - Walking

Students in this course will circle around a set of deceptively simple questions, all of them framed by an overarching question: What does it mean to walk? Should walking be regarded as a fundamental human activity or as a literary convention carried over into everyday life? Why has walking long been regarded as a vehicle for thought and discourse: a privileged mechanism of knowledge production? Is there a difference between a country walk and a city walk? What is the relationship between walking and time, walking and place? Why should walking have emerged, in certain works of contemporary literature, as a principled rejection of mechanization, modernity, and the capitalist mode of production? And what does walking mean for those who cannot walk? To address these questions, students will read texts by such practitioners and theorists of walking as Thoreau, Walter Benjamin, W. G. Sebald, Rebecca Solnit, Simon Armitage, Robert MacFarlane, Geoff Nicholson, and others. Students will also use their own walks as opportunities for composing works of critical self-reflection, observation, and world-making.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 65.02 - Writing with Algorithms: A Literary Computation Workshop

Since the mid-20th century, writers have programmed computers to generate literary works, mimicking old forms and inventing new ones. This course, both a creative writing workshop and a computational lab, will introduce the basics of creative text processing and generation.

Making literature through computational techniques opens up a range of expressive possibilities and encourages us to refine our intuitions about style and form. This activity—at minimum, a collaboration between one human and one machine—also invites us to imagine increasingly diverse and complex ways of dividing the labor of literary production. Throughout the course, we will consider examples of computer-generated poems and fiction as well as literary bots and interfaces. No programming experience is expected, though seasoned programmers are welcome.

Degree Requirement Attributes: Dist:TLA

ENGL 65.03 - Summer Tomes

Long reads for long days! The English Department's annual "Summer Tomes" class will offer rising juniors at Dartmouth the opportunity to dive deeply into a single work that would otherwise be prohibitively long for inclusion on a quarter-long syllabus. Together, we will spend our summer reading a celebrate tome of English-language literature, immersing ourselves in its language while also placing it within relevant historical, cultural, and theoretical contexts. Students will be asked to apply numerous theoretical and methodological lenses to the text, and to compose their own creative reinterpretations and adaptations of the text.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT

ENGL 65.06 - The Poetry and Rhetoric of Love, from Petrarch to Social Media

What we call "love poetry" has generally been a way of expressing much more than the emotional and erotic fascination of one person with another. Often it seems to bypass the love-object altogether, and focuses instead on power relations or poetic achievement. Beginning with early examples, and moving on to contemporary and modern poems, our course will place love poems by men and women in the context of an ongoing poetic tradition, recent feminist criticism and theory, and talk about love and sex in recent popular culture. This last will include: excerpts from recent books about dating and seduction, film, contemporary song lyrics, dating websites, and campus culture.

Cross-Listed as: WGSS 53.05

Degree Requirement Attributes: Dist:LIT; WCult:W

Section V - Senior Seminars

Senior Seminars, limited to 12 seniors and juniors, will vary in content. They will focus students on concentrated discussions and on a final research project of 20-25 pages. Recommended: four completed major courses or permission of the instructor. *Dist: LIT.*

ENGL 71 - Senior Seminar in Course Group I

Senior Seminars, limited to 12 seniors and juniors, will vary in content. They will focus students on concentrated discussions and on a final research project of 20-25 pages. Prerequisites: four completed major courses or permission of the instructor.

ENGL 71.01 - Celtic Fringes: Medieval English Literature in Dialogue with Irish, Welsh, and Breton Traditions

From Arthur and Merlin to prophecy, poetry, and song, the literatures of medieval England drew heavily on the lively, imaginative, and sophisticated traditions of their Celtic neighbors, their musical styles and the particular aesthetic they brought to their poetry and narrative. In this course we will study some pairings of connected Celtic and English/Anglo-Norman texts, as well as contemporary writing about the Celtic connection. The politics of these exchanges are not easy. There were wars and border skirmishes; the Norman and Angevin kings of England sought to subdue the Celtic kingdoms and extend their political influence by diplomacy, coercion and conquest, creating a dynamic that is in some ways parallel to, but also interestingly different from a modern Colonial/Postcolonial situation. Readings may include early Arthurian material; *Diarmaid and Grainne* and the Anglo-French Tristan romances; Geoffrey of Monmouth's *Life of Merlin* and Merlinesque prophecies; the Welsh *Mabinogi*; lais by Marie de France and other writers; the borderland romance "Fulk Fitz Warren"; the anecdotes, satires and short romances of Walter Map; Gerald of Wales's ethnographic descriptions/ travelogues of Wales and Ireland. All non-English texts will be read in translation, although students with some knowledge of French, Latin, or a Celtic language may wish to explore some readings in the original.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.02 - Ovid in England

Englising Ovid was something every advanced schoolboy in the 16th century did: translating passages; composing speeches for characters from the poems; dramatizing and performing (in Latin, in England) Ovidian scenes. In this seminar we'll read Ovid's *Heroides* and *Metamorphoses* in the sixteenth and early seventeenth century print translations alongside a modern English edition. (Students competent in Latin may use the Loeb as well as or instead of the modern English.) We'll consider the forms, themes, and predicaments Ovid's great mythographic poems offered to the English literary imagination. Some attention will be paid to late 20th century performative and poetic "englishings" of Ovid.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.03 - The Faerie Queene

We'll spend the term reading Spenser's great epic romance, *The Faerie Queene*. It's a wonderful poem, deeply engaged with philosophical, poetic, ethical, and political issues via compelling stories, fantastic settings, and provocative descriptions. Shakespeare, Milton, James Joyce, Monty Python and Neil Gaiman are on the long list of the poem's keen readers. Experience with sixteenth century literature is not required. Spenser's language is deliberately archaic at times, but it is not difficult for modern readers. Discussion, informal writing, short papers (2-3pp), oral presentations, and an open topic essay leading to a final paper.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.05 - Romance in Medieval England

This course explores the diverse and elusive genre we now call "romance," a capacious term that covers anything from chivalric adventures and love stories to quasi-hagiographic and pseudo-historical narratives, from a variety of historical and theoretical perspectives. Readings may include Middle English and Anglo-Norman romances such as *Tristan*, *Havelock* and *Sir Gawain and the Green Knight*, and selections from later Arthurian narratives.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.06 - Milton

This course is an advanced seminar in the study of John Milton's poetry and prose, undertaken with attention to the context of Milton's life and times and current critical discussion and debate about all of these matters.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.13 - Gender and Power in Shakespeare

The course will begin by defining the varieties of power inscribed in Shakespeare's plays, and proceed to explore the following questions. Is language gender-inflected? Do men and women speak "different" languages? How do power and gender affect each other? How do women negotiate power among themselves? How do men? How is power exerted and controlled in sexual relationships? How do unspoken social definitions exert their power over the politics of gender? Possible works studied will be drawn from *The Rape of Lucrece*, *A Midsummer Night's Dream*, *The Taming of the Shrew*, *The Merchant of Venice*, *Much Ado About Nothing*, *As You Like It*, *All's Well That Ends Well*, *Othello*, *Macbeth*, *Troilus and Cressida*, *Coriolanus*, *Antony and Cleopatra*, and *The Winter's Tale*.

Degree Requirement Attributes: LIT

ENGL 71.14 - Knights, Camelot, Action!

This course will introduce students to medieval romance, one of the most popular genres of medieval literature and one that gives us some of the best-loved literary characters of all time. We will study the genre of romance, including Arthurian romance and other varieties, from the genre's inception. We will pay particular attention to the form of story-telling that it popularizes, the concept of love that it systematizes, and the notion of heroism on which it depends. We will privilege English romance and will therefore read many texts in their original Middle English.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.15 - Poetics of the Supernatural

"The instruments of darkness tell us truths," warns Shakespeare's *Macbeth*. While the sixteenth and seventeenth centuries took a complex view of the occult—witch-hunts spawned widescale bloodshed while alchemy paved the way for modern chemistry—this senior seminar examines how Renaissance writers used supernatural events to interrogate social structures of power and identity. Closely reading poetry and drama by Shakespeare and his contemporaries, we will ask how transformations, hauntings, and spells productively trouble categories of gender, temporality, ecology, and the human. Working with early modern historical archives and literary experiments, from week to week we will be challenged to consider how imaginative fiction, perhaps even more than realism, captures the tension and possibility that define eras of radical cultural change.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 71.16 - Shakespeare and the Problem of Forgiveness: Late Plays & Problem Plays

This course will study the aesthetic phenomenon and social ritual of forgiveness through readings from the second half of Shakespeare's career. In early modern England, the Protestant reformation had radically reshaped the dominant religious rituals of penance, confession, and absolution. Scholars have often argued that some of the traditions abolished, such as the richly imagined world of purgatory or the importance of intercessory forms of forgiveness, were sublimated into the secular drama of Shakespeare's stage. Our syllabus will test this argument by following Shakespeare's turn from revenge toward romance, "problem plays" and dark comedies. Readings in history, critical theory (Foucault on man as "confessing animal"), language philosophy (including J.L. Austin's *How to Do Things with Words*), and forays into contemporary fiction (including Miriam Toews' *Women Talking*) will inform and broaden our discussions. Is forgiveness differently satisfying or unsatisfying in life or in art? How do aesthetic experiences of reconciliation affect society? Ultimately our goal will be to track the alternative norms and sources of

normativity revealed by a philological inquiry into cultural and literary texts as well as socio-linguistic practices whose contemporary analogues might include the confession booth, the rhetoric of the public apology, or the discourse of restorative justice today.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72 - Senior Seminars in Course Group II

Senior Seminars, limited to 12 seniors and juniors, will vary in content. They will focus students on concentrated discussions and on a final research project of 20-25 pages. Prerequisites: four completed major courses or permission of the instructor.

ENGL 72.02 - Decadence, Degeneration and the Fin de Siecle

The end of the nineteenth century saw the emergence of genuinely mass readerships, but it also saw the development of literary forms that pitted themselves against the commercialization and homogenization of literary culture. In this course we will look at so-called decadent writers and artists who imagined heightened forms of aesthetic experience in order to displace the political and sexual norms of their societies. We will also examine the controversies their work evoked and the theories of degeneration, deviance and abnormality that were frequently deployed to explain their excesses. Texts will include Oscar Wilde's *The Picture of Dorian Gray*, J.K. Huysmans's *Against Nature*, Marie Corelli's *Wormwood*, and Bram Stoker's *Dracula*.

Cross-Listed as: COLT 49.05

Degree Requirement Attributes: Dist:LIT

ENGL 72.03 - Bohemia: Glamorous Outcasts & the Nineteenth-Century Novel

Bohemia - an urban underworld of social outcasts, struggling artists, and political conspirators - is one of the most enduring fantasies to emerge out of the nineteenth century. By the 1890s, the figure of the Bohemian had become central to a cosmopolitan literary culture eager to assert its autonomy from the marketplace and restrictive notions of nationality. It had also become bound up with a range of anxieties fixated on cultural decadence, racial degeneration, transgressive sexuality, political revolution and the occult. This course will study a series of novels that foreground these issues, including Oscar Wilde's *The Picture of Dorian Gray*, George Gissing's *New Grub Street*, George Du Maurier's *Trilby* and Joseph Conrad's *The Secret Agent*. We will also glance ahead to early twentieth-century texts like Henry Miller's *The Tropic of Cancer*.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72.05 - 1850s America

What can the literature of a single decade tell us? From *The Scarlet Letter* (1850) and *Uncle Tom's Cabin* (1851-52) to *Leaves of Grass* (1855) and Lincoln's "House Divided" Speech of 1858, the literary output of America in the 1850s provides us with a snapshot of a turbulent culture amidst unprecedented growth and crisis. Slavery and xenophobia, minstrelsy and mass entertainments, crowds, consumerism, and cities, the "woman question," labor rights, economic panics, and the secularization of Christian sentiment—these are just some of the issues that clamor in the literature of the decade. Our texts shall represent the gorgeous miscellany that is the 1850s, drawing from both high and low culture, canonical and forgotten authors, and from both established genres and media like novels and slave narratives to more ephemeral ones like newspapers, almanacs, caricatures, and inscribed material objects. Classes will meet in Rauner so that we may use these and other period rarities to spawn discussion and topics for original, independent research. In addition to the rich content of the texts themselves (their historical contexts and theoretical possibilities), another object of inquiry shall be the nature of literary history itself.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72.06 - Dickens in Context

This class will focus on the work of Charles Dickens in two distinct contexts. First, we will spend the term engaging in an intensive, deliberately slow reading of Dickens's *Bleak House*, which was published from March, 1852 to September, 1853, in 20 monthly parts. By spreading our reading of this long, complex novel over the span of the fall term, we will gain access to something like the experience of its first readers, who encountered the text in units of several chapters, separated by time. Second, we will put Dickens and *Bleak House* in conversation with three other novelists and novels that shared the moment in the marketplace: Elizabeth Gaskell's *Cranford*, published serially and edited by Dickens in 1851-52, Charlotte Brontë's *Villette*, published in 1853, and Anthony Trollope's *Barchester Towers*, published in 1855. Through work in Rauner Library, we will learn about the material history of literary production in the mid-Victorian period, and through engagement with contemporary critical and theoretical texts, we will learn about the implications of the narrative experiments Dickens, Gaskell, Brontë, and Trollope undertook in the 1850s. Though reading for the course will be demanding, keeping up will be rewarded with ample room for lively in-class discussions.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72.09 - Ecocriticism

Recent critics have argued that our image of "nature" as static and separate from humans is our chief stumbling block in cultivating ecological thought. In this course, we will read literature from the eighteenth century to track the

emergence and environmental legacy of developments such as the Industrial Revolution and the Anthropocene, the geological epoch in which humans became the primary driver of climate change. Topics will include the vogue for georgic poetry, the aesthetics of the sublime, colonial expansion, the rise of natural history, it-narratives and thing theory, and questions of the animal. We will read contemporary theory about ecology and object-oriented ontology in the context of the eighteenth century and twenty-first century environmental concerns.

Degree Requirement Attributes: LIT

ENGL 72.13 - The Brontës

Who were the Brontës and why have their novels remained so popular? What do their texts tell us about Victorian discourses on childhood, gender, space and psycho-geographies, class discontent, empire and globalization, labor and industry, religion, creativity, and language? What do we gain or lose by studying their biographies: tales of four siblings living in isolation on the Yorkshire moors, publishing pseudonymously, and dying young? In this course, we will look closely at the literary production of the Brontës, beginning with the fantastical tales and poetry they wrote as young adults. Topics will include female labor, evangelicalism, the Victorian Gothic, marriage and women's legal rights, storytelling and myth, colonialism, feminized and racialized madness, and the physical and psychological contours of domestic and foreign space.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72.14 - From Riches to Rags: Poverty in American Literature, 1861-1925

From accounts about the streets being paved with gold to tales that take characters from rags to riches, success stories form an important part of American literary and national identity. Some eras especially seem to embrace such narratives, such as the "Gilded Age" which owes its name to Mark Twain. Yet the term itself was tongue-in-cheek, and many of the works produced in that "age" are as -- if not more -- concerned with rags than riches. Taking material possessions -- or their absence -- as a lens through which to examine economic and cultural conditions, these texts don't work from as much as they work towards a definition of what poverty is and what it does -- to individual people and whole classes (with gender and race as salient categories). In this class, we will read key literary works, especially in the genres of Realism and Naturalism, alongside theoretical texts to shed new light on the way in which American Literature portrays, critiques, embraces as well as reimagines the material and cultural conditions of Americans' lives and livelihoods.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 72.15 - Walter Benjamin's The Arcades Project: Reading Nineteenth-Century Material Culture

Walter Benjamin's *The Arcades Project* is a vast compendium of textual fragments that recreates the phantasmagoria of nineteenth century Paris and the figures who inhabited it: the flâneur, the ragpicker, the poet, the prostitute, the revolutionary, the gambler, and the collector. Moving from sewers and catacombs to department stores and covered arcades, it explores the most innocuous aspects of everyday life in order to excavate high capitalism's deepest and most resonant dreams about itself. In this course we will contextualize *The Arcades Project* in the development of Benjamin's thought more generally, and read it alongside a range of representative nineteenth-century writers such as Charles Dickens, Edgar Allan Poe, Karl Marx, Heinrich Heine, Charles Baudelaire, Mary Braddon, Émile Zola and others, the better to understand it as a radically experimental form of cultural theory and creative practice. Additional reading in critical theory will include essays by Theodor Adorno, Siegfried Kracauer, Christine Buci-Glucksmann, Susan Buck-Morss and Carole Pateman.

Junior Colloquium: Course Group II and Course Group IV

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.01 - In the Image: Photography, Writing, and the Documentary Turn

In 1942, the literary critic Alfred Kazin dismissed the documentary movement of the 1930s as a "sub-literature," a "vast granary of facts" from which poets and fiction writers might extract the raw material of true literature. Just a year before, though, James Agee and Walker Evans -- a journalist and photographer -- had published *Let Us Now Praise Famous Men*, a vast book, indeed, sprawling in its feverish devotion to the experimentation Agee and Evans believed necessary to even come close to telling a true story. Agee and Evans wanted it to be an object as much as a book, a challenge to literary culture; whatever it was, it wasn't "sub" anything. In this course we'll use the question of just what Agee's and Evan's combination of pictures and words might be as the heart of our exploration of the documentary sphere as encountered through the conjunction of text and image. In the first half of the course, we'll be guided by critical thinkers as we look at creative works and write our own critical essays; in the second, we'll be guided by creative work as we attempt our own even while we continue our conversations with more contemporary critical thinkers. Besides Agee and Evans, we'll be encountering among others, photographers Robert Frank, Sally Mann, Stephen Shore, Helen Levitt, Wendy Ewald, Teju Cole, Jean Mohr, Tanja Hollander, and Roy DeCarava; literary journalists Leslie Jamison, Michael Lesy, John Jeremiah Sullivan, John Berger, and Charles Bowden; critics Susan Sontag, Roland Barthes, John Szarkowski, Jerry Thompson, Susie Linfield, Jeff Allred, and bell hooks; and poets Claudia Rankine, Marianne

Moore, Langston Hughes, Donald Justice, and Kevin Young.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.02 - Toni Morrison Senior Seminar

This course is an in-depth study of Toni Morrison's major fictional works. We will examine Morrison's earliest and arguably most foundational and influential novels. We will also read critical responses to Morrison's works. Required texts will include, *The Bluest Eye*, *Sula*, *Song of Solomon*, *Tar Baby*, *Beloved*, *A Mercy*, *Conversations with Toni Morrison*, and selected essays. Central to our exploration will be an analysis of Morrison's observation that "the past affects the present." Therefore, we will explore the social and historical factors that contribute to Morrison's artistic constructions. Some of the issues we will examine include, alternative constructions of female community and genealogy, and representations of race, class, nationhood, and identity.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 73.03 - Black Elegies

This course is structured around iterations of black grief within, but mostly beyond the genre of poetry. What curator Okwui Enwezor calls the contemporary "emergency of black grief" is over four centuries old. We will explore modes of release from black cultural producers who attend to the multiple losses sustained by black subjects. The resulting productions span the range of representation from dance, painting, photography, music, film, and craftwork. The course will be organized around three parts, each focusing on the sensorial: *Sight*, *Sound*, and *Touch*. Together we will consider what it means to mourn in an antiblack world resistant to acknowledging the violences endured by black subjects in the United States and beyond its borders.

Cross-Listed as: AAAS 35.01 WGSS 66.11

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 73.05 - Nobel Prize Authors Writing in English

A study of Nobel Prize writers writing in English from various countries, this course examines authors' aesthetic innovations alongside their engagement in cultural, socio-political, and national discourses. Although the focus will be on poetry, the course will also explore the relationship between different genres (including essays, plays, and novels) and various socio-historical moments. Authors will include William Faulkner, Nadine Gordimer, Seamus Heaney, Wole Soyinka, Rabindranath Tagore, Derek Walcott, Patrick White, and W.B. Yeats.

Degree Requirement Attributes: Dist:LIT

ENGL 73.07 - Poetry of Elizabeth Bishop

An orphan, a female poet, a lesbian, a long-term expatriate in Brazil, Elizabeth Bishop is nowhere definitively at home; for a long time, literary criticism had trouble accommodating her as well. Recently, queer, feminist, and postcolonial analyses have provided a new critical context for this elusive poet; we will read widely in this work, while focusing on Bishop's poems, drafts, and letters. We will also consider her relationships with contemporaries like Moore and Lowell.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.13 - James Joyce

This seminar will be devoted to the study of Joyce's *Ulysses*. After some discussion of Joyce's *Portrait* and *Dubliners* -- both of which students are urged to read before the course begins--we will focus on the text of Joyce's *Ulysses*, with an emphasis on close reading and an examination of Joyce's experiments in prose and his place in modern literature.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.19 - Faulkner

Although he never received a college degree and lived most of his life in a small town in one of the most impoverished states in the nation, William Faulkner is now acclaimed throughout the world as one of the greatest modern writers. In this seminar, we will focus on Faulkner's fiction and on its place in the history of modernism. Particular attention will be given to the importance of Southern history and Southern legends, which are inseparable in the fiction from the experiences of individual and family life. We will read *The Sound and the Fury*, *As I Lay Dying*, *Absalom Absalom!*, *Light in August*, *Go Down, Moses*, and *The Hamlet* and study the work of critics who have debated the meanings of Faulkner's art, especially, for recent critics, the importance of race to the stories he tells.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.28 - How We Live Now: Contemporary Hemispheric Fictions

This course explores contemporary hemispheric fiction and film's attempts to represent how we live now: to map the economic and cultural changes of the last forty years, including the death of 1960s social movements and the shift to a new form of global capitalism. Throughout the course, we will consider the inter-Americanism of these works, exploring how these authors grapple with parallel and overlapping historical conditions, and attend particularly to questions of form and genre. We will consider how genres like chick lit and detective fiction might solicit readers to think and feel in ways that are in line with national and multinational economic imperatives,

but also how authors have attempted to create new forms to describe and challenge contemporary conditions of work, war, debt, and depression. Authors may include Roberto Bolaño, Terry McMillan, Junot Diaz, Claudia Rankine, Alicia Gaspar de Alba, Karen Russell, Eden Robinson, and César Aira.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 73.30 - 20th Century Protest Poetry

In light of recent protest movements that target issues of race and gender, the prescient words of numerous artists continue to be evoked and volleyed about in contemporary media outlets. Yet the contexts of many of these utterances are largely ignored. Delving into some of these contexts and engaging many of these artists' larger oeuvre, this course is a multidisciplinary investigation of major protest poets of the twentieth century. It explores the ways in which poets living in the United States, and particularly members of historically marginalized communities, not only pushed back at the powers-that-be, but continuously saw and articulated themselves as simultaneously a part of and a part from larger "American" society. The course wrestles with the well-known and often contentious topics: race, class, and gender. Starting with turn-of-the-century writers like Claude McKay—whose words have become synonymous with outspoken critiques of World War I and the "Red Scare"—and ending with contemporary writers like Balakian and Chin, the course moves chronologically. Some of the writers it examines include, Peter Balakian, Amiri Baraka, Staceyann Chin, Lucille Clifton, Mayda Del Valle, Karen Garrabrant, Allen Ginsberg, Zbigniew Herbert, Robert Lowell, Juan Felipe Herrera, Langston Hughes, Etheridge Knight, Denise Levertov, Haki Madhubuti, Jill McDonough, Claude McKay, Alice Notley, Emmy Perez, Adrienne Rich, Sylvia Plath, Sonia Sanchez, and Dorothy Tse.

Cross-Listed as: AAAS 91.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 74.01 - Reading Freud

Why read Freud? Many of his most famous ideas (the Oedipus Complex, for example) have been discredited, disparaged, devalued, decried. So why read Freud? Using that question — a question that, in its very persistence, already crystalizes all that is most troubling, provocative, and intriguing about the Freudian text — students in this class will read Freud for his enduring value as the inventor, in psychoanalysis, of one of modernity's most disturbing art forms, as an influential theorist of figuration and representation, as a fearless inquirer into the mysteries of gender and sexuality, and as a speculative thinker who continues to have a hold on our imagination precisely because he could never quite come to grips with all that had a hold on his imagination. Above all, we shall read Freud for what he has to teach us about the importance of risking failure and embarrassment, of remaining restless

and uncertain in respect to one's own thinking, of finding oneself in over one's head. The texts we shall use to pursue this line of inquiry may or may not include any of the following: *Studies on Hysteria*, *The Interpretation of Dreams*, *Three Essays on Sexuality*, the case histories of Dora and the Wolf Man, *Papers on Metapsychology* and on *Technique*, *Introductory Lectures on Psychoanalysis*, *Beyond the Pleasure Principle*, *Inhibitions, Symptoms and Anxiety*, *Civilization and Its Discontents*, and essays such as "Project for a Scientific Psychology," "Screen Memories," "The Uncanny," "The Moses of Michelangelo," "On Narcissism," "Two Principles of Mental Functioning," "A Child Is Being Beaten," "The Economic Problem of Masochism," "Constructions in Analysis," "Analysis Terminal and Interminable," and "Humor."

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 74.02 - Understanding Biopolitics

Biopolitics, loosely defined as the reciprocal incorporation of politics and life, describes not merely the dominant form that politics takes today but also, arguably, the form that politics has always taken. Healthcare, reproduction, immigration, security, racialization, risk management, emotional wellbeing, property and the common: There is no aspect of embodied existence that has not been affected, if not created (or at least grasped), by biopolitics. Nevertheless, the concept of biopolitics itself, introduced into the critical lexicon by Foucault and still subject to revision and working-through, remains far from settled. Accordingly, students in this seminar will read foundational texts of the burgeoning biopolitical canon — texts by Foucault, Arendt, Agamben, Esposito, Hardt and Negri, to name but a few — as a way of understanding biopolitics not as the basis for a new epistemology but as the term we accord a set of predicaments that emerge at the point where politics and life intercept one another. To facilitate that understanding, students will rely on the texts collected in *Biopolitics: A Reader*, supplemented by Esposito's *Terms of the Political* and Melinda Cooper's *Life as Surplus*. For their final paper, students will have the option of writing either an essay assessing the treatment of a biopolitical predicament across a range of texts or a biopolitical case study.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 74.03 - On Cruelty

What is cruelty? How can we understand the relation between cruelty and other forms of violence, such as sadism, masochism, and terrorism, all of which straddle the difficult boundary between pleasure and displeasure, enjoyment and pain. In this course, we will explore the concept of cruelty through a study of literary, filmic, psychoanalytic, and philosophical texts. We will also interrogate how appeals to cruelty underwrite various rights discourses, including debates on the death penalty,

human and animal rights, and various international treatises that put a limit on the violence of war. Authors will include: Marquis de Sade, Antonin Artaud, Richard von Krafft-Ebing, Sigmund Freud, Jacques Lacan, Jacques Derrida, Gilles Deleuze and Felix Guattari. Films might include: *Salo, or the 120 Days of Sodom* (Dir. Pasolini), *The Piano Teacher* (Dir. Haneke), and *Antichrist* (Dir. von Trier).

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ENGL 74.04 - Postcolonial Bildungsroman: Youth and Happiness in the Global Novel

How does one grow up to find happiness? The “bildungsroman,” or novel of “coming to age,” is a novelistic genre that arose in the late 18th century to answer precisely that question, by using stories of young protagonists to imagine the optimal path to happiness. In this class, we will familiarize ourselves with texts considered “exemplary” of the bildungsroman in the Western tradition, then turn to non-Western narratives of youth to compare different conceptions of the link between youth and happy living. Primary texts include: J. W. Goethe, *Wilhelm Meister*; Jane Austen, *Pride and Prejudice*; Olive Schreiner, *Story of an African Farm*; Emily Brontë, *Wuthering Heights*; Tawfiq al-Hakim, *Bird of the East*; Hahya Haqqi, *The Saint’s Lamp*; Chinua Achebe, *No Longer at Ease*; Cheikh Hamidou Kane, *Ambiguous Adventure*; Tayyeb Saleh, *Season of Migration to the North*; Ama Ata Aidoo, *Our Sister Killjoy*. Secondary texts include criticism by Mikhail Bakhtin, Franco Moretti, Jed Esty, and Joseph Slaughter.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:CI

ENGL 74.05 - Word-Image Theory

Words in dialogue with images pervade our textual landscape in the form of advertisements, comics, instructional diagrams, and photo essays, and the entanglement of symbol systems once thought of as separate has become routine in digital display. Word-image theory seeks to understand these entanglements, analyzing the conceptual intersections of the literary and the visual. In this seminar, students will be invited to re-conceptualize those intersections by becoming familiar with the core arguments of word-image studies, iconology, picture theory, and visual culture studies. Creative authors may include Chris Ware, Claudia Rankine, and W.G. Sebald, and critical authors may include Panofsky, Barthes, Foucault, Mitchell, and Bal.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 74.06 - Frantz Fanon: Colonial War and Mental Disorders

This course is an introduction to postcolonial theory through an exploration of the writings of Frantz Fanon, a Martiniquan psychiatrist and anticolonial thinker, who wrote extensively on the political and psychological impact of colonization on both the colonizers and the colonized. In the course, we will read Fanon’s early essays on black subjectivity in *Black Skin, White Masks*; his more overtly political writings on violence and revolution in *Wretched of the Earth*; and, his clinical writings on madness, institutionalization, and psychotherapy, collected in the newly translated *Alienation and Freedom*. Throughout the course of the term, we will pay close attention to questions of racial and sexual difference in Fanon’s work as well as the way his writing remains critical for postcolonial political thought.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ENGL 74.11 - High Theory

This seminar for advanced students undertakes a close reading of difficult texts in philosophy and in literary and cultural theory. We will include secondary literature to help contextualize the primary texts under study, but the emphasis is on close reading to develop original and critical approaches to these challenging works. Class will be based largely around group discussion, with lectures and prepared student presentations to help stimulate conversation. Students can help to shape the syllabus by proposing texts they wish to work on together. Representative authors we might read in this class include Deleuze, Derrida, Badiou, Agamben, Heidegger, Virilio, Zizek, Lyotard, and others

Offered: Winter.

Degree Requirement Attributes: TMV

ENGL 74.12 - Garden Politics

This will be a senior seminar based on discussion of various literary, popular, critical, theoretical, and eco-critical texts related to gardens; we will consider issues of power involved in an apparently apolitical leisure activity. Students will be encouraged to find their own topics of interest for discussion and for a final paper modeled on journal articles. We begin where much of English-language culture begins, with the “Book of Genesis.” In that text, the Garden of Eden is the site of creation, and its story suggests questions about who owns a garden, what it means, whom it is for, and what can disrupt or destroy it. We will then move on to other questions of meaning and belonging suggested by gardens as topic and trope, beginning with some postcolonial gardens and critiques that explicitly comment upon the politics, ethics, and power relations encoded in these topics. We will also consider a broad range of related issues and discourses connecting humans and the environment. Literary authors

will include Francis Hodgson Burnett, H.D., T.S. Eliot, Ross Gay, Derek Jarman, Jamaica Kincaid, Andrew Marvell, John Milton, Olive Senior.

Not open to students who have received credit for ENGL 64.02.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 74.13 - Jacques Lacan and Psychoanalytic Thought

This course is an introduction to the teachings of Jacques Lacan, a French psychoanalyst who turned to the texts of Sigmund Freud in order to bring back to psychoanalysis the radicality of its intervention. In the course, we will read some of the key texts in Lacan's *Ecrits* alongside excerpts from his seminars as well as commentaries on his writings by prominent Lacanians, including but not limited to, Jacques-Alain Miller and Slavoj Žižek. The course is located at the intersection of literature, psychoanalysis, and critical theory and will act both as introduction to psychoanalytic thought as well as its unique development by Lacan. The psychoanalytic texts will be supplemented by reference to filmic texts, including: *Psycho* (dir. Hitchcock, 1960), *Shame* (dir. McQueen, 2011), and *Black Swan* (dir. Aronofsky, 2010).

Not open to students who have received credit for ENGL 64.04.

Degree Requirement Attributes: Dist:TMV; WCult:W

ENGL 75.02 - Climate Fiction

The 21st century drumbeat of climate doomsday has ushered in a new speculative genre of planetary crisis dubbed climate fiction or "cli-fi," the science fiction of the late Anthropocene. But how is this genre new, and why limit such queries to fiction? How does the specter of species death and global pandemonium have a literary and cultural history as well as a geophysical, earth systems one? This seminar, through historical and contemporary critique, read transversally across an array of media from novels to theory and film, will situate where we are now with literature from the past about the emergence of steam power, land enclosures, energy systems, and Arctic exploration to account for how we might secure the future. Topics include entanglements of anthropogenic processes with other planetary effects in theories of Capitalocene, Plantationocene, and Chthulucene from the conquest of the Americas to the untimely present. Readings include eighteenth century and romantic natural history, bad weather, contemporary "cli-fi," ecological theory, and at least one film, such as Steven Spielberg's blockbuster *Ready Player One* (2018).

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 75.03 - Beyond the Prison: Premodern Carceral Studies

What came before the prison, and what could come after? This course will serve as an introduction to some of the methods and concerns of contemporary Critical Prison Studies, as well as a deep dive into the historical rise of carceral institutions in England and the United States, as seen from the perspective of incarcerated writers, and as reimagined in literary texts. Famous examples such as the prison epistles of Oscar Wilde will be set alongside more recent rediscoveries, such as the manuscripts of Austin Reed. Readings from Angela Davis, Michel Foucault, and Nicole Fleetwood (among others) will frame our comparative inquiry; classics such as *Robinson Crusoe* will be cast in a different light. Recurring topics will include writings from confinement as genre; the importance of print culture inside and outside the prison; the relation between carceral institutions and literary genres such as the convict narrative, epistle, early realist novel, and lyric poem. Throughout we will pay particular attention to how literary writing has been a recurring means for thinking outside the confines of a given political discourse, while we also reconsider the links between confinement and imagination, rehabilitation and subjectivity, art and liberation, then and now.

Degree Requirement Attributes: Dist:LIT; WCult:W

Section VI - Creative Writing

Introductory Creative Writing Courses

CRWT 10 - Introduction to Fiction

An introductory workshop and reading course in fiction, designed to allow students to work in all fictive modes. Each week students will consider different aspects of writing, and the various elements integral to the genre. Seminar-sized classes meet for discussion and include individual conferences.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

CRWT 11 - Introduction to Creative Nonfiction

An introductory workshop and reading course in creative nonfiction—a hybrid genre of journalism, memoir, and fictional and poetic techniques, also known as the art of fact. Each week students will consider different aspects of writing, and the various elements integral to the genre. Seminar-sized classes meet for discussion and include individual conferences.

Offered: Fall, Summer, Winter.

Degree Requirement Attributes: Dist:ART

CRWT 12 - Introduction to Poetry

An introductory workshop and reading course in poetry. Each week students will consider different aspects of

writing, and the various elements integral to the genre. Seminar-sized classes meet for discussion, and include individual conferences

Offered: Fall.

Degree Requirement Attributes: Dist:ART
Intermediate Creative Writing Courses

CRWT 20 - Intermediate Workshop: Fiction

Continued work in the writing of fiction. The class proceeds by means of group workshops, individual conferences with the instructor, and reading across the genre. The process of revision is emphasized. Topics and emphases may vary from term to term. Please refer to "How To Apply to CRWT 20, 21, or 22" on the department website and answer all of the questions listed in a cover letter. Students must submit a 5-8 page sample of their writing along with the cover letter by the last day of classes of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor. (Formerly ENGL 83)

Prerequisite: CRWT 10 and permission of the instructor. Please read the "How To Apply To CRWT 20, 21, or 22" document available on the Department of English and Creative Writing website. Students should submit, to the instructor electronically, a five – eight page writing sample of their fiction. Deadline for equal consideration for admittance is the last day of classes in the term preceding the course. Late applications will be accepted, but held until the add/drop period and reviewed if vacancies occur.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

CRWT 21 - Intermediate Creative Non Fiction I

Continued work in the writing of creative nonfiction, including literary journalism, investigative memoir, the lyric essay, and documentary. The class proceeds by means of group workshops, individual conferences with the instructor, and reading across the genre. The processes of research and revision are emphasized. Topics and emphases may vary from term to term. Please refer to "How To Apply to CRWT 20, 21, or 22" on the department website and answer all of the questions listed in a cover letter. Students must submit a 5-8 page sample of their writing along with the cover letter by the last day of classes of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor. (Formerly ENGL 84)

This workshop is currently taught as 40 Towns.

Prerequisite: CRWT 11 and permission of the instructor. Please read the "How To Apply To CRWT 20, 21, or 22" document available on the Department of English and Creative Writing website. Students should submit, to the

instructor electronically, a five – eight page writing sample of their fiction. Deadline for equal consideration for admittance is the last day of classes in the term preceding the course. Late applications will be accepted, but held until the add/drop period and reviewed if vacancies occur.

Degree Requirement Attributes: Dist:ART

CRWT 22 - Intermediate Workshop: Poetry

Continued work in the writing of poetry, focusing on the development of craft, image and voice. The class proceeds by means of group workshops on student writing, individual conferences with the instructor and reading across the genre. The process of revision is emphasized. Topics and emphases may vary from term to term. Please refer to "How To Apply to CRWT 20, 21, or 22" on the department website and answer all of the questions listed in a cover letter. Students must submit a 5-8 page sample of their writing along with the cover letter by the last day of classes of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor. (Formerly ENGL 85)

Prerequisite: CRWT 12 and permission of the instructor. Please read the "How To Apply To CRWT 20, 21, or 22" document available on the Department of English and Creative Writing website. Students should submit, to the instructor electronically, a five – eight page writing sample of their fiction. Deadline for equal consideration for admittance is the last day of classes in the term preceding the course. Late applications will be accepted, but held until the add/drop period and reviewed if vacancies occur.

Offered: Spring.

Degree Requirement Attributes: Dist:ART
Advanced Creative Writing Courses

CRWT 60 - Advanced Workshop: Fiction

An advanced workshop for seniors who wish to undertake a manuscript of fiction. Students must submit an 8-12 page writing sample to the instructor by the LAST DAY OF CLASSES of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor.

Prerequisite: CRWT 20 or permission of the instructor.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART

CRWT 61 - Advanced Workshop: Creative Nonfiction

An advanced workshop for seniors who wish to undertake a manuscript of creative nonfiction. Students must submit an 8-12 page writing sample to the instructor by the LAST DAY OF CLASSES of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor

Prerequisite: CRWT 21 or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

CRWT 62 - Advanced Workshop: Poetry

An advanced workshop for seniors who wish to undertake a manuscript of poetry. Students must submit an 8-12 page writing sample to the instructor by the LAST DAY OF CLASSES of the term preceding the term in which they wish to enroll. These materials should be submitted electronically to the instructor.

Prerequisite: CRWT 22 or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

Section VII - Foreign Study Courses

ENGL 90 - English Study Abroad I

In this class we will read a range of literary texts about London in order to think about and model our own critical and creative explorations of one of the planet's most culturally diverse and historically layered urban environments. The emphasis of the class is two-fold: we will use texts as a way into the city, and the material spaces and histories of the city itself as a way of constructing our own texts. Readings will include works focused on London by writers such as Charles Dickens, Robert Louis Stevenson, Virginia Woolf, T.S. Eliot, Zadie Smith, Bernadine Evaristo, Alan Moore and others. We will also pay attention to the larger national, imperial and global contexts in which London and its literature have been situated and with which they continue to engage.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

ENGL 91 - English Study Abroad II

Major credit for this course is awarded to students who satisfactorily complete a course of study elected as part of the department's Foreign Study Program (FSPs) at Queen Mary University of London. Course group credit towards the requirements of the English major will be determined by the program director and will vary depending on the specifics of the QMUL course syllabus. Students are advised to consult with the program director as they make their enrollment choices.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT

ENGL 92 - English Study Abroad III

Major credit for this course is awarded to students who satisfactorily complete a course of study elected as part of the department's Foreign Study Program (FSPs) at Queen Mary University of London. Course group credit towards the requirements of the English major will be determined

by the program director and will vary depending on the specifics of the QMUL course syllabus. Students are advised to consult with the program director as they make their enrollment choices.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT

Section VII - Independent Study and Honors

CRWT 89 - Creative Writing Project

Instructor: Creative Writing Director

A tutorial course to be designed by the student with the assistance of a faculty supervisor. This course is intended for the purpose of producing a manuscript of fiction, creative nonfiction or poetry.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

CRWT 98 - Honors Course I

Independent study under the direction of a faculty adviser. Honors majors elect this course in the first term in which they are pursuing creative writing honors projects. For more information, see English Honors Program above, and consult the Guide to Honors booklet available in the English Department.

Students are awarded one course credit for successful completion of this course upon completion of CRWT-099. Students register for CRWT-098 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for CRWT-099 the subsequent term to complete the coursework. A final grade will replace the "ON" in CRWT-098 upon completion of CRWT-099.

Offered: Winter.

CRWT 99 - Honors Course II

Independent study under the direction of a faculty adviser. Honors majors elect this course in the second term in which they are pursuing creative writing honors projects. For more information, see English Honors Program above, and consult the Guide to Honors booklet available in the English Department.

Students are awarded one course credit for successful completion of this course. Students who have registered for CRWT-098 register for CRWT-099 to complete the coursework. A final grade will replace the "ON" for CRWT-098 upon completion of this course for a total of 2 credits for CRWT-098 and CRWT-099.

Offered: Spring.

ENGL 96 - Reading Course

A tutorial course to be designed by the student with the assistance of a member of the English Department willing

to supervise it. This course is available, as an occasional privilege, to upperclassmen who have demonstrated their ability to do independent work. During the term prior to taking the course, applicants must consult the Department Vice Chair to make arrangements for approval of the project. (Note: ENGL 96 does not normally count towards the English major or minor, though in special circumstances the C.D.C. may approve occasional exceptions to that rule. Students seeking such an exception are asked to petition the C.D.C. before taking ENGL 96. ENGL 96 may not be used to satisfy course group requirements.)

Offered: Fall, Spring, Winter.

ENGL 97 - Introduction to Honors

The aim of this seminar is not only to foster a sense of community and common purpose among the members of the English honors program to offer students further instruction in the protocols and techniques of serious scholarly writing. To that end, we will devote most of our meetings to the nuts and bolts of research and writing, aided and abetted by Eric Hayot's *Elements of Academic Style: Writing for the Humanities*. By the end of the term, students in this seminar should be prepared to write a well-developed proposal for their honors thesis. More, they should be on their way to mastering the skills necessary to help them research, write, and complete the thesis itself.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT

ENGL 98 - Honors Course I

Independent study under the direction of a faculty adviser. Honors majors elect this course during the first term in which they are pursuing honors projects. For more information, see "English Honors Program," and consult the "Guide to Honors" booklet in the English and Creative Writing Department.

Students are awarded one course credit for successful completion of this course at the end of the second term of study. Students subsequently register for ENGL 99, and continue with their coursework into a second term. A final grade will replace the "ON" for this course upon completion of ENGL 99.

Offered: Winter.

ENGL 99 - Honors Course II

Independent study under the direction of a faculty adviser. Honors majors elect this course during the second term in which they are pursuing honors projects. For more information, see "English Honors Program," and consult the "Guide to Honors" booklet available in the English and Creative Writing Department.

Students are awarded one course credit for successful completion of this course. Students who have registered for ENGL 98 register for this course to continue their coursework. Students do not register for a third term. A final grade will replace the "ON" for ENGL 98 upon completion of this course.

Offered: Spring.

Environmental Studies

Chair: Michael E. Cox

Professors D. T. Bolger, M. E. Cox, R. B. Howarth, C. S. Sneddon, E. J. Wilson; Associate Professors V. B. Chaudhary, D. G. Webster; Assistant Professors L. L. Jennings, T. W. Y. Ong, S. J. Tumber-Dávila; Professors Emeritus A. J. Friedland, R. A. Virginia; Research Associate Professor L. E. Culler; Adjunct Professor M. B. Burkins; Visiting Professor B. D. Roebuck; Senior Lecturers R. T. Jones, S. B. Smith; Lecturers J. T. Erbaugh, F. E. Krivak-Tetley, M. E. Peach.

To view Environmental Studies courses, [click here](#).

In the Department of Environmental Studies (ENVS) we seek to motivate and prepare students to rise to the challenges and opportunities associated with human-environment interactions. Environmental degradation is an escalating problem from local to global scales. Training students to understand and address these environmental problems is our core mission and is why we believe that environmental studies is an essential component of a modern liberal arts education.

The field of Environmental Studies views the earth, and our place in it, as a set of complex, interacting socio-ecological systems. To understand this complexity, ENVS draws on concepts and methods from the natural sciences, social sciences and humanities, as complementary lenses through which to view these systems. But we also seek to overcome the limitations of any one of these perspectives by applying innovative approaches that integrate the traditional disciplines in new and productive ways. Research and teaching strengths in the program include environmental governance, ecosystem science, environmental and ecological economics, biodiversity conservation, climate change, and sustainable food systems.

A defining element of environmental studies is active engagement with real-world environmental problems. One contemporary concept we employ to frame this practical engagement is sustainability. The quest for sustainability asks the difficult question, how can humans live well on the planet without compromising the ability of current and future generations to do the same? A number of our

courses have a specific focus on “hands-on” engagement with sustainability (ENVS 3: Environment and Society, ENVS 50: Environmental Problem Analysis and the Africa Foreign Study Program).

To meet the needs of our students, we offer a major in Environmental Studies and two minors: Environmental Studies (tracks available in Environmental Studies, Sustainability or Sustainable Energy) and Environmental Science. We also offer the Africa Foreign Study Program that travels to Namibia where we explore the themes of environmental studies within the particular environment, culture and history of the southern Africa region.

Requirements for the Major, Modified Major, and Minor

The Environmental Studies Major

Prerequisites (3 courses): (a) Math 3, Math 10, ENVS 10 or the equivalent statistics course; (b) Chemistry 3 or 5 or Physics 3 or Biology 16 or Earth Sciences 1; (c) Economics 1 or Economics 2

Requirements (2 courses): (a) ENVS 2 or the equivalent (It is possible to substitute other course combinations for ENVS 2 on a two-for-one basis. The following may be combined with Biology 16: EARS 1, 6, ENVS 12 or GEOG 3. If BIOL 16 is taken as a partial substitute for ENVS 2, it may not be used as a prerequisite.); (b) ENVS 3 (It is possible to substitute other course combinations for ENVS 3 on a two-for-one basis.)

Core Courses (3 courses): Please choose three, including at least one from each of the two groups

(a) Natural Sciences for Environmental Governance: ENVS 20, ENVS 22, ENVS 25, ENVS 26 or ENVS 31;

(b) Social Sciences for Environmental Governance: ENVS 55, ENVS 56, ENVS 61, ENVS 65 or ENVS 67

Critical Issues in Environmental Studies (1 course): ENVS 12; ENVS 14; ENVS 15; ENVS 17; ENVS 18; ENVS 28.

Elective Focus Courses (3 courses): Three related and relevant non-introductory (i.e., 10 or above) courses, at least one from ENVS.

Culminating Experience: ENVS 50, ENVS 84, or ENVS 91

The Environmental Studies Honors Program

A senior honors thesis is a year-long commitment, however students in the program may receive credit for up to two courses, Environmental Studies 91 and 92 (Thesis Research). ENVS 91/92 may be taken in fall/winter, fall/spring or winter/spring, both for credit, but only ENVS 91 will count in the major. The minimum requirement for admission is a grade point average of 3.0 in the major and a 3.0 general College average at the beginning of the senior year or at any other time that an application for admission

is made. Those students who satisfactorily complete the Honors Program with a ‘B+’ average or better will earn Honors recognition in their major or, in appropriate cases, High Honors. High Honors will be granted only by vote of the ENVS faculty on the basis of outstanding independent work. An interim evaluation of honors students will be made after one term and continuation recommended for those students whose work demonstrates the capacity for satisfactory (B+) work. Enrollment in Environmental Studies 91 does not imply admissions into the Honors Program nor does completion of a senior thesis require the awarding of Honors in the major.

The Culminating Experience

The culminating experience requirement for the major in Environmental Studies may be met by completing either ENVS 50, ENVS 84, or conducting Honors Research (ENVS 91).

The Environmental Studies Minor

Prerequisites (1): ENVS 2 or ENVS 3

Requirements: And five other related non-introductory courses, numbered 10 and above, including at least three from Environmental Studies. Up to two courses from outside Environmental Studies may be used with permission of the Chair. (Exception: ENVS 2 or ENVS 3 can also be among these five if not taken as a prerequisite.)

The Environmental Science Minor

Prerequisites: (a) ENVS 2 or equivalent; (b) CHEM 3 or 5 or PHYS 3 or BIOL 16 or EARS 1

Requirements: (a) ENVS 3 or 11 or 42, (b) ENVS 20 or 25 or 28 or 30

Three other related non-introductory Environmental Studies science courses (numbered 10 and above). One class from outside ENVS may be used if from an approved list or with permission of the Chair.

Another Major Modified with Environmental Studies

Prerequisites: none

Requirements (2): ENVS 2 or 3; ENVS 50

Three additional Environmental Studies non-introductory courses, not including 2, 3, or 7. One of these may be substituted by an appropriate course from another department, with permission from the ENVS Chair.

Africa Foreign Study Program

Prerequisites: There are few formal prerequisites to participate in the ENVS Africa FSP. The program benefits from having diverse perspectives among the student participants, and all majors are welcome to apply. What we do look for is individuals who are prepared to engage in a

rigorous field-based educational experience. We do ask that you take one of the following courses in preparation.

AAAS 11/ANTH 12.23: Intro to African Studies

AAAS 14 /HIST 5.01: Pre-Colonial African History

AAAS 15/HIST 66: History of Africa since 1800

AAAS 19/HIST 5.08: Africa and the World

AAAS 40/WGSS 34.02: Gender Identities and Politics in Africa

AAAS 42/REL 66/WGSS 44.03: Women, Religion and Social Change in Africa

AAAS 44/ANTH 36: Anthropology and Contemporary Africa: Exploring Myths, Engaging Realities

AAAS 46/HIST 67: History of Modern South Africa

AAAS 50/ENVS 45/HIST 75: Colonialism, Development, and the Environment in Africa and Asia

AAAS 51/COLT 51: African Literatures: Masterpieces of Literatures from Africa

AAAS 54/THEA 23: Topics in African Theater and Performance

AAAS 83.02/GEOG 80: Food and the African World

AAAS 87.05/GOVT 42: Politics of Africa

AAAS 87.09/ANTH 12.14: African Popular Culture

AAAS 87.12/ANTH 12.24: Africa's Time

AAAS 88.17/ANTH 50.21: Filmmaking and Visual Culture

GEOG 6/INTS 16: Introduction to International Development

ENVS - Environmental Studies Courses

ENVS - Environmental Studies Courses

To view Environmental Studies requirements, click here (p. 362).

ENVS 2 - Introduction to Environmental Science

Instructor: Chaudhary/Peach

To understand current environmental problems, we need to study the physical, biological, chemical and social processes that are often the basis of those problems. This course will give the skills necessary to ask intelligent questions about - and perhaps obtain answers to - some of the environmental problems our planet is facing today by

examining scientific principles and the application of those principles to environmental issues. This course will survey a variety of topics including pollution, biodiversity, energy use, recycling, land degradation, and human population dynamics. It is designed to introduce environmental science and environmental issues, topics which are explored in greater depth in other Environmental Studies courses.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: SCI

ENVS 3 - Environment and Society

Instructor: Cox/Erbaugh

The relationship between humans and the environment is mediated by the consumption of natural resources, the discharge of pollution and waste, and the transformation of landscapes and ecosystems. Unsustainable outcomes arise because individuals and organizations have incentives to undertake actions that degrade environmental quality, often in the context of markets. As a result, achieving sustainability requires laws, public policies, social norms, and shared understandings that align individual action with collective well-being. This course analyzes the causes and solutions of environmental problems through the integration of concepts from a variety of social science disciplines. In addition, it explores the central role that ecology and ecosystem science play in understanding and responding to sustainability challenges.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ENVS 7 - First-Year Seminars in Environmental Studies

ENVS 10 - Introduction to Environmental Statistics

Instructor: Chaudhary

This course is designed to introduce students to the basic statistical methods necessary to conduct and understand statistical analyses of environmental issues and problems. Methods and subjects include: measurement, descriptive statistics, graphs, basic probability, correlation and regression, and basic inferential statistics (hypothesis testing, confidence interval construction, effect size calculation). There is a strong emphasis on the application of these and other techniques to socio-environmental datasets that describe current environmental problems and issues. No previous experience with mathematics or particular software is required. Students will be required to complete a final project in which they use statistical techniques to address an environmental research question.

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Because of the large overlap in material covered, no student may receive credit for more than one of the

following courses: ECON 10, ENVS 10, GOVT 10, LING 010, MATH 10, PSYC 10, QSS 15 or SOCY 10.

Prerequisite: ENVS 2 or ENVS 3 or permission of the instructor

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

ENVS 12 - Energy and the Environment

Instructor: Wilson

Energy, in a variety of forms, is a fundamental need of all societies. This course explores the scientific concepts and applications to society of the issues regarding energy extraction, conversions and use. It will examine the scientific basis for environmental and social concerns about our present energy mix including global climate change, toxic emissions and wastes from energy combustion, and nuclear proliferation. We will also consider choices that are made in the development and utilization of energy resources and the role of public policy.

Prerequisite: ENVS 2 or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: TAS

ENVS 14 - Sustainable Food Systems

Instructor: Ong

Sustainable food systems demand an answer to the question, what is sustainable? This course will explore the many names and faces of food, asking students to critically evaluate sustainability from scientific, social and political perspectives. The course is organized into three modules: 1) food, 2) energy & ecology and 3) environmental justice. The first module provides an overview to food systems, taking a look various management styles and their environmental consequences. We will pull examples from historical times to the present, from the precursors of the Dust Bowl to concentrated animal feed operations (CAFOs). The second module will provide a scientific understanding of the key energetic and ecological components that contribute to the sustainability of food systems including its contribution to climate change and global deforestation. In the third module we will examine the social injustices of food systems, from its twin roles in obesity and hunger to the development of key social movements striving for a new but old "peasant-way of life".

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:TAS

ENVS 15 - Environmental Issues of the Earth's Cold Regions

This course examines the major physical, ecological and human systems of high latitudes, including the circumpolar northern Arctic regions and the continent of Antarctica. Using an interdisciplinary perspective the course explores the science of polar environmental change and applies this information to understand the connections of the polar regions to global processes and international issues (climate change, biodiversity, indigenous rights).

Prerequisite: ENVS 2 or ENVS 3 or permission of the instructor.

Degree Requirement Attributes: TAS

ENVS 17 - Marine Policy

Instructor: Webster

People use the oceans for transportation, recreation, food, mineral wealth, waste disposal, military defense, and many other important things. This course explores the most significant human-ocean interactions known today from two perspectives: science and policy. From the scientific literature, students will learn about issues ranging from the physical effects of sea level rise to the biological impacts of pollution to the bioeconomic repercussions of overfishing. For each of the problems that are revealed by science, we will also critically evaluate relevant policy solutions to understand how institutional design can (or can't) enhance human interactions with the oceans. This includes insights into the politics surrounding oceans issues in the US and around the world.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ENVS 18 - Indigenous Environmental Studies

Instructor: Ferguson

In this course, we examine Indigenous worldviews, environmental values and everyday life through the lens of environmental issues facing Indigenous nations and communities. Our geographic focus is on North America and the Pacific, with limited examples from other places and peoples globally. Through course materials, discussions, and assignments, students gain exposure to varied Indigenous perspectives and Indigenous knowledges expressed and enacted by scholars, Elders, community people, political leaders, and activists. Key concepts in Indigenous environmental studies will be discussed including Indigenous rights and responsibilities, Indigenous environmental stewardship, energy and development, land-language linkages, tribal sovereignty and self-determination, empowerment and resurgence.

Prerequisite: NAIS 8 or NAIS 10 or NAIS 25 or ENVS 11 or ENVS 2 or ENVS 3; or permission of instructor

Cross-Listed as: NAIS 018

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ENVS 20 - Conservation of Biodiversity

Instructor: Tumber-Dávila

On a global scale we are witnessing an unprecedented decline in what has come to be called Biodiversity. Human population growth and increasing rates of material consumption and technological development have increased the rate and scale at which we impact populations of native animals and plants. One goal of the course will be to address the biological aspects of this issue. What is Biodiversity? How is Biodiversity distributed geographically and taxonomically? What does humankind do to cause animal and plant extinctions? Is there a Biodiversity crisis? What is the current rate of extinction and what is the natural extinction rate? What properties of individual species make them vulnerable to extinction? What are the major threats to Biodiversity? The second objective is to examine the social dimensions of Biodiversity. How do our cultural and political perceptions and institutions contribute to the loss of Biodiversity? What value is Biodiversity to humankind? What is being done to preserve Biodiversity in the realms of science, technology, and policy? These questions will be addressed through lecture material, course readings, and writing assignments.

Prerequisite: ENVS 2 or BIOL 16, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: TAS

ENVS 21 - Transforming the Energy System: Keeping the Lights on While Saving the Planet

This course will explore how transitioning to renewable energy systems is a necessary leverage point for addressing human-caused climate change, with a specific focus on how energy for electricity and heat is generated and used in New England. Through the collaboration of instructors from the Environmental Studies Program, the Irving Institute for Energy and Society, the Department of Earth Sciences and the Sustainability Office, students will gain an interdisciplinary perspective on New England energy systems and human-caused climate change, including 1) the economic, policy, and regulatory management and distribution of energy, 2) the environmental and societal benefits and impacts of these systems on people and the environment, 3) a scientific understanding of fossil fuel resource formation, extraction, refining and use, and 4) climate change attribution and predictions of future human-caused climate change. The course will culminate in a discussion of Dartmouth's own energy transition as well as regional- and national scale solutions for resolving

the urgency of climate action with the current political, economic, and technological constraints governing the renewable energy transition.

Prerequisite: ENVS 2, 3, 12 or any one class EARS 1-9

Cross-Listed as: COCO 038 EARS 021

Degree Requirement Attributes: Dist:TLA

ENVS 22 - Coupled Human-Natural Systems: Theory and Practice

Instructor: Ong

This course is an introduction to coupled human-natural systems, exploring how social, ecological, and environmental systems are linked and feedback to influence each other. Increasing human demand for Earth's limited resources has resulted in a plethora of hazards to the natural world; problems which are unlikely to be solved without understanding the links between human and natural systems. Here, we will explore some of the complex, sometimes non-intuitive behavior that results from coupling these systems. The primary objective is to introduce students to the tools and techniques of complex systems science used for researching coupled human-natural systems. In a series of lectures and computer laboratory modules, students will be introduced to significant areas of research in the field and learn how to analyze and leverage basic continuous and discrete time differential models and spatiotemporal statistics to address socio-ecological problems. The course will provide basic coding instruction, as necessary. No prior experience in coding is needed. In a final project, students will work in groups to develop or adapt an existing socio-ecological model, gather and analyze existing data, as well as interpret the implications of their results for human management. Not open to students who have received credit for ENVS 80.10.

Prerequisite: MATH 3 or MATH 10, an equivalent statistics course or permission from instructor

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

ENVS 23 - Arctic Environmental Change

Instructor: Culler

This course examines the connections between science and the human dimensions of rapid environmental change. Environmental responses to climate change and resource development will be introduced from a scientific perspective. In addition, we will explore how this science is framed in policy documents such as reports from the Intergovernmental Panel on Climate Change. The course will emphasize the importance of science communication and will culminate with a collaborative project that integrates climate change, resource development, and

social issues. Not open to students who have received credit for ENVS 80.01.

Degree Requirement Attributes: Dist:TAS

ENVS 25 - Agroecology

Instructor: Ong

This course will introduce the principles of agroecology. Students will learn how classic ecological theories are applied to agricultural settings emphasizing biodiversity, plant-soil and biological control systems through group and independent project work at the Dartmouth Organic Farm. This course is intended to mimic real agroecological research. Thus, students will engage in question and methods development with multiple stakeholders (farm managers, other students and faculty), scientific collaboration, data collection, analysis, presentation, and peer review.

Prerequisite: ENVS 2 or BIOL 16, and MATH 3 or 10 or equivalent stats course, or permission of the instructor.

Offered: Summer.

Degree Requirement Attributes: Dist:SLA

ENVS 26 - Soil Ecological Systems

Instructor: Chaudhary

Soil is the living breathing skin of the Earth, supporting the ecosystem services and biogeochemical cycles that are critical to the maintenance of human societies and all life. Soil is also a complex ecological system that hosts the majority of biodiversity on Earth including millions of species of plants, animals, bacteria, and fungi. From farms to forests to cities, soil conservation, management, and restoration is a key component to addressing the climate crisis and environmental justice. Through lectures, field trips, and course-based soil ecological research, this course explores novel solutions to modern challenges in sustainable soil management.

Prerequisite: ENVS 2 or BIOL 16 or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

ENVS 28 - Global Environmental Health

Instructor: Roebuck

This course will focus upon the scientific and public health principles that govern environmental health outcomes at the individual to the global scale. Case studies will be used to illustrate the principles. Some of the issues that will be discussed include lead poisoning, mercury in the food web, the epidemic of tobacco use that is sweeping the world, the global movement of persistent organic pollutants, and natural contaminants in the human supply. These cases will increase in complexity with regards to causative agents and health outcomes. Lastly, trends of environmental diseases

coupled with the prevention of these diseases will be emphasized.

Prerequisite: ENVS 2 or BIOL 16 or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: TAS

ENVS 31 - Forest Ecology and Management

Instructor: Joseph Tumber-Dávila

ENVS 31 introduces students to fundamental ecological concepts essential for comprehending forest ecology and management practices. With a focus on experiential learning, students will engage in immersive field trips, tree identification exercises, and forest inventory techniques. By the course's conclusion, students will emerge equipped with a deep appreciation for the complexities of forest ecosystems and the practical knowledge needed to contribute meaningfully to their conservation, sustainable management, and climate change mitigation in New England and beyond.

Prerequisite: ENVS 2 or 3, or permission of the instructor

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

ENVS 40 - Foreign Study in Environmental Problems I

Instructor: Bolger

Natural Resources and Environmental Issues in Southern Africa. This course will examine the natural resource constraints and policy dilemmas faced by developing countries and the impacts of people on the environment. Topics will include land and water use, biodiversity and wildlife management, population and environmental health, agricultural practices and community dynamics, and development economics. These topics will be illustrated through field work at National Parks and safari areas, farming areas, and at community-based development projects.

Offered: Fall.

Degree Requirement Attributes: SOC

ENVS 42 - Foreign Study in Environmental Problems II

Instructor: Webster

Social and Political Aspects of Development and Conservation in Southern Africa. This course will examine the historical, social, and political context of the interplay between resource use, economic development and environmental conservation in southern Africa. The impact of colonial and ethnic traditions and international institutions, on strategies for economic development, urban growth, wildlife management, ecotourism, resource

conservation (especially water and soil) and land use will be discussed. Issues of gender in agricultural development and environmental protection will be considered.

Offered: Fall.

Degree Requirement Attributes: INT

ENVS 44 - Environment and Politics in Southeast Asia

Instructor: Sneddon

Over the past several decades, the people and environments of Southeast Asia have confronted a host of political, economic and cultural processes commonly grouped together under the heading "development". As witnessed by recent media reports detailing massive forest fires in Indonesia and dam controversies in Malaysia and Thailand, these development processes have resulted in drastic transformations in the landscapes, forests, and river systems of the region. These processes have likewise produced dramatic alterations in the livelihoods of the people who depend on and interact with the region's ecological systems.

Cross-Listed as: GEOG 044

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ENVS 45 - Colonialism, Development, and the Environment in Africa and Asia

Instructor: Zeinstra

This course examines the environmental history of Africa and Asia, focusing on the period of European colonialism and its aftermath. Topics include deforestation and desertification under colonial rule; imperialism and conservation; the consequences of environmental change for rural Africans and Asians; irrigation, big dams and transformations in water landscapes; the development of national parks and their impact on wildlife and humans; the environmentalism of the poor; urbanization and pollution; and global climate change in Africa and Asia. Open to all classes.

Cross-Listed as: AAAS 050 HIST 075 ASCL 54.07

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

ENVS 50 - Environmental Problem Analysis and Policy Formulation

Instructor: Cox/Ong

Students working together in groups will formulate and justify policy measures that they think would be appropriate to deal with a local environmental problem. The purposes of this coordinating course are to (1) give students an opportunity to see how the disciplinary knowledge acquired in their various courses and

departmental major programs can be integrated in a synthetic manner; (2) provide a forum for an in-depth evaluation of a significant environmental policy problem; and (3) give students the experience of working as a project team toward the solution of a real-world problem. Considerable field work may be involved, and the final examination will consist of a public presentation and defense of student-generated policy recommendations. Open only to seniors or to other classes with permission of the instructor. Satisfies the Culminating Experience requirement.

Prerequisite: ENVS 11, ENVS 2 or ENVS 3, and at least one upper-level Environmental Studies course, or permission of the instructor. Open only to seniors or to other classes with permission of the instructor. Satisfies the Culminating Experience requirement.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

ENVS 55 - Ecological Economics

Instructor: Howarth

This course examines the links between economic and ecological systems with an emphasis on the interplay between values and institutions in environmental problem-solving. Concepts pertaining to welfare economics, common pool resources, ecosystem valuation, and environmental ethics are developed and applied to problems such as fisheries and forest management, biodiversity conservation, and global environmental change. The course emphasizes the relationship between economic growth, ecosystem services, and human flourishing in the definition and pursuit of sustainable development.

Prerequisite: ECON 1 or ECON 2; MATH 3 or the equivalent; ENVS 2 or ENVS 3; or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: SOC

ENVS 56 - Political Economy of US Environmental Policy

Instructor: Webster

This course uses tools and concepts from political economy to explore the evolution of US environmental governance from colonial times to the present day. Classroom activities and assignments are designed to foster critical thinking about the interplay between economic and political forces in social-ecological systems. We will cover fundamental theories in political economy along with other conceptual narratives and ideologies that influenced US environmental history. We will also consider endogenous and exogenous sources of change, with particular focus on how the distribution of resources, understanding, and

incentives shaped patterns of governance across a broad range of domestic and international environmental issues (e.g., forestry, fisheries, agriculture, pollution, energy, climate change, etc.). Power disconnects and related issues from the literature on environmental justice are also incorporated throughout the course.

Prerequisite: ECON 1 or ECON 2 and MATH 3, or the equivalent, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ENVS 60 - Environmental Law

Instructor: Jones

Environmental Law deals with the laws and policies used to protect the natural environment and human health from pollution and development. This course focuses on how U.S. and international environmental law and policy succeeds, and fails, to promote environmental justice (the fair sharing of benefits and harms of environmental regulation), mitigate and adapt to climate change, conserve natural resources, and protect biodiversity. Legal tools will be learned and applied to real-world environmental problems.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ENVS 61 - Community, Society and the Commons

Instructor: Cox

In this course we study local governance of environmental commons through a range of case studies, including fisheries in the Dominican Republic, forestry and water management in the United States, and Balinese agriculture. We will explore how communities manage their shared environmental commons through a variety of topics. These include the tragedy of the commons, environmental property rights, the role of reciprocity and kinship with nature to motivate environmental stewardship, and the possibility for effective co-management arrangements between communities and governments. Students conduct their own case studies and learn about the challenges of local governance through ongoing, in-class activities.

Prerequisite: ENVS 2 or ENVS 3 or permission of instructor

Degree Requirement Attributes: Dist:SOC

ENVS 62 - The Practice of Science Policy & Diplomacy

Instructor: Burkins

How can the best, most current, and most credible scientific knowledge more actively inform global debates and policy advancing the Sustainable Development Goals (SDGs), climate change mitigation strategies, international security, global health, poverty alleviation,

and peace building? And how can our existing science and policy systems become more inclusive, more equitable, and more informed by the next generation of young leaders? This course introduces students to emerging opportunities for engagement and action at the intersection of science, technology, policy, and diplomacy, by developing the “boundary spanning” skills critical for more science-informed, equitable, and inclusive policy solutions. Coursework will be highly interactive and multidisciplinary, including negotiation simulations, policy brief development, social impact work with local organizations, and seminars discussing current issues with invited leaders in science policy and science diplomacy. Not open to students who have received credit for ENVS 80.08.

Prerequisite: ENVS 2 or 3 or permission of the instructor

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

ENVS 65 - Global Environmental Politics

Instructor: Webster

This course will examine the global politics associated with environmental issues such as desertification, wildlife management, biodiversity conservation, oceans and fisheries, shared water resources, and climate change. Specifically, we will engage these topics using theories from international relations and comparative politics. A major goal of the course is to give students a firm understanding of the linkages between the policy preferences of governments and the outcomes of international negotiations regarding the global environment.

Prerequisite: ENVS 2 or ENVS 3 or permission of instructor

Degree Requirement Attributes: INT

ENVS 67 - Political Ecology

Instructor: Sneddon

Political ecology is an approach to human-environment relations that links a broad understanding of biophysical systems (e.g., tropical forests, coastal ecosystems, river basins) to knowledge regarding the political and economic forces that drive ecological change. Drawing on examples from North America, Southeast Asia, Africa and other regions, this course employs a political ecology framework to examine contemporary debates over urbanization, water resources, the role of science in environmental conflicts and the cultural landscape.

Prerequisite: ENVS 3 or GEOG 1 or permission of instructor

Cross-Listed as: GEOG 47.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

ENVS 79 - The Soil Resource

Instructor: Jackson

Soils are a critical natural resource; feeding our growing population depends fundamentally on soils; in fact, soils provide nutrients to all ecosystems. Agriculture and land management has increased soil erosion around the world, potentially influencing the history and fate of civilizations. In the modern era, this use is not sustainable; the physical and chemical degradation of soils far outpaces soil production. This course will explore the nature and properties of soils and examine how these processes occur in natural and human-influenced soils, and identify reasonable limits on what can influence the sustainable utilization of soils as a resource. We will begin by developing an understanding of the geologic, biologic, and chemical processes that lead to soil formation and the development of specific soil properties. The second portion of the course will examine the relationship between soils and underlying bedrock and overlying vegetation and the role of soils in ecosystems. The final section of the course will examine the situations in which soils are used to reduce the impact of human activities and the way in which humans can reduce their impact on soils: the importance of soils in septic tanks and leach fields; the use of soils as solid waste landfill caps and liners; the use of soils in the storage of hazardous wastes; and the conservation and management of soils.

Prerequisite: ENVS 2 or one course from EARS 1, EARS 2, EARS 3, EARS 4, EARS 5, EARS 6, EARS 8, EARS 9, or CHEM 5 and an advanced course from the environmental sciences or Earth Sciences; or permission of the instructor.

Cross-Listed as: Identical to EARS 35

Offered: Fall.

Degree Requirement Attributes: SLA

ENVS 80.03 - Regenerative Design of the Built Environment

Instructor: Kawiaka

This class will examine current trends in ‘regenerative design’ of the built environment that includes buildings, infrastructure, and manmade landscapes that interact with the natural environment and its potential to improve our lives and the planet. Regenerative design is a systems-theory based approach to design. “Regenerative” processes restore energy used and materials consumed through a closed loop model where the outputs are equal to the inputs where waste=resources. Through this process, social needs are addressed while diminishing ecological impact, and usable energy, food and additional materials are created instead of waste and the designed system can actually improve the natural environment over time.

ENVS 80.11 - Social Ecological Systems: Theory and Methods

Instructor: Krivak-Tetley

The concept of social ecological systems (SES) provides a useful theoretical framework for confronting modern environmental challenges. This course uses the SES model to explore natural resource and conservation challenges across a range of historical, social, and political contexts. Case studies will compare and contrast the Global North and South, with special emphasis on the Upper Valley and sub-Saharan Africa. Through discussions, lectures, field activities and independent projects, students will develop a multidisciplinary skills “toolbox” for SES research.

Prerequisite: ENVS 2 or ENVS 3 or permission of instructor

Degree Requirement Attributes: Dist:TAS

ENVS 80.17 - Advanced Topics in Environmental Economics

Instructor: Howarth

This course develops advanced concepts and methods from environmental economics to prepare students to engage with current research and its applications in environmental policy and management. Topics may include welfare economics, nonmarket valuation, common pool resources, bioeconomic modeling, forest resource management, decision-making under uncertainty, and the links between climate change and the economy. Students develop skills in applying economic concepts and methods in the analysis of environmental problems.

Prerequisite: The course is aimed at students who have some prior knowledge of environmental economics (Environmental Studies 55 or 56 equivalent) or microeconomics (Econ 21). In addition, students should have a working knowledge of first-year differential calculus (Math 3 or above).

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ENVS 80.18 - The Control of Nature

Instructor: Tumber-Davila

Embark on a journey that explores the convergence of speculative fiction and cutting-edge scientific advancements. This course delves into the realm of geoengineering technologies, designer genes, carbon removal technologies, renewable energy, and various transformational technologies that shape our understanding of society, the environment, and the climate. Contrary to its portrayal in cinematic works such as *Dune*, *Jurassic World*, and *Snowpiercer*, controlling the earth's climate is not mere science fiction. With a focus on ethical considerations and governance, this discussion-based

course critically examines the potential consequences, both positive and negative, of manipulating the environment.

Prerequisite: ENVS 2 or 3, or permission of the instructor

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

ENVS 80.19 - Resource Extraction and Indigenous Led Solutions

Instructor: Jennings

This course is a brief survey of resource/natural relative extraction (depending on your world view) and ongoing solutions Indigenous People are leading in the management of our natural world. This is illustrated by several major environmental issues: water, mining, oil, natural gas, hunting and fishing, outdoor recreation, data access and agriculture.

Cross-Listed as: NAIS 023

Offered: Spring, Summer.

Degree Requirement Attributes: Dist:TMV; WCult:NW

ENVS 80.20 - Offshore Wind Power: The Promise, Policies, and Practice of Developing Renewable Energy

Instructor: Wilson

Students will take a deep dive into the global development of Offshore Wind power, a clean energy resource with the technical potential to supply the world's electricity demand eleven times over. We will explore the creation of a new renewable energy sector around the globe, paying particular attention to how the sector is evolving within the US, with a focus on the history and intertwined roles of federal and state governments, private developers, and communities.

Prerequisite: ENVS 2 or ENVS 3 or permission of the instructor

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

ENVS 84 - Seminar on Environmental Issues of Southern Africa

Instructor: Krivak-Tetley

This seminar will coordinate and supplement the material in courses and field work of the program, using guest speakers and student presentations. Students, working in small sub-groups, will undertake multidisciplinary studies of specific regional environmental issues in southern Africa. These projects will lead to a single major paper produced by the group on an environmental topic selected in consultation with the instructor. The paper will be printed in a volume for use by future students and by

interested individuals in the U.S. and in southern Africa. Satisfies the Culminating Experience requirement.

Offered: Fall.

Degree Requirement Attributes: WCult: NW

ENVS 90 - Independent Study and Research

Instructor: Cox

Permission is required from the faculty advisor and the program chair.

Offered: Fall, Spring, Summer, Winter.

ENVS 91 - Thesis Research in Environmental Studies I

Instructor: Cox

Independent study of an environmental problem or issue under the supervision of a member of our staff. Open only to Environmental Studies majors. Only one term of either ENVS 91 or ENVS 92 can count toward the major. Credit requires completion of a suitable report. See description of the Honors Program in Environmental Studies.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for ENVS 92, and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both this course and ENVS 92 upon completion of ENVS 92 at the end of the third term of coursework.

Prerequisite: Permission is required from the faculty advisor and the program chair.

Offered: Fall, Spring, Summer, Winter.

ENVS 92 - Thesis Research in Environmental Studies II

Instructor: Cox

Independent study of an environmental problem or issue under the supervision of a member of our staff. Open only to Environmental Studies majors. Only one term of either ENVS 91 or ENVS 92 can count toward the major. Credit requires completion of a suitable report. See description of the Honors Program in Environmental Studies.

Students are awarded one course credit for successful completion of this course. Students who have registered for ENVS 91 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both ENVS 91 and this course upon completion of this course at the end of the third term of coursework.

Offered: Fall, Spring, Summer, Winter.

Ethics Institute

Director: Julie Rose

2024-2025 Advisory Board Members: S. Brison, M. Clarke, R. Muirhead, H. Payson, D. Plunkett, J. Rose, T. Rosenkoetter, L. Swaine.

The Ethics Institute was established in 1982 by a group of Dartmouth faculty who were concerned about issues in applied and professional ethics. The Institute exists to foster the study and teaching of ethics, broadly construed, across the Dartmouth community through various public programming, workshops, fellowships, and funding for research and teaching.

Campus services include: the Burt Dorsett and Roger S. Aaron lecture series; an annual moral and political philosophy workshop; an undergraduate law and ethics fellowship program, a faculty manuscript review; research grant opportunities for faculty and students; the Phillips Family Professional Development Internships, and the Phillips undergraduate essay contest. Please visit our website, <http://www.dartmouth.edu/~ethics/>, for further details and instructions as well as a full listing of our offerings.

The Ethics Institute's administrative offices and seminar room are located in Blunt Alumni Center, 20 N. Main Street, Suite 201, Hanover, NH 03755.

Film and Media Studies

Chair: Roopika Risam

Professors M. Flanagan, J. Mack; Associate Professors R. Risam, J. K. Ruoff, M. J. Williams, P. Young, J. D. Wernimont; Assistant Professor I. Kwayana; Visiting Professor J. Rapf; Visiting Associate Professor W. F. Phillips; Affiliated Faculty G. Gemünden, D. Washburn, M. White Ndounou, T. Keaton, D. Garcia; Lecturers J. Bell, J. D. Chamberlain, E.G. Carabatsos; Fellows T. Jeffay, A. Cisco

To view Film and Media Studies courses, click here (p. 377).

Requirements for the Major in Film and Media Studies

The Film and Media Studies Department at Dartmouth College offers a wide range of courses in the theory, history, and criticism of film and television as well as a number of courses in film and video production, animation, game design, digital media, data studies, and screenwriting. The major provides a common basis for all students in the theory, history, and criticism of film,

television and new media, games, and digital humanities, and requires at least one course with a production component. Beyond this, the major allows students to shape their own emphasis (for instance, history and criticism, or screenwriting). The major requirements are as follows:

Two Prerequisites

1. One introductory course: FILM 1 Introduction to Film: From Script to Screen; or FILM 2 Introduction to Television; or FILM 3 Introduction to Digital Arts and Culture
2. FILM 20 Film History I (Silent to Sound)

Nine Required Courses

1. One film history course from the following:
 - FILM 21 Film History II (1930-1960)
 - FILM 22 Film History III (1960-1990)
 - FILM 23 Film History IV (1990-present)
2. One additional film or media history course from among the following:
 - FILM 21 Film History II (1930-1960)
 - FILM 22 Film History III (1960-1990)
 - FILM 23 Film History IV (1990-present)
 - FILM 45 U.S. Television History
 - FILM 42's National Cinema

Students may also petition to the Chair to count specific offerings of the following topics classes for credit in this requirement:

 - FILM 41's (such as FILM 41.09 History of Animation)
 - FILM 46's (such as FILM 46.01 TV and Histories of Gender)
 - FILM 47's (such as FILM 47.05 History of Documentary)
3. FILM 40 Theories and Methodologies of Film and Media Studies
4. One television studies course from among the following:
 - FILM 45 U.S. Television History
 - FILM 46's Topics in Television/Broadcast Media
5. and 6. Two additional studies courses from among the following:
 - FILM 41's Genre
 - FILM 42's National Cinema
 - FILM 43's Film Creator

- FILM 44's Theory Meets Practice
 - FILM 45 U.S. Television History
 - FILM 46's Topics in Television/Broadcast Media
 - FILM 47's Topics in Film
 - FILM 48's Topics in Digital Culture and New Technologies
 - FILM 50's Topics in Media Theory
7. One production course from among the following:
- FILM 30 Documentary Videomaking
 - FILM 31 Filmmaking I: Basic Elements of Film
 - FILM 33 Writing for the Screen I
 - FILM 35 Animation: Principles and Practice
 - FILM 36's Videomaking
 - FILM 37 Directing for the Camera
 - FILM 51 Game Design Studio
8. and 9. Two courses at an advanced level, one of which must be the Culminating Experience:
- FILM 32 Filmmaking II
 - FILM 34 Writing for the Screen II
 - FILM 38 Advanced Animation
 - FILM 39's Advanced Videomaking
 - Any courses between FILM 41's—FILM 48's
 - FILM 49's Practicum in Digital Culture and New Technologies
 - FILM 50's Topics in Media Theory
 - FILM 80 Independent Study
 - FILM 93 Major Project
 - FILM 95 Honors Project I

Modified Major in Film and Media Studies

Students may modify Film and Media Studies with another related discipline with the permission of the Chair of Film and Media Studies and that of the Chair of the related department. Film and Media Studies can be either the major or the minor part of a modified major.

When Film and Media Studies is the major part of the modified major the requirements are as follows:

Two Prerequisites

1. One introductory course: FILM 1 Introduction to Film: From Script to Screen; or FILM 2 Introduction to

Television; or FILM 3 Introduction to Digital Arts and Culture

2. FILM 20 Film History 1 (Silent to Sound)

Six Required Courses

1. One film or media history course from the following:

- FILM 21 Film History II (1930-1960)
- FILM 22 Film History III (1960-1990)
- FILM 23 Film History IV (1990-present)
- FILM 45 U.S. Television History
- FILM 42's National Cinema

Students may also petition to the Chair to count specific offerings of the following topics classes for credit in this requirement:

- FILM 41's (such as FILM 41.09 History of Animation)
- FILM 46's (such as FILM 46.01 TV and Histories of Gender)
- FILM 47's (such as FILM 47.05 History of Documentary)

2. FILM 40 Theories and Methodologies of Film and Media Studies

3. One studies course from among the following:

- FILM 41's Genre
- FILM 42's National Cinema
- FILM 43's Film Creator
- FILM 44's Theory Meets Practice
- FILM 45 U.S. Television History
- FILM 46's Topics in Television/Broadcast Media
- FILM 47's Topics in Film
- FILM 48's Topics in Digital Culture and New Technologies
- FILM 50's Topics in Media Theory

4. One production course form among the following:

- FILM 30 Documentary Videomaking
- FILM 31 Filmmaking I: Basic Elements of Film
- FILM 33 Writing for the Screen I
- FILM 35 Animation: Principles and Practice
- FILM 36's Videomaking
- FILM 37 Directing for the Camera
- FILM 51 Game Design Studio

5. and 6. Two courses at an advanced level, one of which must be the Culminating Experience:

- FILM 32 Filmmaking II
- FILM 34 Writing for the Screen II
- FILM 38 Advanced Animation
- FILM 39's Advanced Videomaking
- Any courses between FILM 41's—FILM 48's
- FILM 49's Practicum in Digital Culture and New Technologies
- FILM 50's Topics in Media Theory
- FILM 80 Independent Study
- FILM 93 Major Project
- FILM 95 Honors Project I

Modifying another Major with Film and Media Studies

If Film and Media Studies is the minor part of the modified major, the requirements are as follows:

One Prerequisite

1. One introductory course: FILM 1 Introduction to Film: From Script to Screen; or FILM 2 Introduction to Television; or FILM 3 Introduction to Digital Arts and Culture

Four Required Courses

1., 2., 3., and 4. Four film and media Studies courses from any category

Minor in Film and Media Studies

The minor requirements are as follows:

One Prerequisite

1. One introductory course: FILM 1 Introduction to Film: From Script to Screen; or FILM 2 Introduction to Television; or FILM 3 Introduction to Digital Arts and Culture.

Six Required Courses

1. One film history course from among the following:
 - FILM 20 Film History I (Silent to Sound)
 - FILM 21 Film History II (1930-1960)
 - FILM 22 Film History III (1960-1990)

- FILM 23 Film History IV (1990-present)

2. One television studies course from among the following:

- FILM 45 U.S. Television History
- FILM 46's Topics in Television/Broadcast Media

3. and 4. Two additional studies courses from among the following:

- FILM 41's Genre
- FILM 42's National Cinema
- FILM 43's Film Creator
- FILM 44's Theory Meets Practice
- FILM 45 U.S. Television History
- FILM 46's Topics in Television/Broadcast Media
- FILM 47's Topics in Film
- FILM 48's Topics in Digital Culture and New Technologies
- FILM 50's Topics in Media Theory

5. One production course among the following:

- FILM 30 Documentary Videomaking
- FILM 31 Filmmaking I: Basic Elements of Film
- FILM 33 Writing for the Screen I
- FILM 35 Animation: Principles and Practice
- FILM 36's Videomaking
- FILM 37 Directing for the Camera
- FILM 51 Game Design Studio

Or one theory course among the following:

- FILM 40 Theories and Methodologies of Film and Media Studies

- FILM 50's Topics in Media Theory

6. One other production, screenwriting, or studies course (any additional course from FILM 20 and above) in line with the area of major interest.

Culminating Experience

The Culminating Experience requirement is designed to offer each student an opportunity to fulfill an enhanced and focused project related directly to their emphasis within the major. It is required of both Majors and Modified Majors. This course will be selected and declared by each individual student, but must meet department requirements and schedules.

Students may propose one of the following options to count as the Culminating Experience:

1.

FILM 93 Major Project

-

A two-term commitment that can be pursued in studies, creation, or production.

-

Must attend the C.E. Seminar. The seminar instructor is the official advisor for all projects.

-

Available only in winter and spring terms.

2.

FILM 95 and FILM 96 Honors Project I and II (See the Honors Program section below)

-

A more ambitious and higher caliber two-term commitment that can be pursued in studies, creation, or production. Must have an average in the major of 3.4 or higher (and a college average of 3.0 or higher).

-

Must attend the C.E. Seminar. The seminar instructor is the advisor for all projects.

-

Available only in winter and spring terms.

3.

“extra work” in an offered advanced F&MS course

-

One-term commitment.

-

The F&MS course must be taught by a F&MS faculty member.

-

The instructor of the course grants permission and is considered the project advisor.

-

The course cannot fulfill another requirement for the major.

-

This option may be pursued in any term.

Culminating Experience Seminar (Winter And Spring)

-

Two-term project students are required to attend the C.E. Seminar, taught by a F&MS faculty member.

-

Seminar attendance is recommended but not required for students pursuing their Culminating Experience Project as "extra work" in an offered F&MS advanced course during winter and spring terms.

-

All students crafting Culminating Experience Projects are required to make brief presentations of their projects at the Senior Showcase held on week 8 of the spring term.

Project Advisors

Students for FILM 93 and FILM 95-96 don't need to seek advisors. The advisor will be the faculty assigned to the Culminating Experience Seminar for either winter or spring term.

-

Students may seek out faculty subject-matter experts across the department, but these mentoring sessions are limited to regular office hours from those faculty, or up to 2 special meetings a term.

-

Students choosing the option "extra work" in an advanced F&MS course must contact the F&MS faculty member and receive permission to do "extra work" for the Culminating Experience Project within their class. The course's instructor will be considered the advisor for the project.

Requirements

BEFORE students propose or enroll for a Culminating Experience Project, they need to have taken:

[FILM 1](#), [2](#), or [3](#)

[FILM 20](#)

[FILM 40](#)

Note: If students are planning on taking FILM 40 in winter term of their senior year, they may only do a one-term culminating project.

Deadlines

Mid April:

Mid September:

Required Department Info Meeting for one-term summer and fall projects

15th May:
Proposals due to Department

Required Department Info Meeting for one- and two-term winter and spring projects

15th October:
Proposals due to Department

Spring Term (Week 8)
SENIOR SHOWCASE
Final Culminating Experience
Projects Presentations

Proposals for summer or fall term Culminating Experience Projects "extra work" in an offered F&MS advanced course are due by May 15th of junior year. Proposals for winter or spring terms are due by October 15th of senior year.

Attendance at the semi-annual Major's Meeting is required.

Proposal

All Culminating Experience Projects, whether one-term projects "extra work" in an offered F&MS advance course or two-term projects, must be proposed to the faculty and approved. The proposal template can be found on: <https://film-media.dartmouth.edu/menueature/undergraduate/major/culminating-experience>

1. Write a description of the proposed culminating experience project (2-5 pages).

2. Briefly describe the format and goals of the project and how it represents the culmination of your major. Please be specific.

Does it extend work and interests developed in other classes?

Does it allow you to synthesize or isolate issues and ideas introduced in your major coursework?

Does it allow you to combine goals of the major with goals of your career or post-graduate academic work?

3. Indicate how long the project will be (in pages, minutes, etc.)

4. Indicate how long you expect it will take you to complete it

5. Indicate a budget if applicable.

For the option "extra work" in an offered F&MS advanced course, the course's instructor needs to assign the percentage of the course's final grade that the "extra work" would count for and sign the end of the Culminating Experience Cover Sheet form.

Reminders

- Production projects will be assessed in relation to the probability of their completion and to the rest of the production curriculum. Regularly scheduled courses will have priority regarding equipment demands.
- Under extreme circumstances (such as medical leave), students may petition to alter or change their culminating projects, but approval is not guaranteed.
- Note that FILM 80 Independent Study is not an option for a Culminating Experience Project

Honors Program

Students who have an average in the major of 3.4 or higher (and a College average of 3.0 or higher) are eligible to pursue Honors in an ambitious two-term Culminating Experience Project. Students pursuing honors follow the same steps as detailed above. The rules for Culminating Experience Project Proposals apply.

Students with modified as well as standard majors may pursue Honors by enrolling in the FILM 95/96 sequence. An Honors project may only be pursued in winter and spring terms and students receive two major credits. If the finished project does not achieve a grade of 3.3 (B+) or higher, the FILM 95 Honors status will revert to FILM 93 (Major Project). An 4 (A) grade in FILM 95 and FILM 96 may earn High Honors. For additional information, students should consult the Department Chair.

Transfer Credit

Permission of the Chair and a detailed description of the course is required for provisional approval for transfer credit. Final approval will be granted on the basis of the Chair's review of the syllabus and evidence of the student's work in the course for which transfer credit has been requested. Three courses taken at other institutions may be substituted in fulfillment of the major requirements, provided that the program as a whole is consistent with the intent of the major. Of the three transferred courses, no more than two may be in film theory, history, and criticism, and no more than two may be in production.

FILM - Film and Media Studies Courses

To view Film and Media Studies requirements, click here (p. 372).

FILM 1 - Introduction to Film: From Script to Screen

Instructor: M. Williams; P. Young

This course examines all the processes which go into the creation of a film, from its inception as a treatment and screenplay to its distribution as a film. Experts (writers, directors, actors, cinematographers, and distributors) may talk on various areas of expertise. The course will offer an in-depth analysis of different kinds of films and the key technical and critical concepts used in understanding them. Open to all classes.

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 3 - Introduction to Digital Arts and Culture

Instructor: J. Bell

Digital technology is a key component of culture. Looking at popular media, science fiction, computer games, and artists' projects, students will learn important approaches to digital culture including: the history of the computer as a medium; the conceptual history of interactivity; the development of film, design, animation, and hypermedia; the history of artificial reality; and how visions of the future may change our sense of identity and what constitutes our physical bodies.

Offered: Winter.

Degree Requirement Attributes: WCult:W

FILM 7 - First-Year Seminars in Film and Media Studies

Instructor: J. Rapf, J. Bell, R. Risam

Offered: Spring, Winter.

FILM 20 - Film History I (Silent to Sound)

Instructor: J. Rapf

Detailed history of film from its origins to early sound films. Among the major topics to be addressed are: pre-cinematic devices and early cinema; the rise of the feature film; the tradition of silent comedy; the rise of the studio and star systems; European movements and their influence; the coming of sound. Prerequisite to the major in Film and Media Studies. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 21 - Film History II (1930-60)

Instructor: J. Rapf

A detailed history of film beginning with the golden age of the U.S. studio system and its major genres. Among the topics and films considered will be the rise of sound film; Hollywood in the 30s; the impact of World War II; neo-realism; film noir; the blacklist; the impact of television and the decline of the studio system; Japanese cinema; the emergence of European auteurs; beginnings of the French New Wave. Open to all classes.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FILM 22 - Film History III (1960 to 1990)

A detailed history of film beginning with the French New Wave and its impact on American and international cinema. Among the topics and films to be considered will be the interrogation of genres in this period; the rise of alternative models of production; independent and radical film in the United States, Europe, and the Third World; new national cinemas (Eastern Europe in the 60's, Australian and New German film in the 70's, and Soviet, Chinese, and British film in the 80's). Open to all classes.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FILM 23 - Film History IV (1990-present)

This class surveys a variety of national cinemas and their artistic, social, political, and industrial contexts from the period of 1990 to the present. Focus will be on the mutual influences among cinemas during this period, international co-productions, and the ways in which specific national cinema contexts interface with globalized economies and distribution in post-colonial political environments. Some attention will be given to post-French New Wave art film movements, such as Denmark's Dogme group; to the cross-over of east Asian cinemas, such as Hong Kong cinema, to the west; to East European and German cinema since the break-up of the Soviet Union; and to the appeal of Indian cinema to diasporic communities in North America.

Degree Requirement Attributes: Dist:INT or ART;
WCult:W

FILM 30 - Documentary Videomaking

Instructor: J. Ruoff

This documentary workshop will explore in depth the rich world of nonfiction film and video production. Working in groups, students will tackle a variety of technological, aesthetic, and ethical issues intrinsic to the medium. Each group will produce one 10-minute non-fiction film. The class will utilize standard professional production models, which require intense collaborative teamwork and the distribution of tasks and responsibilities. It will culminate in a screening in Loew Auditorium in the Black Family Visual Arts Center. Open to all classes.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

FILM 31 - Filmmaking I: Basic Elements of Film

An introduction to the theory and technique of film-making combining comprehensive analysis of significant works in various film styles with practical exercises in production. The course aims to provide a basic understanding of the film-making process—from script to screen. Students will work in 16mm and portable video for experience in scriptwriting, directing, cinematography, acting, and editing. Readings will include introductory film history, film theory and criticism, screenplays, and essays on new aesthetics in film and video. Limit 12

Degree Requirement Attributes: Dist:ART

FILM 32 - Filmmaking II

A workshop course in film production, with students, working alone or in collaboration, required to complete a project for showing at the end of the term. Weekly class meetings will include analysis of film classics and work in progress, as well as critical discussions with visiting professionals. Limit 12

Degree Requirement Attributes: Dist:ART

FILM 33 - Writing for the Screen I

Instructor: W. Phillips

An analysis of the creative writing process as related to film and other media. A variety of styles will be explored and the potential of specific content for a visual medium will be examined. Each student will be expected to complete a script for a work of at least twenty minutes as a term project. Permission will be granted by the instructor on the basis of material submitted before the end of fall term.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:ART

FILM 34 - Writing for the Screen II

Instructor: W. Phillips

A continuation of FILM 33 in which the student is expected to complete a full-length screenplay begun in that course. Continued work on the methods of writing, particularly on character development and plot rhythms. Permission is granted by the instructor and if you have taken Film Studies 33.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

FILM 35 - Animation: Principles and Practice

Instructor: J. Mack

This studio course will introduce the expansive possibilities of the animated film through a series of exercises in drawn, cut-out, object and digital animation techniques as well as an extended final project that will screen publicly. Class screenings, critiques, and visiting artist presentations will supplement in-class demonstrations. Students should expect to devote serious time to the coursework (up to 20 hours per week). Permission of the instructor is required—granted first day of course.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

FILM 36.01 - Experimental Videomaking (Autobiography)

This course covers the basics of developing a personal video from idea through realization, while emphasizing ideas outside traditional narrative or documentary forms. Students are encouraged to develop their own forms of aesthetic expression. Students show and critique their work in class in preparation for a final project and public screening.

Degree Requirement Attributes: Dist:ART

FILM 36.03 - TV Production

In this introductory course, students will learn hands-on the fundamental aspects of television production. Studying camera, sound, editing, writing, and producing techniques, students will engage in critical discussion of these techniques and will develop technical production abilities. Students will explore the culture of the media professional through a series of group assignments which stress productive collaboration, objective criticism and analysis, and professional ethics. Students will use their knowledge and skills to create several short television productions both inside and outside of the studio, culminating in a publicly presented group project. Dist: Art.

FILM 37 - Directing for the Camera

Instructor: I. Kwayana; R. Thalheim

Directing for the Camera investigates the directorial process of translating the written script to the screen. Students analyze, rehearse, shoot and edit narrative scenes from existing or original screenplays. The exercises are critiqued and comparisons are then made between the existing works and the exercises. Students work in crews rotating between the roles of director, camera, and sound. Special attention is also given to lighting, cinematography, and audio recording.

Limit 12

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART

FILM 39 - Advanced Videomaking: Group Documentary

Degree Requirement Attributes: Dist:ART

FILM 39.01 - Advanced Videomaking: Documentary and Experimental

A workshop course in advanced digital videomaking, with students, working in pairs or groups, required to complete a short (10-minute or less) broadcast-quality documentary or experimental video for screening at the end of the term. Class meetings will focus on conceptualizing, preparing, and completing the various stages of pre-production, production, and post-production, with extensive in-class critiques.

Prerequisite: Film Studies 30, 31, 36, or significant experience shooting and editing digital video. Permission granted by the professor after the first day of class.

Prerequisite: FS 30, or FS 31, or FS 32, or FS 36, or FS 37, or FS 44.04, or FS 44.07, or FS 48.02, or FS 51, or previous digital video experience. Instructor permission required.

Degree Requirement Attributes: Dist:ART

FILM 40 - Theories and Methodologies of Film and Media Studies

Instructor: M. Williams; P. Young

This course is designed to introduce film and media studies majors to some of the field's major scholarly methodologies and their theoretical value in explaining how texts, industries, creative artists, and audiences participate in the meaning-making processes. Students will read scholarship and participate in projects that illuminate how meaning is created and negotiated at the levels of industrial production, artistic creation of texts, and audience knowledge and engagement. The screenings, readings, and assignments will ask the student to think about the relations among his/her own position as a

scholar, as an audience member, and as a creative artist. This knowledge provides a foundation for critical thinking skills necessary for the student's success in the major. The course is designed for students who have had some introductory exposure to the principles of film and/or television aesthetics and production techniques, but before they have completed their upper division major requirements. **All Film majors and Film modified majors should take this course no later than their junior year.**

Degree Requirement Attributes: Dist:ART

FILM 41.01 - Infernal Affairs: Police on Film

An examination of the concept and use of genre with focus on a particular genre. How are the genres determined and how useful structurally and historically is genre as a concept of classification? What constitutes a genre? What is the relationship between periods and genres? Between genre and the Hollywood film? This course will consider genre as both an aesthetic concept and an economic one, producing stabilization and variation in product. The roles of repetition and variation, stability and change. Genres may include the western, the crime movie, the women's film, the musical, family melodrama, the film noir or other genre-related topics such as film and literature. May be repeated for credit with a different topic.

Degree Requirement Attributes: Dist:LIT; WCult:W

FILM 41.02 - Shades of Noir: Film, Fiction, Politics

"Film Noir" evokes memories of stylish, cynical, black-and-white movies from the 1940s and 1950s—melodramas about private eyes, femmes fatales, criminal gangs, and lovers on the run. In this course, we will examine noir in relation to its many contexts: the hard-boiled fiction of Chandler and Hammett; the experience of dislocation and alienation that reflect the exile status of many central-European professionals who worked in the US film industry in the 1940s; and Hollywood blacklisting and censorship during the anti-Communist witch hunt. The course will also trace the pervasive presence of noir and its continuing appeal for artists and audiences throughout the world. Because of its artistic and political complexity, noir is a key term for the study of US postwar cultural history: noir narratives revolve around questions of racial and national identity, around the postwar crisis of masculinity, and the convergence of modernism and mass culture.

Cross-Listed as: COLT 62.02

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FILM 41.04 - Ethnographic Film

Instructor: L. Ogden

Ethnographic film crosses the boundaries of academic anthropology and popular media. This course will address

the construction of meaning in ethnographic films in relation to the parallel concerns of anthropology. We will consider approaches to film style, the relation of visual media to ethnographic representation, and the challenges visual forms poses to written ethnographies. The class will appeal to anthropology and film students as well as students interested in the politics of cross-cultural representation.

Cross-Listed as: ANTH 12.01

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

FILM 41.06 - Bond and Beyond

This course will focus on the way changing definitions of Britishness are worked through in the espionage genre as seen in British film (James Bond, *The Spy who Came in From the Cold*) and television (*The Avengers*, *The Prisoner*) in the 1960s. Some of the topics to be discussed include the evolution of 1960s British film from the "kitchen sink" dramas of the early 60s to the Pop-stylishness of *Swinging London*; the relationship between film and novel, and between discrete texts and on-going series; the impact of Hollywood on British production and the lure of the American market.

Degree Requirement Attributes: Dist:ART

FILM 41.07 - Cinema and the Graphic Novel

Instructor: P. Young

This course will use historical case studies to examine formal, thematic, and stylistic convergences between cinema and comics. We will analyze a variety of graphic narratives that demonstrate the interdependence of the two forms throughout their histories, particularly in matters of framing, editing, lighting effects, and narrative forms. NOTE: I assign drawing homework each week; no prior drawing experience is required.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.08 - The Cinematic City

Instructor: P. Young

This course tracks a quintessentially modern character type--the flâneur/flâneuse--as s/he navigates the cinematic metropolis. Films ranging from early actualities to science fiction, gangster films, musical comedy, and *film noir* will present the flâneur as a compromised figure who walks a fine line between resistance to the city's rhythms and complicity with its reorganization of subjectivity, affect, collective life, and the senses.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.09 - History of Animation

Instructor: J. Mack

This course is an introduction to the history and development of the field of animation. We will explore this subject from various perspectives: by chronology, from its prehistory before the invention of film to the present day; by form, including, method and medium; by culture, comparing the US to Japan, Russia, Europe and others; by subject; and by personality, concentrating on the figures who have shaped the art form and continue to influence it through their example. Students are expected to bring an enthusiastic interest in the medium, and to devote serious effort to reading about, viewing, researching and discussing animation and the artists who have created it.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

FILM 41.10 - Global Gothic

Instructor: D. Washburn

The Aesthetics of Horror in Japanese and Western Cinema The Japanese tradition of stories about ghosts, spirit possession, demonic visitations and strange psychological phenomena has a rich, complex history that has intersected with Western traditions in productive ways. Beginning with a consideration of theories of the uncanny, the gothic, and the fantastic, this course will explore the techniques filmmakers in Japan and the West have used to create an aesthetics of horror. We will also examine the ideological significance of tales of the weird and supernatural – what they tell us about moral values or about personal and social conceptions of identity.

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 41.11 - Genre: History of Visual Music

Instructor: J. Mack

This course introduces the history of visual music, the exploration of the relationship between music and abstract imagery. Students will investigate this subject from its predecessors to current day--tracing the constantly expanding practices of visual music through painting, cinema, performance, and installation-form intuitive sketch films to complex algorithmic works.

Cross-Listed as: MUS 16.01

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.12 - Screwball Comedy

This course examines the rise of the classic Hollywood screwball comedy, 1934-1944, and its enduring impact. Occasionally thought of as "a sex comedy without sex," the screwball comedy blends slapstick, farce, and lunacy with sophisticated, rapid-fire dialogue and abundant wit.

Starting with the early entries like *It Happened One Night* (1934) and *My Man Godfrey* (1936), the course includes such classics as *His Girl Friday* (1940), *Ball of Fire* (1940), and *The Lady Eve* (1941). Screenings are accompanied by primary and secondary texts that focus on the wide-ranging meanings that the genre has held over time in literature, film history, and theory.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.13 - Women in Musicals

This course traces the representations of women in the American musical genre from the 1930s to the present. We will look at the presentation of singing and dancing as labor; demands made on women's bodies in the musical form (including the use of doubles to produce "ideal" bodies); ethnic heritage displayed or disguised; the way the genre can undermine or explicitly challenge normative gender expectations; the representation of historical figures in musical biographies, including those underrepresented in previous eras – for example, African American performers and non-performers (women directors, songwriters, etc.). This course is not open to students who have received credit for Film 07.12

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.14 - The Western

Instructor: M. Willilams

Explores the development of the Western genre from its beginnings in pre-cinematic culture and silent cinema through its maturation in the Classical Hollywood era (1930s to 1950s), its path toward revisionism in the 1960s and 1970s, and its fluttering obsolescence ever since. Historical analysis of this most prolific, and most "American," of Hollywood genres provides a singularly nation-centered perspective on changing U.S. culture, ideologies, and sensibilities.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.15 - 20th-Century American Film Comedy

Instructor: J. Rapf

Though tragedy is a more respected genre, comedy emanates from the same source: the recognition of a gap between what is, and what ought to be. This course will enrich our understanding of how this predicament was negotiated on American screens during the cinema's first full century, from Keaton, Normand, and Chaplin through Hepburn and Jerry Lewis. Course combines several key approaches to US comedy: its cultural/countercultural bent, its development as a Hollywood genre, and its representations of women and gender.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.16 - Space and Genre

Instructor: D. Garcia

This course explores representations of space and place in Hollywood genres. We will examine the musical, the melodrama, and film noir to discern how space informs and complicates their conventions; discuss how cinematic representation of specific spaces (the apartment, the city, the hotel) blurs genre boundaries; and consider how race, gender, and sexuality influence cinematic representations of spaces. Students will produce their own video essays to intervene in current scholarly debates on cinema, genre, and spatial representation.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.17 - Water In the Lake: Real Events for the Imagination

Instructor: J. Mack

This class, based on the book [Water in the lake: Real Events for the Imagination](#) (1979) by Kenneth Maue, fuses cinema, the studio arts, sound, and theatre with the natural landscape in an intense study of improvisation, collectivity, and collaboration in conjunction with the environment. Looking at religion, law, science, and politics as a way to consider cinema, sound, land art, site specificity, performance, and the unfolding of real time events within the artistic context, we will gain the critical capacity to understand intersections of cinema, performance art, video art, land art, and sonic practice. Through viewing films, listening to sounds, and studying works of art spanning painting, sculpture, installation, site-specific practice, and performance, we will inspire and provide critical/historical contexts for your personal work in the course.

Cross-Listed as: MUS 16.03

Degree Requirement Attributes: Dist:ART

FILM 41.18 - Latinx-ploitation

This course serves as an introduction to the history of Latinx cinema, Latinx film spectatorship, and exploitation cinema in the United States. Latinx audiences have long been an interest and target of the Hollywood studios. Since the beginning of sound in film, the studios grappled with reaching this linguistically and culturally-diverse demographic. Since the late 20th century, the studios have widely acknowledged the box office power of that group. Time and again, however, the Hollywood industry has failed to accurately identify and engage Latinx peoples on both sides of the US-Mexico border. Applying theories of racialized spectatorship and performance and film genre and authorship, we will interrogate this historically troubled relationship and grapple with its consequences for Latinx representation and inclusion in American cinema. \f

Cross-Listed as: LACS 20.08

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 41.19 - The Musical

Instructor: D. Garcia

This course introduces students to the history and evolution of the musical film. From the beginnings of sound cinema, the musical has entertained diverse audiences. While its popularity has at times waned, the musical continues to appear on 21st century movie screens. What accounts for the musical's popularity in different moments in the past? What have been its central themes and cultural preoccupations? How have filmmakers developed a cinematic language in order to lend musicals expression? And what kinds of theoretical paradigms have scholars employed in order to better understand the genre's evolution?

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.20 - Special Effects in Film History

Instructor: P. Young

"Special visual effects" has many meanings in cinema. When we use the term in the twenty-first century, we usually refer to computer-generated fantasy images of otherworldly creatures or impossible locales. However, the history of special visual effects begins with the basic technologies of photographically filmed moving pictures, and effects—whether matte shots using optical printers in post-production, rear- or front-projection process shots done live on-set, in-camera mattes and mirror shots, or "creature" effects controlled by wires, puppetry, robotics, or remotes—have served many purposes besides generating fantasy worlds. Beginning in the 1890s, the magician and filmmaker Georges Melies used editing, photographic processes, elaborate puppets, and ornate costumes and sets to take viewers up to the moon or down to the bottom of the sea. Only two decades later, however, processes similar to those utilized by Melies were primarily employed to film realistic-looking settings at a fraction of the cost of location shooting. Today, scholars of special visual effects try to answer historical as well as technical questions about what has motivated the incredible innovations of "FX," the forms they take, and the functions they perform for producers and viewers. What determines these different uses of special effects? How have these processes and practices developed in the US film industry and among independent creators? And how do the standards of realism and plausibility—the standards by which special effects are traditionally judged—change depending on the era, the technologies being employed, and the culture in and for which films are made? This course will place us in the thick of such

contemporary scholarly debates about special effects and their history. By viewing key examples of special effects cinema from the past century (primarily from US films) and reading what historians have argued about the significance of these films, students will learn to write and think in these terms and to develop their own educated stances on the topic—to participate as full partners in these scholarly debates. Students will also learn to consider such conditions as industrial history and cultural change as factors in the development of special effects as well as what these effects mean to their viewers.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

FILM 41.21 - Music and Media in Everyday Life

Instructor: W. Cheng

This course lends an ear to the roles and power of musical media in the new millennium. Prominent themes include: new media's purported democratizing effects on the production, circulation, and consumption of sound; the changing roles, responsibilities, and relevance of musicians and media artists in the digital age; and the potential for musical and social media to redraw the boundaries human experience, ethics, memory, and identity at large.

Cross-Listed as: MUS 16.02

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 41.22 - Feminist and Queer Video Art: "I'm asking – does it exist? What is it? Whom is it for?"

John Perreault, the first openly gay art critic at the Village Voice, published the phrase "I'm asking – does it exist? What is it? Whom is it for?" as the subtitle of an article on "Gay Art" for Artforum in 1980. Expanding upon Perreault's nuanced consideration of how art works accumulate identities and address particular audiences, this undergraduate course will explore feminist and queer moving image-making practices in the United States between the 1950s-1990s. While eschewing a strictly chronological approach, we will consider art practices in relation to specific historical thresholds, from the intensification of nonviolent direct action in the 1950s and 1960s, to the Stonewall rebellions of 1969, to the emergence of AIDS activism in the late 1980s and 1990s. We will consider the term video expansively, inclusive of TV art, installation, and video's dialogue with film, holography, and print publications. This course leaves open what feminist and queer art practices look like and perform, and what methodologies might be most useful in writing about them. However, the course aims to challenge the ways in which art historical narratives, including alternative ones, have eclipsed the role of artists of color. Students will be required to reflect upon video footage and on readings in a series of short papers and assignments.

Shorter videos will be screened in class, but some weeks require an extra screening during the X-hour session.

Cross-Listed as: ARTH 43.01 WGSS 66.22

Degree Requirement Attributes: Dist: ART; WCult: CI

FILM 41.23 - Sport Film

This course critically examines the role of the sport film as a cinematic genre with significant social and cultural relevance. By analyzing narrative and documentary feature films exhibiting an array of sporting styles, students will explore and identify underlying themes, narrative arcs, character types, and visual aesthetics. Drawing on key concepts from film theory and cultural studies, the course asks students to critically assess how sports films reflect and refract issues of race, gender, class, nationalism, and the commodification of the athlete. Dissecting common master narratives illustrated in most sport films, students will analyze genre conventions and their evolution over time and across different filmmaking traditions. Through this exploration, students will consider the social, cultural, and historical implications of sport films on the screen and beyond. Assignments for this course consist of seminar-style in-class discussions, short paper responses, one short film exercise, and culminates with a research project.

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 42.02 - New Waves

Instructor: J. Ruoff

In the 1950s and 1960s, the French New Wave changed the course of film history. French new wave directors were mostly film critics who became filmmakers. Their films merged documentary and fiction, mixed film genres, and reveled in a profound knowledge of the history of the medium. A quintessential youth movement, the FNW inspired new waves in Hong Kong, Iran, Yugoslavia, Czechoslovakia, and the US, among other countries. We will alternate screenings, readings, and discussions of new wave films from these different countries.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 42.03 - New Latin American Cinema

With emergence of filmmakers such as Alejandro Inarritu (Mexico), Lucrecia Martel (Argentina), and Jose Padilha (Brazil), the last decade has seen a creative boom in Latin American cinema that includes art house cinema, blockbusters, documentary, and experimental film. Beginning with a quick overview of key forerunners, this course will focus on the major directors, genres and aesthetic trends that characterize the new Latin American cinema. On the one hand, we will pay special attention to the distinct national cinemas: the different historical and cultural contexts out of which they emerge; and the different aesthetics that this gives rise to.

Cross-Listed as: COLT 52.02 INTS 17.12 LACS 35.01

Degree Requirement Attributes: Dist:INT

FILM 42.08 - Asian Animation as Socio-Political Artifact

Because animated films have traditionally been targeted at children, animators in Asia have often been able to sidestep much of the political control exercised by some of their more centralized governments to create sophisticated artistic works that speak as much to educated adults as they do to children. The course will feature the most interesting of these works from China, Japan, and Korea, and students will analyze them within a socio-political and cultural context. Particular attention will be paid to the development of both originality and argumentation in student papers and class participation.

Cross-Listed as: AMES 40.04

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 42.09 - African Cinema

Instructor: A. Coly

This course focuses on the cinemas of Francophone Africa. We will examine early Western filmic representations of Africans as savages devoid of culture and history. We will then examine how African filmmakers have challenged those images by creating new depictions of their societies, offering Africa through African eyes. We will explore the social, historical, and political contexts of these films and explore their aesthetic and narrative characteristics. We will discuss issues and theories related to the definition of the so-called third world cinema, postcolonial cinema, and postmodern cinema.

Cross-Listed as: AAAS 55.01

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 42.13 - Global Documentary and Transnational Cinema

Instructor: M. Roberts

Since the Lumière Brothers first began dispatching camera operators around the world to shoot actualité films over a century ago, documentary film and video have played a major historical role in constructing and mediating popular understandings of the global. This course considers that history, from its origins in ethnographic documentary to contemporary IMAX films and YouTube videos. In assessing the wider implications of documentary's relation to the global, selected transnational fiction films will also be screened and discussed.

Degree Requirement Attributes: Dist:INT or ART

FILM 42.14 - Mexican Cinema

Instructor: D. Garcia

This course serves as an introduction to Mexican cinema and the global system of filmmaking in which it

developed. We will examine the history of Mexican film, filmmaking practices, aesthetics and business concerns, as well as audiences inside and outside of Mexico. One central point of inquiry will be the extent to which Mexican cinema was truly "national." We will question the concept of "national cinema" all the while analyzing the extent to which issues in Mexican politics, society, and culture were reflected on and influenced by the screen. The transnationality of Mexican film will be central to our investigation as we examine the influence of the United States and Hollywood during Mexican cinema's development. Students will learn about the various styles and genres of Mexican film and the theories with which film scholars have interpreted them. Among the filmmakers to be studied are Sergei Eisenstein, Fernando de Fuentes, Emilio "El Indio" Fernandez, Luis Buñuel, Alfonso Arau, Maria Novaro, Natalia Almada, Guillermo del Toro, Alfonso Cuarón, and Alejandro Gonzales-Iñárritu. Proficiency in Spanish is not required.

Cross-Listed as: LACS 20.05

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 42.15 - Nothing is True and Everything is Possible: Politics, Media, and Religion in Post-Soviet Russia

In 1987, the Soviet Union was the largest political entity on the planet. Four years later, it had vanished from the map entirely. In this interdisciplinary course, you will learn about the 'new Russia' that has emerged in the three decades since that stunning collapse. Drawing on a wide variety of resources in English translation—from Russian films and novels to YouTube videos and social media posts—you will navigate the diverse technologies and media products that are helping to shape contemporary Russian identity. You will explore, for example, the 'violent entrepreneurship' of oil oligarchs, the cynicism of state-funded television propagandists, and the avant-garde theatrics of Moscow's feminist dissidents. Your study of Putin's Russia should also allow us to discuss some of the most pressing questions facing citizens in a democracy today: What is the nature of truth in the digital age? How do content creators and media consumers determine what is credible? What factors and forces are shaping the messages we consume through our televisions, tablets, and smartphones, and how can we learn to critically evaluate these messages in order to lead better lives?

Cross-Listed as: RUSS 38.06

Degree Requirement Attributes: Dist:LIT; WCult:W

FILM 42.16 - Cinema of Black Protest

This course considers Black histories of protest in conjunction with the history of Black representation in film. We will analyze historical documents, scholarly

articles, legal cases and historical accounts of the major moments in Black resistance in the United States. We will begin with the protests against lynching in the early twentieth century and the Civil Rights and Black power era of the 1970's Blaxploitation film genre through contemporary independent films. We will discuss issues of race and gender, racism, sexuality and homophobia as well as misogyny and sexism in Black representation. Students will be expected to watch and discuss films as well as read scholarly articles on race theory, queer theory, feminist theory and cultural criticism.

Cross-Listed as: AAAS 32.05

Degree Requirement Attributes: Dist:SOC; WCult:W

FILM 42.17 - Of Golems, Vampires, and Robots: The Haunted Screen of Weimar Cinema (in English)

Instructor: G. Gemunden

Weimar Cinema prefigures the rise of the Third Reich, but it also reacts to the trauma of the lost War, and to the fear of changes brought on by modernity: secularization, industrialization, urbanization, the rise of the "new woman," and changing forms of sexuality. In this course, we will meet the most famous of these uncanny cinematic creations and study them in the larger cultural and social context that marked the transition from the demise of the German Kaiser to the advent of the Führer.

Cross-Listed as: GERM 43.05

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 42.18 - Migration, Mobility and the Movies: German Film in Global Context

European borders have become a popular setting in world cinema since the development of global tourism and the recently declared "international immigration crisis".

"Not open to students who have received credit for GERM 043"

Cross-Listed as: GERM 043 GERM 43.06

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

FILM 42.19 - The Middle East in Film: Picturing the Past and Present

Instructor: Andrew Simon

How may films serve as a starting point for revisiting the past and rethinking the present? In what ways may representations of the Middle East differ over time and across places? And why do the stories told by filmmakers in documentaries, historical dramas, and other cinematic productions matter? Movies depicting the Middle East routinely draw mass audiences and consequently shape popular perceptions of the region the world over. The very same films, however, are all too often understood by many

people as mere entertainment. In this class, we will consider what movies, if treated critically, may teach us about Middle East history. Beginning with a brief introduction to film and media studies, we will contemplate where the Middle East fits into this field of inquiry. Once establishing how we will approach movies and the Middle East throughout the term, we will navigate a number of key themes together, from war, memory, and migration to (mis)information, revolution, and representation. Along the way, we will watch everything from indie films to big budget blockbusters. Regardless of the exact form these projects assume, all of the pictures we explore will generate debate and discussion around the past and present. Among the topics we will cover are the Israeli-Palestinian conflict, European colonialism, and America's legacy in the Arab world. To assist us on this journey across the Middle East and well beyond its boundaries, we will engage several primary sources, with motion pictures at the forefront. These thought-provoking items will empower us to partake in conversations that traverse languages, national borders, historical eras, and artistic genres, enabling us to view the Middle East in an entirely new way.

Cross-Listed as: JWST 44.01 MES 15.11

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 42.20 - The Berlin School (in English)

Instructor: G. Gemunden

This course examines the contemporary German film movement known as the "Berlin School," a group of approximately a dozen filmmakers with more than 40 features to their credit. Dissecting the everyday reality of post-wall Germany, this counter-cinema draws on Italian Neo-Realism, the New German Cinema, and contemporary international independent film to advocate radical notions of realism and narrative conventions, challenging viewers to rethink political filmmaking in a national and transnational environment. Screenings will include films by key filmmakers associated with the Berlin School as well as by Luchino Visconti, Wim Wenders, Kelly Reichardt, Apichatpong Weerasethakul, and others.

Cross-Listed as: GERM 43.04

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 42.21 - Afro/Black Paris in Film and Life

Instructor: T. Keaton

This course takes students on a journey, not to an actual place per se in France, but rather through a lived experience, known as "Afro/Black Paris." Paris, an historical site of freedom from racial enslavement, has long been a contested home and homeland for Africans and

their descendants, that is, diverse people racialized as black whose presence in Paris results from colonization, exile, expatriation, and im/migration, including African Americans. The City of Light is arguably one of the most beautiful and exciting destinations in the world. However, all that glitters is not gold. Matters of race and anti-blackness co-exist with a variety of myths, narratives, and representations of Paris and France as color-blind and race-free. Through French film, students will explore these and related issues and thereby gain a broader understanding of pressing social questions, involving anti-racism, belonging, inequality, racism, and their intersections. This course follows a lecture-discussion format.

Cross-Listed as: AAAS 68.08

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

FILM 42.22 - Moviegoing in America

Instructor: D. Garcia

This course serves as an introduction to the history of moviegoing in the United States. Students will learn about the earliest moviegoing spaces and trace the social, cultural, and technological dynamics of when and how the places of moviegoing changed over time. The course will introduce and extend discussions of various theories of spectatorship, including feminist theories and critical race theory, in order to better understand the experiences of peoples of color, immigrants, and women in this history. Students will learn how to apply these theories to the analysis of film and to their own archival and ethnographic research projects.

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 42.23 - Travelers, Tourists, and Sojourners: Mobility in the Movies

In this class, we study film as an aesthetic and political medium. Referring to works on cinematic space and spectatorship theory, we explore how directors construct and deconstruct spaces, nations, and borders in their audience's imagination. We analyze cinema spectatorship as a travel experience and investigate how geopolitical depictions rely on narratives, images, and imaginations. We study travelling as the possibility for transnational encounters of disparate groups of people and not only assess who is crossing international borders – seafarers, colonizers, immigrants, refugees, commuters, or tourists – but also examine who is welcome to cross, who is welcome to stay, who is expelled and who might have to die, according to genre conventions in global cinema. In road movies, westerns, and recent migration and tourist films, we will focus on themes of pleasure, coming-of-age, and self-fulfillment, as well as conflict, power differentials, (neo-)colonialism, and displacement. In our comparison of European and American films, we will explore similarities

and differences in debates surrounding mobility, national identity, indigeneity, film-induced tourism, and human rights.

Cross-Listed as: COLT 57.13

Degree Requirement Attributes: Dist:INT; WCult:W

FILM 42.24 - Race, Class, Gender and Sexuality in Contemporary Brazilian Film

In this course film will be viewed as text and used to analyze discourses around race, sex, gender; and class in contemporary Brazil. It is the hope that film will offer students an additional cultural context to critically examine the development of nation and national ideologies such as "the myth of racial democracy." Class discussions based on scholarly readings and film screenings will focus on how Brazilians view themselves and the construction and function of social institutions within the contemporary nation

Cross-Listed as: LACS 30.08

Degree Requirement Attributes: Dist:INT; WCult:CI

FILM 43.01 - Women Make Movies: Women and Film Authorship

Instructor:

Women have worked in the film industry since its very beginnings, yet it is a popular conception that this is a recent phenomenon. This course will examine how women participated in the mainstream American film industry from the 1890's to the present as producers, directors, writers, photographers, fashion designers, performers, and audiences. Concept about female authorship, as well as historical questions about the cultural, social, and industrial contexts for women's power in the industry, will be explored. Films made by prominent women producers, directors, and writers will be screened.

Cross-Listed as: WGSS 56.11 WGST 56.11

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 43.02 - Family Matters: Pedro Almodovar, Gender Reversals, and New Communities

Pedro Almodóvar Caballero, Spain's most internationally acclaimed filmmaker will be studied in this course as representative of what critics have termed the New Spanish Cinema Movement. Almodóvar's filmmaking, both in aesthetic and cultural terms, addresses issues which will appeal to students interested in understanding how culture, politics, and aesthetics get entangled in ways that "queer" gender identity, family structures, notions of community and the societal expectations and limitations surrounding them. The course will also compare his work with other contemporary filmmakers that have reconfigured in their films the boundaries of "family."

Cross-Listed as: SPAN 63.10 WGSS 56.03

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 43.04 - Hitchcock

This course examines important Hitchcock films produced in both the UK and the US, from three perspectives:

Hitchcock as a cinematic pioneer, an innovator in film form and style;

Hitchcock as an *auteur* whose thematic and aesthetic concerns link his films in overt and covert ways; and

Hitchcock's films as cultural documents that engage deeply with questions of democracy, individual rights versus communal concerns, mass culture, sexuality, and gender.

Critical and theoretical texts on Hitchcock (including historical, feminist, and theoretical interpretations of his work) will be read and discussed along with the films. Your work will be evaluated based on your application of concepts and interpretive strategies from the readings to Hitchcock's work, your ability to develop productive research questions about his films, and your curiosity, scholarly energy, and creativity. Participation in daily discussions is mandatory.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 43.05 - Truffaut and Godard

This course will examine the films, careers, and legacies of two critics and directors who were fundamental to the French New Wave and its legacy: Francois Truffaut and Jean-Luc Godard. Each is an indelible figure in film and media history. The two were at first close colleagues and then diverged radically, both as filmmakers and as people. Considering their respective careers in relation to one another will place their films into new historical relief. We will survey the important body of film criticism that each produced before becoming a renowned director, along with historical and analytical writings about both. Most importantly, we will examine major films and other media texts (such as television programs) that each created. Our goal will be to understand the phenomena known as "Truffaut" and "Godard" in relation to the development of auteur methodologies, assumptions, and practices. We will also consider the broad international influence of both directors, especially in film form and style. In addition to in-class lectures and screenings, the course will include a range of online and reserve assignments (films, readings, discussions). Two short papers, a research paper, and a final exam will be assigned.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 44.01 - Handmade Cinema

This course will explore non-conventional, artisanal modes of experimental and avant-garde cinema that focus on the

materiality of moving image media formats. By utilizing a variety of techniques--direct image and sound manipulation on 16 mm film, hand-processing, ray-ograms, animation, special effects, and live-projector performance--students will gain total filmmaker toolsets through constructing a series of exercises that will screen publicly. In addition to producing personal projects, students will complete a series of short papers that build upon our screenings, readings, and discussions to locate handmade cinema within historical and cultural contexts.

Cross-Listed as: SART 17.17

Degree Requirement Attributes: Dist:ART

FILM 44.02 - Cut and Paste Cinema

Instructor: J. Mack

Using principles of both animation and editing, this course will explore the results of combination in cut and paste cinema in conjunction with the history of collage--from classic uses in painting, photomontage, architecture, and literature to contemporary functions via mash-ups, samples, and digital manipulation. Through producing projects, screening films, and discussing readings, we will explore the varying possibilities of forming new meanings via the pairing of found elements.

Cross-Listed as: SART 17.19

Degree Requirement Attributes: Dist:ART

FILM 44.03 - Filming the Landscape

This class will study and compare representations of the American landscape through the history of film and painting as well as the depiction of landscape and environmental issues manifested through television and video. Students will be required to complete a short film or video every two weeks referencing sites visited.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 44.04 - Sound: Practice and Theory

Instructor: J. Mack

Through the analysis of soundtracks and the creation of soundtracks, this course will explore the history of film sound and the way theories of sound reproduction continue to influence the development of sound technology and the practical choices made by sound recorders, mixers and editors. We will look at early sound films, 70s breakthroughs (Altman, Murch), and the imaginary soundscapes of science fiction and horror films.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 44.06 - Storytelling in the Digital Age

Instructor: J. Chamberlain

How can you use storytelling as a creative strategy for the digital age? Learn how to craft experiences through the

power of story across a variety of media forms. Creative assignments explore fundamental storytelling elements and tactics, and interrogate how form impacts content. In the final project, students will push the boundaries of storytelling and content creation to develop a concept pitch for a project of their own design.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

FILM 44.07 - Docu-Fantasy and the Speculative Narrative in Multi-Ethnic Cinema

This course traces the evolution of the speculative narrative in non-fiction film in multi-ethnic and marginal filmmakers. We look at the work of Vietnamese, African-American, and German filmmakers in order to analyze how their works were part of a movement that affirm the validity of dreams, and function to expand the filmic imagination past traditional conceits of reality and realism. Final projects may be in any chosen genre, including, but not limited to, abstract imagery, documentary films, installations or experimental formats that invoke the theme "docu-fantasy".

Degree Requirement Attributes: Dist:ART

FILM 44.08 - The Art of Adaptation and Storytelling

This theoretical and practice-based course is a study of the conversion of oral, historical and fictional narratives into stage drama, cinema and literary texts. Special attention will be given to the cultural and political implications of cross-generic transformation, formulaic conventions and concepts of "genre," "crossover appeal" and "adaptation." Throughout the term, the intersections of race, culture and economics will be regularly questioned. Black cultural storytelling in various mediums and genres will be examined to serve as a point of entry into discussion of cultural worldview and storytelling in order to aid and encourage students to explore the theories, concepts and practice of adaptation from multiple, diverse vantage points and areas of interest. Building upon the adaptations they created in the first half of the quarter, students begin translating their stories visually in the "production" phase of the course. They assess how emotional information is translated in the original form and invent new ways of translating this content in their new visual format. Final projects can be interactive stage pieces, video installations or films.

Cross-Listed as: COCO 032

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 44.09 - Cinematography I: Lighting and Composition

Instructor: I. Kwayana

The primary focus of Cinematography I is to explore lighting and composition as an extension of cultural

identity to explore how to use the apparatus of the camera to tell a compelling story visually. In addition, we look at the elements of composition, aesthetic style, and lighting that factor into a visually compelling narrative. Whether fiction or non-fiction, or all around experimental, we ask the question- how can we use cameras to provoke emotional, visceral and even intellectual responses in the viewer. The course introduces students to the artistic and technical language used across analog and digital platforms but emphasizes experience. Students also gain practice in the following areas: Mechanical Camera Control and Operation, Lighting, Principles of Color, Exposure, Resolution/Depth of Field, Movement and Composition. Student mastery of these concepts is reinforced through dynamic class exercises and a final project. Additionally, students develop a sense of visual style and learn to interpret the appropriate application of it according to story or product.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

FILM 44.10 - Writing for Television

Instructor: E. Carabatsos

This workshop course introduces students to the art and craft of writing for television. We're living in the midst of the (second) Golden Age of Television. More and more Americans are turning away from the traditional movie theater experience and embracing long form, character driven, small screen stories. In the film world, directors are king, but in television, the writers reign. It is their vision that gets put on the screen. Throughout the course, each student will workshop and develop a thirty minute pilot script and Show Bible, as well as read and analyze contemporary pilot scripts to see what exactly makes a pilot

Cross-Listed as: CRWT 41.01

Degree Requirement Attributes: Dist:ART

FILM 44.12 - The Idea of Africa: Deconstructing Race in the Iconography of a Continent

Instructor: A. Coly and M. Williams

This course will consider the mapping of race onto the idea of Africa and how Africa came to constitute a unique racial category. We will therefore conduct an "archeology of race" and engage the argument by historians of race in Africa that Africa was a major laboratory of race. Our primary material will consist of motion pictures, in an effort to reckon with the role of motion pictures as prime technologies of racial othering and their deep imbrications in colonial projects.

Cross-Listed as: AAAS 55.02

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 44.13 - Writers' Room

Instructor: E. Carabatsos

This course is modeled after a professional TV writers' room. At the start of the course, the class will come up with a concept for a five episode television show. Then, each student will take turns fulfilling the various roles: showrunner, staff writer, and writer's assistant. The course focuses on the art of co-writing, the technique of writing for someone else's idea and in someone else's voice, and the tools to be an effective leader and delegator. Throughout the course, the students will collaborate on five short episodes, as well as an individual final portfolio. Readings will include episodic scripts from successful television shows. Feel free to reach out to me for more reading recommendations at any time.

Degree Requirement Attributes: Dist:ART

FILM 44.14 - Making Video Essays

This course introduces students to the art and scholarship of videographic criticism, the practice of using sounds and images to make arguments about film and television. We will take Latinx cinematic history as our subject and employ videographic methods in order to better understand Latinx representation, performance, stardom, and labor in Hollywood. The course will be equally split between learning this history and becoming acquainted with the theory and evolution of videographic practice. To understand how these two realms of inquiry intersect, students will create a series of video essays, workshop their creations with peers, and produce a final, sophisticated essay that demonstrates what they have learned.

"Making Video Essays" is an interactive, collaborative course in which students regularly share and receive feedback on their essays. To that end, we will work from a common body of films during the first part of the term. These will include seminal films in the history of Latinx representation in Hollywood that possess rich aesthetic potential for videographic critique. They are: the film noir, *Border Incident* (Mann, 1949); the Western, *High Noon* (Zinneman, 1952); the melodrama, *Giant* (Stevens, 1956); and the musical, *West Side Story* (Wise, 1961). After working closely with these films, students will have the opportunity to choose a different film that will form the basis of their final two essays.

Cross-Listed as: LACS 20.06

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 44.15 - SLOW Lab: Seeing, Looking, Observing, Witnessing

This humanities lab course explores the act of vision through hands-on creative and experiential projects and

theoretical and historical work. The object of study will be the practices of film and media studies. We will examine the intersection of vision with political questions of power, disability, surveillance, and digitality through encounters inside and outside the classroom. Students will produce creative media projects and critical reflections on texts and images to engage in process-based learning and risk-taking.

Degree Requirement Attributes: Dist:ART

FILM 44.16 - Does Media Die?

All media have histories. In this course, we will explore the material nature of media by asking ourselves if media technologies and practices end and exploring how they are remediated, remixed, and resurrected. Topics will include whether media actually die, how planned obsolescence affects our relationships with technology, the opportunities and challenges of digital preservation, and media reuse and disposal. Students will engage in hands-on experiences making, working with, and even destroying media to better understand the broad lifecycle of media as well as the connections between media theory and practice.

Degree Requirement Attributes: Dist:ART

FILM 44.17 - Media Entrepreneurship and Practice

Media Entrepreneurship and Practice presents a set of tools students can use to evolve their creative practice into a professional practice. There is a gap between developing and funding a single project and ensuring long-term success—for both the work and the people who make it. We will develop skills to ensure the latter. Working across media types and discussing models ranging from individual creator to social entrepreneur to business developer, students will explore how they present themselves to different audiences, how to seek out funding for projects, and how to develop plans to execute their vision. Guest speakers from industry will share their experience to help students set achievable, sustainable goals for their work and career.

Degree Requirement Attributes: Dist:ART

FILM 45 - U. S. Television History

Instructor: J. Chamberlain

This course will examine the history of television as an emerging technology; its dynamic interaction with government, private industry, and audiences; and its impact on society and culture. It will include a consideration of both pre-television media (especially radio) and new media (cyber-culture) as they inform a historical understanding of TV. The norms and practices of the network era (1955-1985) will be positioned as a functional middle-ground, much in the way that classical Hollywood Cinema (1920-1960) serves as middle-ground in motion picture history. Students will be encouraged to develop their capacity for a critical distance from

contemporary media via this historicized approach. Open to all classes. Limited to 50 students.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 46.01 - Television and Histories of Gender

Instructor: M. Desjardins

This class examines the ways American commercial television has historically “assumed” gendered positionings of its audience, as well as operates as one of the strongest cultural touchstones of gendered identity in patriarchal, consumer society. After tracing television’s place in the construction of gendered ideals through the history of the situation comedy, we examine “gender-specific” genres, such as sports, westerns, cop shows, and soap operas. Representative programs will be screened, and feminist essays on television history/theory are among assigned readings. *Open to all students.*

Cross-Listed as: WGSS 56.01

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 46.04 - Broadcast Journalism and Electronic Journalism History

Instructor: M. Williams

The history of broadcast and electronic journalism in the United States, from telegraphy to the internet, focusing on the development of and changes to its fundamental relation to the public sphere. We will pursue a contextualized historical understanding of the formats, aesthetics, economics, and industrial organization of these media, in addition to case studies of specific debates, events, and individuals that have conditioned the impact of these media on society. We will invite speakers who have worked in these media industries and/or these histories. Students will be expected to create a digital video project and to write analytical papers, including a research paper.

Degree Requirement Attributes: Dist:SOC; WCult:W

FILM 46.06 - Topics in Television: Cop TV

Police shows have been important part of broadcasting in the US since before the beginning of television. This course explores how police shows have evolved over the last seven decades; the changing representations of police and procedures; the use of the genre to deal with “social problems”; fiction versus non-fiction programs; how these programs reflect real world controversies involving police; how the development of this genre reflects changes in the history of broadcasting. Throughout we will look at films that influenced the style and content of these programs.

Degree Requirement Attributes: WCult:W

FILM 46.07 - Television and New Media

Instructor: M. Roberts

This course examines the transformation of television in both its commercial and public-service forms by the rise of the internet as a mass medium, YouTube and participatory culture, and most recently, social networks and mobile communication. On the one hand, it will show, digital technologies and computer networks have disrupted the historical power relations between television networks and their audiences, enabling viewers to watch programming whenever and wherever they like, to avoid commercials, and to become producers themselves; yet at the same time, networks and advertisers are quickly finding new ways to adapt older business models and forms of storytelling to today's multi-platform media environment. Attention is paid to questions of agency in the control of programming flows and consumption; the shift from ratings to analytics, the emergence of transmedia storytelling as a production model; new forms of digital aesthetics (e.g., "slow TV"); and celebrity, branding, and neoliberal citizenship.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 46.08 - Television Without Borders: Local Communities, Global Audiences

Instructor: I. Kwayana

Considers television as a transnational medium from the first international broadcasts of the late 1950s to its digital descendants in the early twenty-first century. As television genres and formats continue to mutate and proliferate (digital downloads, streaming, etc.), the course addresses fundamental questions about its nature as a medium of mass communication: What is television for, today?

Offered: Spring.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FILM 46.09 - Critical Approaches to Media Production

The course analyzes and discusses various production practices in U.S. media industries. Through readings, audiovisual materials, and guest speakers from a wide array of media positions, we will explore various phases of media production in film, television, live events, journalism, and more. In particular, we will focus on dynamics involving race, gender, and sexuality in the labor of media production, as well as in the media products themselves. Overall, the course considers the ways in which media production and representations simultaneously reflect and reinforce social stratification and inequalities. Students should emerge from this course with a strong understanding of hierarchies of labor in media production, a practical sense of everyday practices in a diverse array of media production fields, as well as a firm understanding of the media's effects on and

interaction with identity politics. This course is intended to provide a 360-degree (over)view of media production.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

FILM 46.10 - Transmissions: Histories and Theories of Broadcast Sound

Instructor: D. Simon

This course traces the history of broadcast sound from its inception through the golden age of radio, the use of sound and music in television and film, and into the current internet age. With its focus on sound and music, this course addresses an often-underexamined aspect of media history. We will explore a variety of different concepts and approaches used to analyze mediated music and discuss how concepts central to media studies—including text, audience, genre, industry, ideology and identity—function when applied to sound. At the end of the course, students will turn theory into practice through writing, recording and producing an episode of their own podcast.

Cross-Listed as: MUS 16.04

Degree Requirement Attributes: Dist:ART

FILM 46.11 - Introduction to Media Industries Studies

This seminar provides an in-depth look at the American media industry and Los Angeles based Production culture in particular, examining its history, theory and practice. The course investigates the collaborative creative process, its employment practices, work cultures and the mythologies that underlie them. After a brief historical and theoretical overview, the course will focus on the various media workers and their relationship to and role in the creative process. Topics are clustered around different sectors of production, past and present, to allow an exploration of the industry through the perspective of the people who have shaped it.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.01 - Video Mashups

Instructor: J. Ruoff

Individually, in pairs, and in groups, students edit short videos that appropriate, quote, and re-contextualize images and sounds from other sources. These collages include movie trailer mashups, political videos, supercuts, and music videos. In addition to readings, there will be screenings of avant-garde and documentary found footage films as well as a wide variety of digital video mashups. No prior editing experience required.

Offered: Summer.

Degree Requirement Attributes: Dist:ART

FILM 47.02 - Theory and Practice of Editing

This course covers formal and stylistic techniques in editing along with how to approach the overall organization of a film. Assignments include creative film exercises, film screenings and contextual readings. In addition, throughout the term students will work towards the completion of a final project that will be showcased in a public screening.

Degree Requirement Attributes: Dist:ART

FILM 47.05 - History of Documentary

Documentary film combines nonfiction with an aesthetic aspiratio. This course will explore achievement in the documentary, raising issues about the influence of documentary upon political persuasion, historical memory, the status of film as evidence and its utility as a means of investigation. We will look at film from a broad range of styles, viewpoint and eras. Documentary represents an alternative to the dominant entertainment cinema and as such, frequently addresses controversial issues directly. Students should be prepared to explore sensitive issues of race, class and gender raised by non-fiction film.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.06 - Audio-Vision: Film, Music, Sound

This interdisciplinary course explores the intersection of Film, Music and Sound, navigating alternatively through the history of film and music from both perspectives, proposing a dual approach to film and music, imaging and sound. The course alternates topics of cinema, music and sound and requires extensive viewing and listening, weekly readings and class discussions.

Topics ranging from sound experiments of the early avant-garde, through Visual Music, visual sound, audiovisual arts, experimental audiovisual installations and live arts practices will be studied along classic Hollywood, European and Asian films. Focusing on the connections between filmmakers, composers and artists, while tracing the evolution of audio-vision and its interconnections with music composition and sound innovation. The course structure is a double helix interconnected history of film and modern music from 1895 till today.

Cross-Listed as: COCO 016 MUS 17.03

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 47.07 - Migration Stories

Instructor: G. Gemunden

With over 50 million displaced people today, migration is one of the most compelling problems of our time. Filmic and literary representations of migration focus on borders, different types of migrants, and their border crossing experiences. We will study migration from Latin America to the U.S.; from Africa and Eastern Europe to Western Europe; and internal migration within these countries. We

will also analyze how Hollywood cinema itself creates images and values that drive migration.

Cross-Listed as: COLT 57.05 INTS 17.04

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

FILM 47.16 - Film Festivals

Instructor: J. Ruoff

Film festivals have become increasingly important institutions of film culture, even what one programmer called “an alternative distribution network.” Though invented in Europe in the 1930s, festivals are now a worldwide phenomenon encompassing art, commerce, tourism, and cultural identities. Festivals often provide meeting points for critics, directors, producers, distributors, actors, audiences, and others. Students will undertake case studies of individual film festivals from around the world.

Degree Requirement Attributes: Dist:ART

FILM 47.17 - Race and Place and Los Angeles Media

The purpose of this course is to examine the range of media produced by, for, and about the multicultural populations of Los Angeles. We will look at the film, music, television, and digital media produced by, for, and about indigenous people and people of color in the city and consider the role that racialized communities play in the circulation of images of Los Angeles in local, national, and global networks. Topics will include the following: colonialism; intersections of race, class, gender, sexuality, religion, and nation; alternative modes of production, distribution, and spectatorship.

Degree Requirement Attributes: Dist:ART

FILM 47.19 - Krieger's Virtual Girlfriend: Japanese Anime and the idea of the Post-human

Instructor: Washburn

An examination of major trends in popular visual culture in Japan since the 1980s focused on the growth in production and distribution of animated films, tv series, and video games. Screenings will include works by Miyazaki Hayao, Rintaro, Takahata Isao, and Kon Satoshi. Readings will include both critical and historical sources that will provide the social and economic contexts for the development of the anime industry, theories of animation, and the global impact of Japanese popular culture.

Cross-Listed as: AMES 43.09 ASCL 62.09

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 47.20 - Curating and Microcinema

Curating and Microcinema. This course provides an introduction to the practice of curating film and video-from shorts programs, to retrospective screenings, to moving-image installations and exhibitions of production artwork.

Through a series of on-campus presentations, readings, screenings, and discussions, the course will prepare students for final projects in which groups of students organize moving-image events for members of the community.

Degree Requirement Attributes: Dist:ART

FILM 47.21 - Scenes from the City: Urbanism and Modern American Visual Culture

Instructor: M. Desjardins, Domosh

From silent films to *Mad Men*, the American city has been the site through which “modern” identities have been imagined and created. This course draws on Cultural Geography and Film and Media Studies in order to interrogate this development. Through a variety of readings and screenings of films and TV shows, we will be examining American downtowns, suburbs, and homes as sites for the construction of classed, racialized, sexualized and gendered identities in three different time periods: the early 20th century, the post WWII era, and the contemporary period. We will interrogate such topics as: the real and imagined role of “shopping” women and gender in the shaping of modern downtowns; the relationship between the American suburb, new sexual identities and the film *Pillow Talk*; and how a particular nostalgia for the past that has led to the popularity of such shows as *Mad Men* can also be seen on the streets of Hanover (neo-traditional urbanism).

Cross-Listed as: GEOG 80.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

FILM 47.22 - Buddhism and Film

“What is Buddhism?” “How can it be something expressed in and through the medium of film?” and “What actually constitutes a Buddhist film?” After an introductory survey of central topics in Buddhism, this course will explore the cinematic presentation of Buddhist religion, philosophy, practices, saints, and institutions. By learning to watch films critically from a Buddhist perspective, students will explore the process through which we create the meaning in films and everyday life. Open to all.

Cross-Listed as: REL 41.02

Degree Requirement Attributes: Dist:TMV; WCult:NW

FILM 47.23 - Berlin--New York--Hollywood: A Cultural History of Exile

This course focuses on the condition of exile. It takes as its main example “one of the largest and most dramatic mass migrations to this country in the twentieth century,” namely that of some 130,000 German-speaking refugees who arrived on these shores between 1933 and 1945. The course will examine several of the most significant areas

that were influenced by this vital cultural shift: the American academy and intellectual life; the film industry (“Weimar on the Pacific,” as Hollywood was sometimes called); and, more generally, the political and cultural debates concerning the “German Question,” i.e., what to do with Germany after the war. We will explore how the exiles viewed their role and how they viewed the interplay between American and European culture.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FILM 47.24 - Race & Gender in American Film

Instructor: D. Garcia

This course is an introduction to the history of race and gender in American film. These fundamental social constructs in American life have been central to the development of American film narrative from the beginnings of cinema at the turn of the twentieth century. In turn, American films have profoundly shaped the ways that we think about race and gender and racialized and gendered beings. We will analyze the shifting and situational meanings of race and gender throughout the twentieth century, and in particular, how they have been influenced by the forces of history, including wars, economic depressions, and social movements. While we will focus our attention on Hollywood cinema of the “golden age”, the period from the 1920s-1960, we will also spend significant time considering American independent cinema and the post-classical period of filmmaking from the 1960s to the present. In our consideration of race and racialized peoples, we will include African Americans, Native Americans, Asian Americans and Latinos. Our discussions of gender will be expansive to include not just women and femininity, but men and masculinity as well.

Cross-Listed as: AAAS 32.01 LACS 25.01 LATS 025

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.25 - Black Noir

In this course, we will study black American literature that focuses the noir genre on black people themselves. We will read gritty, urban crime novels that attempt to expose inequities in black American lives and dispel the notion that a descent from whiteness results in blackness. Rather, the black people in these texts exist in darkness because they are living in alienated communities. We shall investigate how the noir genre is altered when “noirs” are the subjects and the authors. In addition to primary texts, the course will engage critical responses to these works.

Cross-Listed as: AAAS 81.07 ENGL 53.07

Degree Requirement Attributes: Dist:LIT; WCult:W

FILM 47.26 - Film and Fashion: Dressing the Part

Instructor: M. Desjardins

This course examines the interrelations between film, costuming, and fashion cultures. We will look at theories of fashion, “the fashioned body,” and costume, reading them against trends in fashionable dress, body image, and fashion subcultures, as well as against histories of film costuming and spectacle. Screenings include media texts from different historical periods that reflect or have influenced fashion of their time and/or represent interesting challenges for costuming.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.27 - The Hollywood Studio System

Instructor: M. Desjardins

This course explores the historical foundations of the Hollywood Studio System (1925-1960) in relation to how creative decisions were made and practices of production and promotion were enacted in the business of industrial film production during that era.

FILM 47.28 - Queer Cinema

What constitutes queer aesthetics and politics today? How does it relate to fights for LGBTQ rights? And how have these questions been represented on screen? This course will address these questions by introducing students to the history and theory of “Queer Cinema” broadly construed. We will pay particular attention to the aesthetic strategies and political interventions of filmmakers who use film to address broader debates in queer theory and LGBTQ history.

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 47.29 - Latinx Stage and Screen

Instructor: D. Garcia

This course will examine the Latinx stage and screen, focusing specifically on musicals that portray Latinx lives. We will focus on canonical works—including *West Side Story*, *Zoot Suit*, and *Hamilton*—in order to deepen our knowledge of their form, production history, historical reception, and contemporary place in American culture. We will take an interdisciplinary approach, drawing our reading assignments from the fields of Ethnic Studies, American Studies, Performance Studies, and Film and Media Studies, in order to analyze these productions as they traveled from stage to screen (and sometimes, back to the stage) and the representational and cultural politics involved in that shift. Finally, we will explore not only the musicals themselves, but also the historiography that has informed our understanding of them. Writing assignments will ask the students to reflect on the evolution of scholarly arguments regarding these canonical works.

Cross-Listed as: LACS 20.07 THEA 10.27

Degree Requirement Attributes: Dist:SOC; WCult:NW

FILM 47.30 - Black Looks: A Survey of Race and Representation in Cinema and Visual Media

This course surveys the evolution of race and representation in visual media. Special attention will be given to black subjects and the socio-economic, historical and political factors that feed into depictions of black life, dominant tropes within these historic depictions, and the aesthetics of emergent voices that help to shape a new black subjectivity on screen. Students are encouraged to draw connections between discourse about black subjectivity with that of identities through doing “close readings” of screen representations and images. In their final projects, students write about and create work relating to black subjects or the broader theme of race and representation in visual media.

Cross-Listed as: WGSS 66.29

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 47.31 - Sounding Out Power and Dissent

How does authority reach the ear? What are the sonic features of speaking truth to power? Who shapes the ways we hear, and where might we learn to listen differently? This course sounds out displays of authority as well as how we can act against such structures by turning to representations of the auditory in both literature and cinema. As we consider questions of sound and its reproduction, we will work across geographical contexts to determine which concerns resonate widely and what role acoustics, or the specific properties of a space, might play. Readings will come from writers such as Valeria Luiselli, María Sonia Cristoff, Franz Kafka, Frantz Fanon, and Severo Sarduy, while films will range from *Fitzcarraldo* to *Sorry to Bother You*.

Cross-Listed as: COLT 40.08 LACS 45.04

Degree Requirement Attributes: Dist:INT

FILM 47.32 - Sounds of Totalitarianism and Resistance

Instructor: D. Simon

This course is dedicated to exploring how twentieth-century music and culture became entangled in the political and social conditions of governments. We will read foundational scholarship in Fascist Studies, musicology, media and sound studies that takes into account the multifaceted nature and deeply rooted legacy of totalitarian states. Our goal is to understand how composers, performers, filmmakers and audiences have reckoned with authoritarian politics and to develop a nuanced understanding of politics’ role in music and media, both historical and contemporary.

Cross-Listed as: MUS 40.06

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.33 - Performing Histories, Performing Us

Performing Histories, Performing Us is an interactive course, taught by scholar artist, Dr. Monica White Ndounou, with a residency component with actor/writer/director Roger Guenveur Smith. The course utilizes performance as a tool to interrogate, examine and explore the concept of history, particularly at the intersection of culture and performance. This course uses traditional and nontraditional archives and multiple platforms to illuminate the possibilities for performing histories; performing us.

Cross-Listed as: AAAS 31.80 THEA 10.84

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 47.34 - International Cinema and WWII

The cinema plays a pivotal role in creating and defining our understanding of the past. Through viewings and close analysis of classic international films, this course explores historical representations of the Second World War. We will consider how the war has been remembered, interpreted, and represented in the cinemas of different European, Asian, and North American countries. Note that a number of the films graphically depict violence and other upsetting topics.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.35 - Rita Moreno: Identity, Performance, Stardom

Rita Moreno is a Puerto Rican actress, singer, and dancer whose career has spanned the 20th and 21st centuries. She has worked across film, television, and theater, and most famously, starred in *West Side Story* (1961) for which she won an Academy Award, the first Latina to do so. The course will explore her life and career as a means of exploring broader contexts of Latinx history and culture.

Cross-Listed as: LACS 80.04

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.37 - Cinema and Modernism, High and Low

This course explores film history's tumultuous relationship to modernism, the twentieth-century Anglo-European aesthetic trend that irrevocably transformed global concepts of "art."

Beginning with the explosive arrival of film on the "science as entertainment" scene in the 1890s, the course will trace film's multiple identifications with modernism through the past century, from Dadaism and surrealism in the 1920s through post-World-War-II American avant-garde cinema and the French New Wave of the 1960s. To guide us through these film-modernism encounters and their consequences, we will investigate key critical and theoretical debates about the uses (and misuses) of "high" art cinema and commercial narrative film for inciting

political change, from André Breton's surrealist manifesto(es) and the studies of modernity and mass culture undertaken by the Frankfurt School in Germany to the "Screen theorists" in the French and British academies in the 1970s, right up to more current debates about the resonance between "classical" Hollywood film product and the ardently experimental, even anti-narrative ambitions of post-1968 cinematic avant-gardes.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 47.63 - Shaping Cinema's Futures with Remnants of the Past: The Film Archive as Site of Experimental History

This course builds on ongoing research projects, curatorial initiatives and the experience of training programs in film archiving in the Global South to teach students a broader understanding of film, its multiple histories across the world, and its possible futures. In the course we will discuss productive archival accidents in recent film practice and research with a focus on the legacies and futures of the so-called "Third Cinema," the militant filmmaking of the 1960s through the 1990s, as well as on archive-based film from outside of the North Atlantic realm. A practice-oriented element of the course will connect to the Media Ecology Project at Dartmouth and its digital film collections.

Degree Requirement Attributes: Dist:ART; WCult:NW

FILM 48.01 - The Map

Maps involve Purposeful omission: they require compression; they are subjective in their emphasis and purposeful omission; they require compression; they are subjective in their emphasis and perspective; they are of the imagination and create illusions of space, time, and place. The Map, the group visits map collections, reads critical and historic essays, investigates digital maps and territories, and interviews artist, cartographers, and geographers, about their practices. Weekly assignments include several maps per week-fanciful, conceptual, and practical

Cross-Listed as: SART 17.03

Degree Requirement Attributes: Dist:ART

FILM 48.02 - Video Art

Instructor: M. Flanagan

This theory/practice studio course explores the medium of video as an art form. Through a survey of historical and contemporary works, students will examine how history, access, culture and technological shifts have influenced and changed how artists work with the moving image and time-based media. From early portable video rigs and live video to the use of animation, netart, streaming video, and memes, the course will unpack role that film, video, sound, writing, performance, abstraction, installation, structure,

streaming and narrative forms have played in their work. Students create individual video projects to develop their artistic voice and point of view; they engage with properties that distinguish video art practices while completing a series of creative experiments in order to develop a personal media vocabulary. Students will use video art to expand our understanding of time, space, sound, representation, and narrative.

Cross-Listed as: SART 17.20

Degree Requirement Attributes: Dist:ART

FILM 48.03 - Data and Bodies

Instructor: J. Wernimont

In this course we will take a multi-modal approach to understanding relationships between “datafication” and human bodies. Today’s “Datafication” is a process of transforming diverse processes, qualities, actions and phenomena into forms that are machine-readable by digital technologies, but the act of turning humans and human bodies into quanta of information has a long history. We will be using art, new media, history, information science, and more to think through the impact that datafication has on how we understand ourselves and others. Particular attention will be paid to the ways in which data has historically been used in racializing and gendering ways, and the role that quantification of people has been integral to the development of the Western nation-state.

Cross-Listed as: WGSS 57.01

Degree Requirement Attributes: Dist:SOC

FILM 48.04 - Social Justice and Computing

Instructor: J. Wernimont

This course draws on feminist and queer scholarship to examine the intricate relationship between datafication, ubiquitous computing, and social justice, highlighting the politics and impacts of data-driven processes and big data on human lives. One of the key highlights of WGSS engagements with computing history is the focus on the politics and impacts of data-driven processes and big data on human lives. The course will provide a brief introduction to histories of computing and data-driven practices within the Anglo-American tradition, including discussions of the roles that ethics and biopolitics play within these histories. We will explore ways that privacy/security, algorithmic processes, computational environmental impacts, and design have exploited the most vulnerable while increasing affordances for the most privileged. We will also spend significant time learning about new data/computational justice initiatives and develop a robust understanding of how social justice issues like prison abolition, climate change, and equitable health outcomes are at the core of understanding computational cultures. No Computer Science or Data Science background is required, but the course will entail learning

about some of the technical history within both fields. Similarly, there are no WGSS prerequisites for the course but students will be responsible for learning about anti-racist feminist and queer methods and insights.

Cross-Listed as: WGSS 66.02

Degree Requirement Attributes: Dist:SOC

FILM 48.05 - Postcolonial Media

Instructor: R. Risam

How has colonialism operated — and how does it continue to operate — through media? How have colonized people used media to resist colonialism in the past and how do they continue to do so today? What role can we play in undoing the relationship between media and colonialism as readers, critics, and makers? This course draws on digital humanities, media studies, postcolonial and decolonial theory, and Native American and Indigenous studies to examine the historical and ongoing relationship between colonialism and media. We will compare multiple geographic, cultural, and linguistic contexts (e.g., British colonialism in South Asia, European colonialism on the continent of Africa, and settler colonialism in the U.S.) to explore the long relationship between media and colonialism. Through our work, we will consider how it formed the past and how it continues to shape our present. Drawing on insights gleaned from this analysis, we will engage in the creation of media to experiment with the role it can play in resisting colonialism.

Degree Requirement Attributes: Dist:INT or SOC

FILM 48.06 - Media and Migration

Instructor: R. Risam

The relationship between media and migration is a complex one. Media can, at once, facilitate migrants’ journeys and, at the same time, contribute to public discourse that aims to curtail migration. Our individual understanding of migration, personal relationships to it, and the viewpoints we have formed on immigration rights and policies are indelibly shaped by multiple forms of media, broadly construed: mainstream news media, social media, television and film, data visualization, infographics, and multimodal forms of communication. In this course, we will use the lenses of postcolonial studies and critical ethnic studies to examine the interplay of media and migration to collectively build our capacities as critical consumers of media and nuanced and empathetic thinkers about migration.

Cross-Listed as: COLT 62.09

Degree Requirement Attributes: Dist:INT or SOC

FILM 48.07 - Analyzing Content: From Tik Toks to Tweets

Instructor: T. McNulty

The internet is awash with new popular cultural forms, from listicles and lolcats to Ted Talks and makeup tutorials. And yet scholars have only just begun to analyze this new digital “content”: what makes it unique, and how it is reshaping our culture. In this course, we’ll look at new forms of popular digital content in detail—reading tweets as closely as if they were poems, or exploring the substance of 100,000 Instagram images. We’ll survey the methods that have been developed, in different disciplines (media theory, art criticism, sociology), for analyzing content in this way, as well as those that have yet to be attempted (questions that haven’t been asked; material that hasn’t been addressed). To put theory into practice, students will develop 10-12 page research projects on popular digital artifacts of their choosing. They will also be introduced to computational methods of analyzing content, and have the opportunity to pursue these methods further.

Cross-Listed as: ENGL 55.23

Degree Requirement Attributes: Dist:LIT

FILM 48.08 - Media and Environment

At a time of increasing reliance on technology to enhance and even transform the environment, how do media shape our perception of the world around us? This course introduces students to environmental media studies methods and concepts through a focus on contemporary Latin America. As we work comparatively across a range of media—including film, photography, visual art, and virtual reality—we will consider the specific ways in which each can reveal or reformulate conceptions of the environmental. Among key topics, we will discuss the stakes of defining nature as media, the ecological materiality of media formats, and the role of environmentalist media in present-day Latin America. The course culminates in a project that asks students to simultaneously analyze and create media.

Conducted in English; no previous media experience required.

Cross-Listed as: COLT 70.08 LACS 35.17 SPAN 65.17

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 49.02 - Black Theatre & Storytelling Workshop in XR: Reimagining The Purple Flower (1928)

Instructor: M. White Ndounou

Recognizing the intrinsic value of Black lives and Black storytelling across media platforms, this course will explore the staging of Black theatre texts in virtual reality (VR) and related XR technology. Participants will explore VR technology at the intersection of Black cultural storytelling through the performance of monologues and scenes as well as design/tech, music and movement culminating into a pilot production of Marita Bonner’s *The Purple Flower* (1928), a non-realistic, one-act play that

pushes the boundaries of theatrical staging. No prior experience or pre-requisites required.

Cross-Listed as: AAAS 31.90 THEA 10.51

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 50.01 - Cinematic Mirrors: Reflexivity and Authorship in Global Film History

Instructor: P. Young

This course investigates a trend in modernist and postmodernist cinema of reflexive films or *metafilms*: films foregrounding the medium through themes, techniques, style, and formal methods that call attention to the artificiality of cinema. How authorship and the concept of the “auteur” affects production and reception of these films, how different national and political contexts impact their production, and how compatible metafilms are with mainstream commercial practice, are among the questions explored in the course.

Degree Requirement Attributes: Dist:INT or ART

FILM 50.02 - Race, Media, Celebrity

Instructor: Monk-Payton

How is fame understood through racial difference? This course explores the dynamic terrain of contemporary celebrity culture as it intersects with race. Looking across a range of media formats (music, television, and digital media) we will examine the construction of black celebrity from Barack Obama to Beyonce. We will engage with the aesthetics and politics of black celebrity visibility, paying close attention to issues of gender, sexuality, and class. Topics considered include celebrity performance, scandal, and fandom in U.S. public and popular culture.

Cross-Listed as: AAAS 80.07

Degree Requirement Attributes: Dist:ART; WCult:CI

FILM 50.03 - Topics in Film Theory: Exploring the Archive

Instructor: M. Williams

This course will introduce students to new capacities for archival research and explore new directions of archival scholarship regarding film, television, and media history. Inspired by the turn to “preservation plus access” that characterizes many media archives today, this course will provide a set of perspectives from archivists, scholars, and film/video makers regarding new modalities of textual collections, availability, and delivery that promise to deepen media studies as a set of interdisciplinary research and production practices.

Degree Requirement Attributes: Dist:ART; WCult:W

FILM 50.04 - Video Games and the Meaning of Life

Instructor: W. Cheng

Video Games and the Meaning of Life is an interdisciplinary course that explores the modern human condition through the stories, designs, and soundscapes of digital games—from the perils of obedience (Hannah Arendt and *The Stanley Parable*) to the metaphors of illness (Susan Sontag and *That Dragon, Cancer*), from the deathless dreams of pacifism (*Undertale*) to the transnational rise of today's billion-dollar e-Sports industry (*League of Legends*). All students are welcome; no gaming or musical experience needed.

Cross-Listed as: COLT 40.07 MUS 046

Degree Requirement Attributes: Dist:TMV; WCult:CI

FILM 51 - Game Design Studio

Instructor: M. Flanagan

This course explores how innovative games are created and what elements go into the design of a good play experience. Games, be they console, networked, mobile, board, or pervasive, provide a versatile platform for design thinking and media practice. During the course, students create a host of game prototypes that address social issues. Students study the process of making games while developing actual game ideas, prototyping, play-testing, and documenting original, innovative game plans in a design journal.

Degree Requirement Attributes: Dist:TAS

FILM 80 - Independent Study

This course is designed to enable qualified upperclass students to engage in independent study in film under the direction of a member of the Department. A student should consult with the faculty member with whom he or she wishes to work as far in advance as possible. A proposal for any independent project must be submitted by the appropriate deadline in the term immediately preceding the term in which the independent study is to be pursued. Permission of instructor required. The staff.

FILM 93 - Major Project

This course, limited to Film and Media Studies majors or as part of a modified major, involves an individual project in some aspect of film and television history, theory or practice. The subject of the project, the term, and the hours are to be arranged. Each project must be directed by a faculty member of the Department. The approval of the faculty member and the Chair must be secured in advance, not later than the term immediately preceding the term in which the project is to be undertaken. This is a two term project.

Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for FILM-093 and receive a grade of "ON" (ongoing) at the end of the term. Students do not

register for the subsequent term. A final grade will replace the "ON" at the end of the subsequent term at which time the coursework must be completed.

FILM 95 - Honors Project I

A thesis, screenplay, or film production written under the supervision of a member of the Film and Media Studies Department. This course must be elected by all honors candidates. Permission of the Film and Media Studies Faculty required. Honors Projects are considered to be two-term projects. Students must register for each of the two terms to receive the Honors designation.

Students are awarded one course credit for successful completion of this course at the end of the second term of study. Students subsequently register for FILM 96, and continue with their coursework into a second term. A final grade will replace the "ON" for both this course and FILM 96 upon completion FILM 96.

FILM 96 - Honors Project II

A thesis, screenplay, or film production written under the supervision of a member of the Film and Media Studies Department. This course must be elected by all honors candidates. Permission of the Film and Media Studies Faculty required. Honors Projects are considered to be two-term projects. Students must register for each of the two terms to receive the Honors designation.

Students are awarded one course credit for successful completion of this course. Students who have registered for FILM 95 register for this course and continue with their coursework. A final grade will replace the "ON" for both FILM 95 and this course upon completion of this.

French and Italian Languages and Literatures

Chair: yasser elhariry

Professors F. E. Beasley, L. D. Kritzman, D. P. LaGuardia, G. Parati; **Associate Professors** N. L. Canepa, y. elhariry, L.C. Hollister, S. M. Sanders, R.A. St. Clair, A. W. Tarnowski; **Assistant Professors** D. Callegari, M. W. Larose; **Research Assistant Professors** T. Convertini, G. Oliveira, **Senior Lecturers** M. Gilebbi, K. F. McConnell, G. Alberti, S. Mefoude-Obiono **Lecturers** M. Novak, E.K. Kane, N. Peregó.

Majors

The department offers three majors:

- French Studies
- Italian Studies
- Romance Languages

Major programs usually include at least one term of study in France or Italy—all courses on the LSA+ and FSP study abroad programs count toward departmental majors and minors.

Major in French Studies

Prerequisite: French 5 and 6

The French Studies major consists of two prerequisite courses, FREN 5 and FREN 6, followed by eight seminar courses selected by the student in consultation with the French major advisor. At least one of the eight seminar courses must be a department-designated Writing Workshop and must be taken before the senior year. A maximum of two courses may come from the roster of FREN classes offered in English, though majors who elect these must take an x-hour in French and do all reading and written work in French. Alternatively, up to two courses from other departments may be counted towards the French Studies major if the material of such courses is directly germane to the student's major plan; these must be approved by the French major advisor. All three courses taken on the French LSA+ in Toulouse (winter) or the French FSP in Paris (winter or spring) count towards the major or minor.

Honors Thesis: If a student seeks to write an honors thesis in French Studies, they should contact a potential faculty thesis advisor and submit their thesis proposal by June 1 of their junior year. The honors thesis represents two course credits in the major during the student's senior year.

Culminating experience: Majors who do not write an honors thesis will, in their senior year, select an upper-level seminar in which they will submit additional assignments to produce a sustained piece of writing (20+ pages) to fulfill the College requirement for the culminating experience.

The major plan must be approved by the French major advisor.

Major in Italian Studies

Prerequisite: Italian 3

The Italian Studies major consists of eight courses beyond the level of ITAL 3. It must include either ITAL 8 (if taken on an LSA+ program in Rome) or ITAL 9 (if taken on campus), ITAL 10, and six additional courses selected from among those offered by the department. A maximum of two courses may come from the roster of ITAL classes offered in English, though majors who elect these must take an x-hour in Italian and do all reading and written work in Italian. All three courses taken on the Italian LSA+ in Rome during winter term count towards the major

or minor. Note: ITAL 10 may only be taken once for credit.

Honors Thesis: If a student seeks to write an honors thesis in the Italian major, they should contact a potential faculty thesis advisor and submit their thesis proposal by June 1 of their junior year. The honors thesis adds one course to the major because the student is granted a course credit for conducting research and writing their thesis essay; thus, the honors major consists of a total of nine courses.

Culminating experience: Majors who do not write an honors thesis will, in their senior year, select an upper-level seminar in which they will submit additional assignments to produce a sustained piece of writing (20+ pages) to fulfill the College requirement for the culminating experience.

The major plan must be approved by the Italian major advisor.

Major in Romance Languages

French or Italian can be either the primary or secondary language in a Romance Languages major (the major can also include Spanish or Portuguese as a primary or secondary language).

French as primary language: students take FREN 5 and FREN 6 followed by four seminars in French, for a total of six courses. One course may come from the roster of FREN classes offered in English, though students who elect such a course must take an x-hour in French and do all reading and written work in French. When French is the primary language of the major, students do their culminating experience in French, either through an independent study with a professor or through additional reading and writing in an upper-level FREN seminar.

Italian as primary language: students take six courses in Italian beyond ITAL 3. These must include either ITAL 8 on the Rome LSA+ or ITAL 9 on campus, ITAL 10, and four additional courses selected from among those offered by the department. One course may come from the roster of ITAL classes offered in English, though students who elect such a course must take an x-hour in Italian and do all reading and written work in Italian. When Italian is the primary language of the major, students do their culminating experience in Italian, either through an independent study with a professor or through additional reading and writing in an upper-level ITAL seminar.

French as secondary language: students take FREN 5, FREN 6, and then an additional two seminars, for a total of four courses. As with other courses of study that include French, participation in the LSA+ in Toulouse or the FSP in Paris will give the student three courses towards the Romance Languages major.

Italian as secondary language: students take four courses in Italian beyond ITAL 3: ITAL 8 or 9, ITAL 10, and two additional seminars. As with other courses of study that include Italian, participation in the LSA+ in Rome will give the student three courses towards the Romance Languages major.

French or Italian as a Modifier

If a student wishes to modify a major in another department with French or Italian and wishes the modifying language to be entered on their permanent record, the major program must be approved by the Department of French and Italian Studies as well as by the primary department. The modifying component, which must add intellectual coherence to the primary major, must consist of major-level courses.

Minors

The department offers two minors: Italian Studies and French Studies. Minors often include at least one term of study in Italy or France; all courses on the LSA+ and FSP study abroad programs count toward departmental minors.

Italian Minor

The Italian Studies minor consists of six courses beyond the level of ITAL 3. It must include either ITAL 8 (if taken on an LSA+ program in Rome) or ITAL 9 (if taken on campus), ITAL 10, and four additional courses selected from among those offered by the department. One course may come from the roster of ITAL classes offered in English, though minors who elect such a course must take an x-hour in Italian and do all reading and written work in Italian.

All three courses taken on the Italian LSA+ in Rome during winter term count towards the minor or major.

ITAL 10 may only be taken once for credit.

French Minor

The French Studies minor consists of two prerequisite courses, FREN 5 and FREN 6, followed by four seminar courses selected by the student in consultation with the minor advisor. Among their four seminar courses, students

are strongly encouraged to take at least one department-designated Writing Workshop. One course may come from the roster of FREN classes offered in English, though minors who elect such a course must take an x-hour in French and do all reading and written work in French.

All three courses taken on the French LSA+ in Toulouse (winter) or the French FSP in Paris (winter or spring) count towards the minor or major.

Honors Thesis Program

Please refer to the ORC for general, College-wide requirements for admission to the Honors Program. Students who wish to write an honors thesis must give evidence of exceptional ability and interest in the major field by having a GPA of 3.5 or better.

Honors Thesis

The thesis topic and the individual faculty advisor for the thesis must be determined during the student's junior year, with a one-page thesis proposal due to both the advisor and the department chair by June 1st.

French Studies: If a student seeks to write an honors thesis in French Studies, they should contact a potential faculty thesis advisor and submit their thesis proposal by June 1 of their junior year. The honors thesis represents two course credits in the major during the student's senior year.

Culminating experience: Majors who do not write an honors thesis will, in their senior year, select an upper-level seminar in which they will submit additional assignments to produce a sustained piece of writing (20+ pages) to fulfill the college requirement for the culminating experience.

Italian Studies: If a student seeks to write an honors thesis in the Italian major, they should contact a potential faculty thesis advisor and submit their thesis proposal by June 1 of their junior year. The honors thesis adds one course to the major because the student is granted a course credit for conducting research and writing their thesis essay; thus, the honors major consists of a total of nine courses.

Culminating experience: Majors who do not write an honors thesis will, in their senior year, select an upper-level seminar in which they will submit additional assignments to produce a sustained piece of writing (20+ pages) to fulfill the College requirement for the culminating experience.

Upon student submission of a thesis, department faculty will determine whether the student will graduate without honors in the major, with an Honors designation, or with a designation of High Honors.

Please refer to the department's website for details on thesis writing and timelines.

FREN - French Courses

FRENCH INTRODUCTORY LANGUAGE SEQUENCE

An introduction to French as a spoken and written language. The work includes regular practice in class and scheduled drill-sessions in understanding and using the spoken language. Written exercises and elementary reading materials serve for vocabulary building and discussion.

French 1: Introductory French

This course is open to true beginners, students with one or two years of high school French or students with a score of 0-530 on the SAT II Subject Test. Emphasis will be on speaking and dialogue with your peers. You will learn to introduce your family and friends, share what your daily life looks like, talk about what you do for leisure. Your final assignment will be to do an oral presentation in French describing your hometown. Does not serve to satisfy Distributive or World Culture Requirements.

French 2: Introductory French II

This course is open to students who have completed French 1 on campus, those with three or four years of high school French, or those with a score of 540-600 on the SAT II Subject Test. You will expand your possibilities of expression by learning how to use the past and future tenses, to say where you've been and where you're going. You will share childhood memories and exchange ideas about plans for your education and career. While building your vocabulary, you will deepen your cultural knowledge with introductions to multiple francophone countries around the world. Your final assignment will be to choose a francophone country and do an oral presentation for your peers on its history, geography, architecture, art or traditions. Does not serve to satisfy Distributive or World Culture Requirements.

Prerequisites: French 1 or qualifying placement through the placement exam. Please contact Professor Oliveira for more information.

French 3: Introductory French III

This course is open to students who have completed French 2 or French 11 on campus, those with a score of 610-710 on the SAT II Subject Test or a score of 4 on the AP. You will explore several themes of contemporary life and learn to discuss travel, technology and its influence, wellness and healthcare, and social relationships. Your final assignment will be to seek out information on a current issue facing a francophone country—the environment, racism, poverty, freedom of speech, immigration, the colonial past, religious conflicts—and present it to your peers through a medium of your choice: film, interview, blog, skit, music or poster. Does not serve

to satisfy Distributive or World Culture Requirements.

Prerequisite: French 2, French 11, or placement qualifying from the placement exam. Please contact Professor Oliveira for more information.

French 11: Intensive French

This 1-credit course is designed for students with little or no knowledge of the French language, but who have a strong background in another Romance language (i.e. Spanish, Italian, Romanian, Portuguese, Catalan, Latin). It might also be suitable for students who have been exposed to French through family ties or have spent some time in a francophone environment. French 11 is an accelerated course that combines French 1 and 2 in one term, offering an exciting and fast-paced atmosphere in which to learn French. The course will have a web-based component, which, through cultural, grammar and multimedia learning activities, will complement face-to-face work and prepare students for in-class work. Students will learn to talk about familiar events in the present and the past, as well as formulate plans for the future. Weekly cultural videos will situate in context the grammatical content of the course, making it relevant and meaningful. Students will be actively engaged in a variety of creative written and oral activities that will help them develop their language skills. Upon successful completion of this course, students will be able to sign up for French 3 (remember that after French 3, you are eligible to apply for the French LSA+ in Toulouse). With the goal of facilitating the acquisition of the target language, this course will be conducted entirely in French.

Prerequisite: One year or equivalent of university level instruction in a Romance Language or Latin; or three high school years of instruction in a Romance Language or Latin; or native speaking proficiency in a Romance Language; or permission of instructor.

French Intermediate and Upper-Level Courses

Fren 5 (formerly French 8)

Conversations and Styles: A bridge course between the elementary language sequence and FREN 6, Texts and Contexts. You'll build your cultural knowledge by studying historical and contemporary French and francophone societies. Focus topics include evolving political and regional identities, literature and the expression of identity, gender relations, the role of the media, education, religion and immigration. You'll expand your active use of French, refine reading and writing strategies, and comprehensively review grammar. Course work includes active participation in class discussions, oral presentations, and regular reading/writing assignments in the areas of narrative and poetry, cinema, music, and journalism. Not open to students who have received credit for FREN 008 or FREN 09.01. Prerequisites: FREN 3, or equivalent preparation. W and SOC.

Fren 6 (formerly French 10)

Introduction to French Texts and Contexts: An introduction to French literature, culture, and media across time that provides students with the tools to read and analyze texts critically. Through a selection of literary works, films, and other cultural artifacts, this course examines how ideas, genres, and narratives develop and intersect. Topics and materials vary based on the instructor's focus, allowing for an engaging and dynamic exploration of francophone literary and cultural landscapes. Not open to students who have received credit for FREN 10.01-10.99. Prerequisites: French 5 or French 8 or the permission of the individual instructor. DIST: W and LIT.

Fren 87: Honors Thesis Reading and Research

A program of individual study directed by a faculty member. A proposal signed by the faculty advisor must be submitted to the department for approval by June 1st of the student's junior year. Open only to French Studies and Romance Language majors whose primary language is French.

Fren 88: Independent Reading and Research

Students may arrange a program of study and research with an individual faculty member. A student proposal, signed by the independent study advisor, must be submitted to the chair of the department by the fifth day of classes of the relevant term.

Fren 89: Honors Thesis

Honors students will arrange a program of study and research during the winter or spring term of the senior year with an individual faculty member. A thesis written in French and a public presentation are the standard culmination of this course. A student proposal signed by

the faculty advisor must be submitted to the department for approval by the fifth day of classes of the designated term.

[Please refer to the website for the upper-level French courses offered.](#)

FREN 1 - Introductory French I

Instructor: See department website

An introduction to French as a spoken and written language. The work includes regular practice in class and scheduled drill-sessions in understanding and using the spoken language. Written exercises and elementary reading materials serve for vocabulary building and discussion. Never serves in partial satisfaction of the Distributive or World Culture Requirements.

FREN 11 - Intensive French

Instructor: See department website

This 1-credit course is designed for students who have studied French for one to three years in high school, or those who have been exposed to French through family ties or have spent some time in a Francophone environment. It is also suitable for students with little or no knowledge of the French language, but who have a strong background in another Romance language (i.e. Spanish, Italian, Romanian, Portuguese, Catalan, and also Latin). French 11 is an accelerated course that combines French 1 and 2 in one term, offering an exciting and fast-paced atmosphere in which to learn French. The course will have a web-based component, which, through cultural, grammar and multimedia learning activities, will complement face-to-face work and prepare students for in-class work. Students will learn to talk about familiar events in the present and the past, as well as formulate plans for the future. Weekly cultural videos will situate in context the grammatical content of the course, making it relevant and meaningful. Students will be actively engaged in a variety of creative written and oral activities that will help them develop their language skills. Upon successful completion of this course, students will be able to sign up for French 3 or apply for our French LSAs in Lyon or Toulouse. With the goal of

facilitating the acquisition of the target language, this course will be conducted entirely in French.

Prerequisite: One year or equivalent of university level instruction in a Romance Language or Latin; or three high school years of instruction in a Romance Language or Latin; or native speaking proficiency in a Romance Language; or permission of instructor.

FREN 12 - Advanced Writing and Speaking in French

Instructor: See department website

In this course, students will learn to recognize and reproduce a broad range of linguistic registers and structures in order to achieve competence in French grammar, phonetics, vocabulary, and oral and written expression. Aided by the analysis of newspaper articles, letters, political orations, screenplays, interviews, and short stories, students will analyze, imitate, and produce diverse types and levels of discourse. Course work will entail intensive writing, stylistic analysis, small group discussions, dramatic presentations, and experiential exercises such as conducting interviews, writing business letters, or composing political speeches. Texts by Montesquieu, Danton, Maupassant, Zola, Ionesco, De Gaulle, Yourcenar, Kassovitz, and others.

Prerequisite: Acceptance into the Dartmouth Advanced Language Study Abroad Program.

Degree Requirement Attributes: WCult:W

FREN 14 - Dartmouth Meets the French Enlightenment

Can we trace Tri-Kap's origin to the secret societies, masonic lodges, salons and cafés that arose prior to the French Revolution? This course will trace the migration of texts from France to Dartmouth where 18th-century literary societies - Social Friends (1783), United Fraternity (1786), Phi Beta Kappa (1787), and later Tri-Kap (1842) – read French Enlightenment texts on human rights as well as on the forms of sociability recently developed in France and at Dartmouth. Not open to students who have received credit for FREN 045 or FREN 45.01.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 15 - Paris, philosophies de l'espace

Paris has been described in numerous disciplines and media: literature, philosophy, cinema, photography, painting, sociology, geography, etc. What usage schemes characterize the city? How are often conflicting identities generated when individuals seek to inhabit and negotiate the hierarchies of its neighborhoods? How do diverse thinkers, filmmakers, and photographers describe and represent the class, ethnic, and gender clashes that play out in urban space? In what ways do affective “investments” saturate Parisian streets, buildings, and businesses? Not

open to students who have received credit for FREN 53.08.

Degree Requirement Attributes: Dist:LIT; WCult:CI

FREN 19 - Baaaaaad French! A Creative Writing Workshop

As the speaker of a foreign language in the United States, you are in a unique position to innovate, improve, and corrupt French. *Baaaaaad French!* enables you in this endeavor. It introduces you to historical precedents of bad French, and provides you with the opportunity to conceive, theorize, historicize, and execute projects in bad French. You will think and you will write with the awareness that you are in the presence of all the bad Frenches that have ever preceded you. You will read and you will write your own logics of emancipation, liberation, and disorientation out of the prison house of language. *Baaaaaad French!* ultimately resists all forms of standardization. It empowers you to harness your innate capacities to sound different, to write wrong and ungoodly, and to take pride in the innovative impulse to resist the standardizing imprint of globalizations on your accent and pronunciation.

Baaaaaad French! lies at the intersection of cultural history and the creative writing workshop. It is an invitation to read and write creatively, historically, and across genres and media. The course adopts a long historical view of the dynamic history of French as it plays out in a wide array of media. You will learn this history nonchronologically, which places different strains and genealogies of bad French into stronger relief. The material provides us with the opportunity to slowly develop together a broad collective definition of badness over the course of the term, with a particular emphasis on the distinctly sonic dimensions of our linguistic identities. You will engage in a series of class discussions, creative writing assignments, and workshops, and you will have the freedom to pursue and create a final project in any medium, produced in a bad French language of your own invention. A contest and awards ceremony for the baddest project caps the course.

The course stars readings by Monique Wittig, Rupi Kaur, Amandine André, Rim Battal, Claire Star Finch, Alpheratz, Stéphane Bouquet, Katalin Molnár (aka Kité Moi), Luc Bénazet, Loïc Demey, Ghérasim Luca, Isidore Isou, Mallarmé, Lautréamont, Verlaine, Rimbaud, Baudelaire, Lamartine; music by Rahim Redcar, Saint Levant, Aya Nakamura, PNL, Dita Von Tease and Sébastien Tellier, Jeanne Added, Camille, Françoise Hardy, Jane Birkin and Serge Gainsbourg, Claude François; films by Catherine Breillat, Mathieu Kassovitz, Stephen Spielberg, Melvin Van Peebles, François Truffaut; media by Joyce Mansour, Les Coquettes, clips from French radio and television (*Apostrophes*, *Quotidien*, *Les Marseillais*, *Brice de Nice*).

This course may only be taken once for credit.

Prerequisite: French 6 or a course in the French 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 2 - Introductory French II

Instructor: See department website

Rapid review and continued study of the fundamentals of French, with intensive work in vocabulary building. More advanced practice, in classroom and drill-sessions in the use of the spoken language. Open to students by qualifying test or to students who have passed French 1. Never serves in partial satisfaction of the Distributive or World Culture Requirements.

Prerequisite: FREN 1 or qualifying placement

FREN 20 - Interpreting French Cultures

Students will acquire the analytical skills to interpret French and Francophone cultures. To prepare students to be "culturally competent," the course will focus on how and why we read signs of culture, whether through the lenses of history, symbols, politics or class and power. We will explore a variety of cultural objects in conjunction with the writings of authors who may include Balibar, Barthes, Baudrillard, Condé, Fanon, Foucault, Le Goff, Nora and Wieviorka.

Prerequisite: A course in the FREN 10 series, or permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 20.01 - France and the Culture of Conversation

In this course we will examine the relationship between conversation and French history and culture. We will explore the role of conversation on artistic production and examine its influence on the history of ideas. Conversation was a central tenet of early modern intellectual and textual exchanges through the Enlightenment, and the French salon was the site in which conversation flourished. We will then extend our analysis to the present day. What are the forms conversation has adopted in France today, especially in digital culture? Is there anything about this art and the way that it functions that is still uniquely French?

Prerequisite: A course in the French 10 series or permission of the instructor

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 20.02 - The Locations of French Culture

Instructor: Hollister

This course proposes to consider the contexts and the constitution of French cultural identities. Specifically, it will explore the pressure points and key subjects that return time and again in discussions of what it means to be French or possess French culture: language; religious

identity, republicanism, nationalism; race, class, gender, sexuality; gastronomy; popular culture and high art.

Prerequisite: A course in the French 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 20.03 - Long Live the Revolution

This course is a study of the French and Haitian Revolutions through cultural artefacts: films, novels, plays, history textbooks, public debates and even video games. Ever since Revolutions ricocheted from the Americas to Europe and back, artists and writers have crafted versions of their legacy in a variety of venues and media. We will begin the term with an overview of the French and Haitian Revolutions. This course, however, is not about the history of these Revolutions. Instead, we will examine how French and Haitian cultural artefacts craft different versions of their founding moment in an attempt to construct Republican identities. During the term, we will encounter Republican identities that are nationalist, egalitarian, communitarian and post-colonial. By comparing the quantity and type of representations between the Haitian and French Revolutions, we will also interrogate how cultural artefacts are constantly re-imagining the past.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

FREN 21 - Introduction to Francophone Literature and Culture

Instructor: See department website

This course surveys the evolution of French language (Francophone) literature of the former French colonies and examines the social, political, and cultural issues it raises: race, colonialism, decolonization, revolution, independence, neo-colonialism, Négritude, Antillanité, Créolité, écriture féminine, mimetic desire, cultural hybridity, post-independence government and society. The survey will include novels, plays, poetry, film and essays by representative writers from the principal divisions of the Francophone world: the French West Indies, the Indian Ocean, Southeast Asia, Sub-Saharan Africa, North Africa; Quebec, and Francophone Canada.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:NW

FREN 22 - Introduction to French Literature I: the Middle Ages and the Renaissance

Instructor: See department website

Medieval France - its art, architecture, technology, philosophy and literature - exerted an unparalleled influence throughout Europe. Studying the first texts written in French, as well as the manuscripts in which they

circulated, will shed light on the nature of French culture. We will examine defining issues of the period: the transition from oral to written expression, the invention of printing, debates concerning the status of women, Renaissance humanism, scientific inquiry, religious reform and conflict. Texts may include *La Chanson de Roland*, selected poetry, and works by Chrétien de Troyes, Christine de Pizan, Marguerite de Navarre, François Rabelais, and Michel de Montaigne.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 23 - Introduction to French Literature II: Neoclassicism and the Eighteenth Century

Instructor: See department website

The seventeenth and eighteenth centuries were a dynamic and volatile period characterized on the one hand by the rise to power of the most absolute of all monarchs, the Sun King Louis XIV, symbolized by Versailles, and on the other hand by the French Revolution. Fostered by royal patronage, literature and the arts flourished, yet many writers also used artistic expression to counter this royal power. The period saw the birth of the modern French novel and the development of a rich body of theatrical and philosophical literature. These centuries are recognized as major components of France's collective identity and their influence is still felt in France today. Authors may include Descartes, Corneille, Racine, Molière, Lafayette, Diderot, Rousseau, Voltaire, Graffigny, Beaumarchais and Laclos.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 24 - Introduction to French Literature and Culture III: Nineteenth Century

Instructor: See department website

This course examines the nineteenth-century renewal of literary form and vision from the French Revolution to the First World War. We will study the social and historical developments of French culture as they are reflected in various literary genres (narrative, poetry, dramatic theory and practice), literary criticism, philosophy, historiography, and the other arts. Emphasis will be placed on France's growing self-awareness as a nation and on the analysis of aesthetic and intellectual issues represented in the major literary movements of this period including romanticism, realism, symbolism, art for art's sake, naturalism, fin de siècle decadence, and modernism. Readings may include works by such authors as Chateaubriand, de Staël, Stendhal, Hugo, Musset, Sand, Balzac, Baudelaire, Flaubert, Michelet, Zola, and Huysmans.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 25 - Introduction to French Literature and Culture IV: Twentieth and Twenty-First Centuries

Instructor: See department website

This course examines the radical transformations of literary form and vision that characterize twentieth-century France with its two World Wars, its colonial conflicts, and the challenges to French identity posed by immigration and globalization. We will use lyric poetry, fiction, drama, autobiography, and film to explore literary movements such as surrealism, existentialism, the new novel, the theater of the absurd and *écriture féminine*, as well as the recent impact of immigrant and minority writers. Readings and films may include works by Proust, Breton, Colette, Beauvoir, Sartre, Camus, Robbe-Grillet, Duras, Delbo, Cixous, Sebbar, Resnais, Malle, and Kassovitz.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 29 - French Civilization: Study Abroad

Instructor: See department website

Studies in such aspects of the cultural heritage as French art, music, and history. Credit for this course is awarded students who have successfully completed the program of the Dartmouth Foreign Study Program at one of its university centers in France.

Prerequisite: acceptance into the Foreign Study Program.

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 3 - Introductory French III

Instructor: See department website

Given on-campus as the final course in the required sequence and off-campus as part of the L.S.A. curriculum, this course is designed to develop reading, writing, and speaking skills, with emphasis on expansion of vocabulary and reinforcement of grammatical structures. Some discussion of texts and films of literary or cultural interest. Frequent oral and written assignments and tests, both on-campus and off, plus daily drills when taken on-campus. Open to students by qualifying test or to students who have passed French 2 or French 11. Never serves in partial satisfaction of the Distributive or World Culture Requirements.

Prerequisite: FREN 2, French 11, or qualifying placement

FREN 30 - French Literature: Study Abroad

Instructor: See department website

Credit for this course is awarded students who have successfully completed the program of the Dartmouth Foreign Study Program at one of its university centers in France.

Prerequisite: acceptance into the Foreign Study Program.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 31 - The French Language: Study Abroad

Instructor: See department website

Credit for this course is awarded students who have successfully completed the program of the Dartmouth Foreign Study Program at one of its university centers in France.

Prerequisite: acceptance into the Foreign Study Program.

Degree Requirement Attributes: WCult:W

FREN 37 - FQZ Feminist Queer Zones

FQZ Feminist Queer Zones provides in-depth study of the exceptional richness of feminist and queer traditions in global francophone cultures. From nineteenth-century revolutionaries to the mid-twentieth century's first-wave feminists; from reproductive rights and women's suffrage to the explosive intersectionality of race, capitalism, post/colonialism, and feminism; the books read in this class help us understand sexuality, gender, and identity as they evolve over time and across historical, political, and sociocultural formations. The texts open up *POROUS ZONES*—open fields and fluid sites of change, exchange, and interchange—that allow for various other forms of alternative thinking.

All readings and discussions are conducted in English. No prior knowledge or pre-requisites necessary. Readings, written assignments, and x-hours are offered in French for students seeking credit for the major or minor in French.

Cross-Listed as: FRIT 37.30 WGSS 50.01

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

FREN 4 - Afro/Black Paris Through Language: Intensive French

An intensive beginning French course, this class gives Afro/Black Paris FSP participants the linguistic tools to observe, understand and articulate multiple aspects of their time in France. The course stresses language needed by all learners for everyday communication and promotes speaking, listening, reading, and writing. During this intensive session, students will develop their knowledge of African-descended French people and diversity in mainland France while acquiring broad perspective on French, colonial and postcolonial culture.

Successful completion of French 4 will qualify you to continue to French 2. Please visit the Department of

French and Italian's website for more information about French language courses.

Degree Requirement Attributes: WCult:W

FREN 40 - Acting French

Instructor: Sanders

Acting French is a practical approach to French theater and its role in constructing French identity. Throughout the trimester, we will read, analyze, watch and then perform scenes from French plays. By the end of the trimester, we will learn how to interpret theater as a performance, and use that knowledge to perform scenes from plays. Works by Marivaux, Racine, Musset, Beckett, Mnouchkine, and others.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 40.02 - French and Francophone Poetry from Baudelaire through Césaire

Instructor: Elhariry

Charles Baudelaire, Arthur Rimbaud, Guillaume Apollinaire, Paul Eluard, André Breton, Paul Valéry, Aimé Césaire, Léon Damas, D.T. Niane and Andrée Chédid are poets of radically different backgrounds connected by abiding preoccupations of a modernist vision. These poets will be studied in order to explore the traditions and counter-traditions of French and Francophone poetry.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 40.03 - Récits méditerranéens

Instructor: See department website

In 'Récits méditerranéens, pourtours mystiques I,' we will focus on first-person narratives (fictional and non-fictional, fictive and fictionalized) from across the modern Mediterranean Francophone world: Lebanon, Egypt, Algeria, Tunisia and Morocco. We will exhaust the politics of autobiography, autofiction and autoportrait as we unravel the mystical underpinnings of texts by Tahar Ben Jelloun, Hélène Cixous, Jacques Derrida, Assia Djebar, Edmond Jabès, Abdelkébir Khatibi, Amin Maalouf, Abdelwahab Meddeb, and Salah Stétié.

Prerequisite: A course in the FREN 10 series or permission of the instructor

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 40.04 - Classical Comedy: Molière

Instructor: Beasley

In this course we will focus on the celebrated French playwright Molière. We will read his works in their seventeenth-century context, analyze how these plays were produced, and study Molière's impact on French culture today. The final project may consist of a staging of one of Molière's comedies, depending on student interest.

Prerequisite: A course in the FREN 10 series or permission of instructor

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 40.05 - Acting French

Instructor: Sanders

Acting French offers a practical approach to French theater. Throughout the trimester, we will read, analyze and then perform scenes from French plays. In this class, you will have an opportunity to bring Figaro to life, or to wait for Godot. By the end of the trimester, we will learn how to interpret theater as a performance, and use that knowledge to put on scenes from plays.

Prerequisite: A course in the French 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 40.06 - Selfies: autobiographie, autoportrait, autofiction

Instructor: Kritzman

A study of three forms of writing about the self and their generic distinctions. Autobiography, a practice of self-understanding deals with the construction of one's life story across time; self-portraiture does not attempt to rejoin the past by the construction of a self that is temporally constructed. The autoportraitist presents a self apprehended in the present of writing through a montage of disparate images. Autofiction, on the other hand, deals with a form of fictionalized autobiography that uses fiction in the service of the search for self. Subjects to be examined include: rhetoric, politics, history, and gender. Texts: Rousseau, Chateaubriand, Sartre, Beauvoir (autobiographies); Montaigne, Sevigne, Barthes (autoportraits); Colette, Modiano, Ernaux (autofictions).

Prerequisite: A course in the French 10 sequence or permission of the instructor

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 40.09 - Classical French Comedy Made Modern; Molière Past and Present

Molière is France's best known and most universally loved playwright. Over three hundred years after his death, his plays continue to dominate the French stage and stages across the world. In this course, we will explore Molière's creative genius to understand his profound and lasting influence. The last third of the course will be devoted to

an in-depth study of "Molière in the Park," a theatre company in Brooklyn founded in 2019. Not open to students who have received credit for FREN 40.04. This course will be taught in English.

Cross-Listed as: THEA 10.72

Degree Requirement Attributes: Dist:INT or ART; WCult:W

FREN 45 - Dartmouth Meets the French Enlightenment

Instructor: Sanders

Can we trace Tri-Kap's origin to the secret societies, masonic lodges, salons and cafés that arose prior to the French Revolution? This course will trace the migration of texts from France to Dartmouth where 18th-century literary societies - Social Friends (1783), United Fraternity (1786), Phi Beta Kappa (1787), and later Tri-Kap (1842) – read French Enlightenment texts on human rights as well as on the forms of sociability recently developed in France and at Dartmouth.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 45.01 - Dartmouth Meets the French Enlightenment

Can we trace Tri-Kap's origin to the secret societies, masonic lodges, salons and cafés that arose prior to the French Revolution? This course will trace the migration of texts from France to Dartmouth where 18th-century literary societies - Social Friends (1783), United Fraternity (1786), Phi Beta Kappa (1787), and later Tri-Kap (1842) – read French Enlightenment texts on human rights as well as on the forms of sociability recently developed in France and at Dartmouth. Not open to students who have received credit for FREN 045.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 45.02 - The Art and Influence of Conversation

Instructor: See department website

We will resurrect the conversations among men and women in seventeenth and eighteenth-century France. Questions include: What is the relationship between the individual and society? What roles do literature and philosophy play? What are women's and men's "natural" functions in society? What effect does contact with different cultures have on a society or the individual? Authors may include: Descartes, Corneille, Sévigné, Lafayette, Voltaire, Rousseau, Diderot, de Gouges, Montesquieu, and Graffigny, among others.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 45.03 - De la motérialité : the Body in 19th-century French Literature

Instructor: See department website

At first glance a simple thing, seen “à la loupe” the body reveals itself a complex location where our links to our selves, the world, and our unavoidable otherness are situated and complicated. This course proposes a critical study of an omnipresent object/subject in the the poetry, prose, and visual texts of nineteenth-century France to think about the sorts of claims we can make about the body, and the sorts of claims they make upon us. Readings from poetry, visual texts, prose, from Romanticism to Decadence; Manet, Courbet, Caillebotte, revolutionary caricature. Excerpts of Foucault, Marx, Freud, Merleau-Ponty, Elisabeth Grosz, Jacques Rancière, Jean-Luc Nancy, Didi-Huberman

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 45.05 - Between Revolution and Oblivion: The Politics of Literature in Nineteenth-Century France

Instructor: See department website

This course seeks to explore the hypothesis that nineteenth-century French literature and other modes of cultural and aesthetic production are situated against the backdrop of the massive political upheavals of the century, and grapple especially with the problems of contested memories and narratives of a revolutionary past that refuses to pass. In this course, then, we will link and think 19thC literature to politics and history, interpreting a variety of nineteenth-century texts, from poems to short stories, novels, paintings and revolutionary caricatures, with/against their cultural, political, historical, and esthetic contexts.

Prerequisite: A course in the French 10 series or approval of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 45.06 - Debate, Dialogue and Advice: Launching France on Rhetoric

Instructor: See department website

Discussion, whether among equals or in a hierarchical dynamic, shapes politics, culture and worldview. Questions such as the ideal form of government and the most desirable way of life are staged in early literature that uses platforms of debate, dialogue and counsel to sway listening audiences and individual readers, from powerful princes to townspeople. Readings may include works by Peter Abelard, Jean de Meun, Guillaume de Machaut, Philippe de Mézières, Christine de Pizan, and Alain Chartier.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 5 - Conversations and Style

Instructor: See department website

A bridge course between the elementary language sequence and FREN 6, Texts and Contexts. You'll build your cultural knowledge by studying historical and contemporary French and francophone societies. Focus topics include evolving political and regional identities, literature and the expression of identity, gender relations, the role of the media, education, religion and immigration. You'll expand your active use of French, refine reading and writing strategies, and comprehensively review grammar. Course work includes active participation in class discussions, oral presentations, and regular reading/writing assignments in the areas of narrative and poetry, cinema, music, and journalism. Not open to students who have received credit for FREN 008 or FREN 09.01.

Prerequisite: Acceptance into the Dartmouth Language Study Abroad Program.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 50 - French Literature: Major Figures

Instructor: See department website

This course will be devoted to the study of a single author or to a group of authors who have exercised a decisive influence on French, European or world literature or who are deserving of concentrated attention because of the quality or originality of their literary production.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 50.05 - Montaigne and Proust

Instructor: See department website

Montaigne and Proust, two of the greatest prose writers in the French literary tradition, represent distinct historical periods (the Renaissance and early twentieth century France) in which the idea of subjectivity is a major intellectual concern. Using Montaigne and Proust's first person narratives as emblematic of their times, the course will examine how self-portraiture is manifested in time and space and reflects upon broader notions of character, sensation, gender and sexuality, history and memory. Particular attention will be paid to how writing can be viewed as a way to suspend time, delay death and prolong life and sensation. Paradoxically we shall discover in each writer the failure of "autobiographical" narrative to establish identity. Selectons will include representative Essais of Montaigne, Proust's Du coté de chez Swann and

Le temps retrouvé, and short essays by Bergson, Bersani, Deleuze, de Man, Derrida, Genette, Kristeva and Lacan.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 50.07 - Baudelaire/Flaubert: Reading Modernity for Filth

It is by a fortuitous, if strange, twist of literary fortune that two publications from the winter of 1857—both of which would later come to be regarded as uncontested masterworks of high modernism in the French literary canon—saw their authors hauled before Second Empire courts and put on trial for obscenity: Gustave Flaubert's *Madame Bovary* and Charles Baudelaire's *Les Fleurs du mal*. This course will pursue a perhaps inadvertent insight made during the trials against these two core figures in French – and world – literature: namely, that the so-called crimes (of shocking moral corruption, of prurience and obscenity, etc.) of which Baudelaire and Flaubert were accused have much to do with the formal complexity and aporias that one finds in their works. What one finds there, in other words, is less “filthy” material *per se* than a stylistics that opens up space for dangerously unruly sociocritical readings; that brings into visibility and legibility desires and subjectivities typically confined in the nineteenth century to the *grisaille silencieuse* of “History’s” margins; and that seeks to bring out into representation repressed historical and political traumas occasioned by the “shocks” of modernity (Benjamin). One finds, in other words, in Baudelaire’s poetry and in Flaubert’s novels a distinct literary politics; a critical use of literature against the abuses of the present order of things. A way of reading modernity *for filth*

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 52 - Elles viennent d’ailleurs : Women and Migration

Through a series of Francophone literary texts and films, this course examines how contemporary female writers, filmmakers and artists respond to the migration, immigration, and displacement of peoples today. From the written and the visual materials, students will consider how women such as Fatou Diome, Marie NDiaye, Kim Thúy among others address the range of critical issues and factors contributing to displacement, particularly under conditions of poverty, uneven development, competition for resources, political instability, violence, and natural disasters.

The course gives participants an opportunity to participate in current immigration debates whether it is the Syrian refugee crisis, the Mexican Border crisis, Haitian TPS status, the Haitian migrants’ mistreatment at the Texas border or the current Afghan relocation project.

Cross-Listed as: AAAS 67.07

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

FREN 53 - French Thought: Philosophical Issues

Instructor: See department website

This course will study texts which have shaped influential views of human nature, scientific knowledge, social and moral values. Its focus may be on the philosophers and moralists of the classical period (such as Pascal and La Rochefoucauld), the social and political thinkers of the Enlightenment (Diderot and Rousseau) or contemporary thinkers (Beauvoir, Foucault, Lévi-Strauss).

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 53.05 - French Theory

Instructor: See department website

French writers played a crucial role in the development of contemporary literary and critical theory. French theorists have analyzed subjects ranging from perception, to sexuality, gender, the unconscious, popular culture, fashion, cinema, photography, mythology, kinship, and the body. This course will examine some of the major trends and master works in this explosion of theoretical activity in France. Works by Lévi-Strauss, Lacan, Foucault, Kristeva, Irigaray, Cixous, Derrida, Deleuze, Baudrillard, and others.

Prerequisite: A course in the FREN 10 series or permission of the instructor

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 53.06 - Human Rights in France

Instructor: See department website

A wide-ranging survey of the historical and conceptual issues in human rights from the Enlightenment to the present. An examination of philosophical origins and contemporary theoretical debate on citizenship and hospitality, republicanism and universalism; death penalty, women’s and gay rights, Charlie Hebdo and freedom of the press. Essays, historical documents and literature. Authors drawn from: Voltaire, Rousseau, Gouges, Renan, Drumont, Hugo, Camus, Sartre Beauvoir, Ben Jelloun, Badinter, Derrida, Kristeva, Agacinski, Lefort, Balibar, Debray.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 53.07 - Confrontations with Death in the French Tradition

Instructor: See department website

Through readings of essays, plays, poetry and fiction, we will examine the relationship of death to the history of French culture and the philosophical traditions it embodies, from the medieval *danse macabre* to the present. Issues to be discussed include separation and loss, mourning and melancholia, violence, eroticism and sexual difference. Texts will include Villon, Montaigne, Bossuet, Pascal, Flaubert, Baudelaire, Sartre, Beckett, Beauvoir, Derrida, Blanchot and Barthes.

Prerequisite: A course in the FREN 10 series or permission of the instructor

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 53.08 - Paris, philosophies de l'espace

Instructor: See department website

Paris has been described in numerous disciplines and media: literature, philosophy, cinema, photography, painting, sociology, geography, etc. What usage schemes characterize the city? How are often conflicting identities generated when individuals seek to inhabit and negotiate the hierarchies of its neighborhoods? How do diverse thinkers, filmmakers, and photographers describe and represent the class, ethnic, and gender clashes that play out in urban space? In what ways do affective “investments” saturate Parisian streets, buildings, and businesses?

Prerequisite: A course in the French 10 series or permission of the instructor

Degree Requirement Attributes: Dist:LIT; WCult:CI

FREN 53.09 - Literary Theory in French (Semiotics and Reading)

How can we describe the nature of the relation binding a word to a thing, languages to worlds? How do we know that a word “stands for” (or, represents) an idea, an emotion, a thing, a place, or a person? How do we know what a thing like a stoplight is telling us, that it is standing in for not merely an idea but a system? In what way are the apparently most unassuming things—our clothing, our vacation plans, our hometowns or the food we eat—“saying” things about us and the world, and how might the different answers to such questions change the ways in which we think about ourselves, others, our world(s)? Such questions are the domain of what we call *semiotics* (or: the general science of signs, as Ferdinand de Saussure famously put it) and in this course, we will study some of the core theoretical formations from the twentieth century which allow us not only to ask “what do signs do and how?,” but to grapple with what “the stake of signs” (what they are, how they function) may entail for us linguistically, aesthetically, philosophically, and politically. Along with texts ranging from de Saussure to Derrida, we will also seek to bridge the gap not merely between text (i.e., signs) and context (the social-historical situations in which they get produced and produce meaning), but between theory and literature as well.

Degree Requirement Attributes: Dist:LIT; Lang:LRP; WCult:CI

FREN 55 - French Culture and Politics

Instructor: See department website

This course will study the broad field of French civilization with a variety of approaches. Literary texts may be studied for their political influence; literature may be seen as a way of changing history or a reflection of history. Writings on cultural or political issues, by such figures as Montaigne, Diderot or de Staël, may also be included as may more current works from the field of cultural criticism.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 55.04 - India in the French Imagination

Instructor: Beasley

The West is often seen as having exerted a civilizing force on an orientalized, inferior, homogenous East. In this course, we will challenge this prevalent view of the relationship between East and West by focusing on France’s encounter with one member of the oriental pantheon, India. We will examine encounters between India and France in architecture such as Versailles and the Taj Mahal, in literary and philosophical discussions and contrast France’s relationship to India with those established with other “orients” using travel narratives, correspondence, novels, theater, newspapers, fables, and the work of cultural historians.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 55.06 - Politics and French Intellectuals

Instructor: Kritzman

The modern intellectual was invented in France at the time of the Dreyfus affair. In the twentieth century, French intellectuals were seen as moral guides and social critics. They engaged in philosophical speculations by bridging theory with practice. During political crises, intellectuals engaged in public debate as a means of influencing society. We will examine figures such as Zola, Benda, Breton, Sartre, Camus, Beauvoir, Aron, Foucault, Ben Jelloun, Derrida and Kristeva.

Degree Requirement Attributes: Dist:TMV; WCult:W

FREN 55.07 - Propaganda and Public Opinion from Napoleon to World War II

This course studies the political tools used by Napoleon to control public opinion as he enacted his vision of the French nation after the Revolution. We will trace back some of his major philosophical Enlightenment influences

in order to consider the legitimacy of his claim of being an heir of the Revolution and will examine the means by which Napoleon controlled public opinion. Finally, we will examine the failure of Napoleon's propaganda system throughout Europe using the German states as a case study.

Cross-Listed as: HIST 47.02

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 60 - Gender and French Literature

Instructor: See department website

Intersections of gender and literary expression will be studied from a variety of perspectives: gender and authorship (women writers, *écriture féminine*, comparative analysis of masculine/feminine treatments of genres or themes); gender and reading (do men and women read differently? do certain texts address a specifically gendered readership?); gender and literary form (the lyric, the romance plot); representations of men and women in certain movements or periods (the female body, women/men as subjects or objects of representation).

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

FREN 7 - First-Year Seminars in French Literature

Instructor: Sanders

FREN 70 - New Directions in Francophone Literature and Culture

Instructor: See department website

This course will involve the study of Francophone literature and culture outside Europe. This may include the cultural production of Africa, North Africa, the Middle East, the Caribbean, Québec, and Southeast Asia. The course will introduce students to writing, cinema, and music produced by misfits, outsiders, and figures marginal to France and the French republic of letters. Readings are accompanied by class visits by the authors whenever possible. The course has three main objectives:

1. To situate modern and contemporary francophone literary and cultural production within the context of an aesthetic history: Who and what are the precedents to today's books, cinema, and music?
2. To underscore that the French language is neither French, nor belongs to France: What makes a language so capacious, plastic, and malleable?
3. To enable and empower students to think, speak, and write freely and creatively in their own idiosyncratic version/vision of French: How can a foreign language be transformed into an intimate language?

These will be the principles guiding our explorations of some of the most exciting and provocative cultural

production in French today. Readings may include texts by PNL, Françoise Vergès, Kaoutar Harchi, Elsa Dorlin, Abdelkèbir Khatibi, Assia Djebar, David Diop, Laure Murat, Abdellah Taïa, Georges Henein, Edmond Jabès, Joyce Mansour, Habib Tengour, Abdelwahab Meddeb, Linda Lê, Hubert Aquin, Andrée Chédid, Nadia Tuéni, Aimé Césaire, Édouard Glissant, Maryse Condé, and Évelyne Trouillot.

FREN 70.02 - Francophone Literature

This course will involve the study of Francophone literature outside Europe. This may include the literature of Africa, the Caribbean, Québec and Southeast Asia. A comparative study of urban and globalized Francophone cultures (Port-au-Prince, Dakar, Algiers, Tangiers, Saigon, Brussels, Paris), the attendant challenges and effects of globalization, including immigration, national politics, gender, sexuality, as well as ecology and economics, and how the literary or filmic imagination captures these issues. Readings by Kane, Sembène, Beyala; Lê, Lefèvre; ben Jelloun, Allouache, Chraïbi; Chauvet, Ollivier, Étienne, Césaire, Glissant. Walker.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

FREN 75 - French Film

Instructor: See department website

This course will focus on one of the following: an individual filmmaker, a significant movement or period, or a major theme in French cinema. Students will become familiar with aspects of French cinematic history as well as with important concepts in film analysis.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 75.01 - Faces of the Criminal

Instructor: See department website

This course will examine the history of French film through the prism of its representations of criminality. Assigned films may include works by Marcel Carné, Henri-Georges Clouzot, René Clair, Joseph Losey, Jean Renoir, Louis Malle, Jacques Becker, Jean-Pierre Melville, Alain Resnais, Bertrand Tavernier, Michael Haneke, François Ozon, Bertrand Blier, Agnès Varda, Jean-Luc Godard, Maurice Pialat, Claude Chabrol, Robert Bresson, Luis Buñuel, Gaspard Noé, Alain Guiraudie, and Jacques Audiard.

Prerequisite: A course in the FREN 10 series or permission of the instructor.

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 75.02 - Toward a History of French Cinema

Instructor: See department website

France gave birth to cinema in 1895. Since then, French cinema has influenced not only French society, but filmmakers around the world. In this course, we will explore silent masterpieces, New Wave film, and movies of the 21st century to examine the evolution of French film and its impact on French culture. Our analyses will include in-class film excerpts and a selection of movies that will be available to you on DVD or to stream.

Prerequisite: A course in the French 10 sequence or permission of the instructor

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 75.03 - Cinema and Modern Life

Instructor: See department website

This course will propose a historical overview of French cinema, with a particular emphasis on the relationship between cinema and the idea of the modern or modernity. How was cinema perceived as a modern, technological art? How was cinema positioned in relation to utopian and dystopian visions of industrial capitalist modernity? How did cinema contribute to these visions? To respond to these questions, this course will examine texts and films associated with many of the most important cultural, intellectual, and political movements in twentieth-century France: socialism, communism, anarchism, naturalism, surrealism, modernism(s), poetic realism, Left Bank cinema, the New Wave, *cinéma vérité*, formalism, *le cinéma du look*, postmodernism(s).

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 75.04 - French Cinema From the Golden Age to the Present

An overview of French cinema from the silent era to the contemporary. Examines films associated with major social and cultural movements in France – surrealism, modernism(s), poetic realism, Left Bank cinema, the New Wave, social cinema, postmodernism(s), feminist and queer cinema, postcolonial cinema – as well as genres like melodrama, comedy, romance, crime film.

Degree Requirement Attributes: Dist:ART; WCult:W

FREN 8 - Exploring French Culture and Language

Instructor: See department website

Practice in the active use of the language combined with an introduction to major aspects of French society. Each week students will write papers and participate in discussions based on books, articles, and films emphasizing social and historical concepts. Not open to students who have received credit for FREN 09.01.

Prerequisite: FREN 3, or equivalent preparation.

Degree Requirement Attributes: Dist:SOC; WCult:W

FREN 87 - Honors Thesis Reading and Research

A program of individual study directed by a faculty member. A proposal signed by the faculty advisor must be submitted to the department for approval by June 1st of the student's junior year.

Offered: Fall, Spring, Summer, Winter.

FREN 88 - Independent Reading and Research

Students may arrange a program of study and research with an individual faculty member. A student proposal, signed by the independent study advisor, must be submitted to the chair of the department by the fifth day of classes of the relevant term.

FREN 89 - Honors Thesis

Honors students will arrange a program of study and research during the winter or spring term of the senior year with an individual faculty member. A thesis written in French and a public presentation are the standard culmination of this course. A student proposal signed by the faculty advisor must be submitted to the department for approval by the fifth day of classes of the designated term. For more information about application procedures, please review the department website.

Offered: Fall, Spring, Summer, Winter.

FREN 9.01 - French Civilization LSA

Studies in such aspects of the cultural heritage as French art, music, and history from the Middle Ages to the modern period. Credit for this course is awarded to students who have successfully completed the Dartmouth Language Study Abroad Program at one of its university centers in France. Not open to students who have received credit for FREN 008.

Degree Requirement Attributes: Dist:INT; WCult:W

FRIT - French and Italian in Translation Courses

To view *French and Italian in Translation requirements*, [click here](#) (p. 397).

FRIT courses are taught in English. Students taking the course for major or minor credit in Italian or French, will attend a weekly x-hour and do all written work in Italian or French.

FRIT 31 - How Languages are Learned

Instructor: Convertini

Many approaches to language teaching and learning have been proposed and implemented over time. From learning grammar rules and lists of vocabulary to memorization and practice of correct sentences to natural communication, project work, communicative language teaching, and

content-based learning, this course will introduce students to some of the language acquisition research that will help them understand how languages are learned. Topics explored in the course will include language awareness, bilingualism, early-child language learning, the major trends in twentieth-century language teaching, and the role of technology in language learning. The course will also offer students the opportunity to reflect on language learning on a personal level, to find out how they think as language learners and how they can empower themselves to learn languages in an active and engaged manner. Hands-on activities, including class observations, textbook evaluations, and interviews with language learners, will complement the course. Open to all students. Text, lectures, and discussion in English. Students taking the course for major or minor credit in Italian will attend a weekly x-hour and do all written work in Italian. Not open to students who have received credit for FRIT 093.

Degree Requirement Attributes: Lang:LRP; Dist:SOC; WCult:W

FRIT 37 - Topics in Literature and Culture

Offerings of this course will consist of various topics in Literature and Culture.

Open to all students. Text, lectures and discussion in English: Students taking the course for major or minor credit in French or Italian will attend a weekly x-hour and do all written work in the target language.

FRIT 37.04 - European Fairy Tales

Instructor: See department website

In this course we will study the evolution of the forms and contents of the rich European fairy-tale tradition, from the Renaissance to our times. Along the way we will address questions concerning canon formation; the role of “marvelous” genres such as the fairy tale in socialization and the expression of national identity; the relation between oral folk narratives and written literary tales; and the reworking of fairy-tale subjects and motifs in contemporary culture. We will also acquaint ourselves with a variety of critical approaches to the fairy tale, and create tales of our own in a special storytelling workshop.

Cross-Listed as: COLT 39.03

Degree Requirement Attributes: Dist:LIT; WCult:W

FRIT 37.07 - Do the Right Thing! Creativity and Public Engagement in Italy and the United States

Instructor: See department website

This course explores the confluence of art, literature, cinema, political engagement, and activism in the nineteenth, twentieth, and twenty-first centuries between

Italy and the United States. Students will familiarize themselves with the most controversial and influential artists and intellectuals of these periods from both countries and they will also have the opportunity to spend two weeks collaborating with an Italian street artist on a project that integrates learning and awareness into practice.

Cross-Listed as: COLT 56.02

Degree Requirement Attributes: Dist:ART; WCult:W

FRIT 37.08 - Obsessive Affinities Contemporary French & American poetry

Instructor: See department website

This deeply experiential course examines the rich history of transatlantic desire, negotiated over the love of poetry. The United States has always figured heavily in the collective French imaginary ever since the American Revolution, for instance in the works of Tocqueville and Chateaubriand. American literature, however, gains particular prominence toward the mid-twentieth century with the transatlantic travels of Simone de Beauvoir, André Breton, Jean-Paul Sartre, and Philippe Sollers among authors, to the point that French writers began wondering how one can even be French in the first place. The course explores this crisis in national identity through a series of important poetic Franco-American friendships and collaborations: Edmond Jabès and Rosmarie Waldrop; Emmanuel Hocquard and Michael Palmer; Serge Pey and Allen Ginsberg; the Fondation Royaumont; the poetry collective *double change*; among others.

Cross-Listed as: COLT 31.02 CRWT 40.09

Degree Requirement Attributes: Dist:LIT; WCult:W

FRIT 37.10 - French Gastronomy: Culture et Cuisine

For over 300 years the world has associated France with the gastronomic arts. In 2010 the “gastronomic meal of the French” was inscribed by UNESCO on its list of the “Intangible Cultural Heritage of Humanity.” In this interdisciplinary course, we will examine the culture of French gastronomy from its origins to the present. We will use the case of France to illustrate how a country’s culinary culture illuminates its history, politics, economics, and “mentalités,” thought patterns. There are no prerequisites for the course; students taking the course to count towards their French major/minor should only enroll if they have already received credit for FREN 008.

Degree Requirement Attributes: Dist:INT or LIT; Lang:LRP; WCult:W

ITAL - Italian Courses

Italian Introductory Language Sequence

An introduction to Italian as a spoken and written language. The work includes regular practice in class and scheduled drill-sessions in understanding and using the

spoken language. Written exercises and elementary reading materials serve for vocabulary building and discussion.

ITAL 1: Introductory Italian I

An introduction to Italian as a spoken and written language, with emphasis on practical conversation. The course includes regular practice in class and scheduled drill-sessions in understanding and using the spoken language. Does not serve in partial satisfaction of the Distributive or World Culture Requirements. This course is not open to students who have received credit for ITAL 11.

ITAL 2: Introductory Italian II

Rapid review and continued study of the fundamentals of Italian, with intensive work in vocabulary building. The course will also include an introduction to the culture and civilization of Italy. Open to students by qualifying placement or to students who have passed ITAL 1. Does not serve in partial satisfaction of the Distributive or World Culture Requirements. This course is not open to students who have received credit for ITAL 11.

ITAL 3 Introductory Italian III

This course is designed to reinforce and refine spoken and written language skills through a review of grammar, exposure to a broad spectrum of language ranging from colloquial to literary styles, and the use of samples of Italian language from multiple sources such as advertising, comics, television and literature. Frequent compositions, quizzes, plus linguistic and thematic analysis of texts. Open to students by qualifying placement or to students who have passed ITAL 2, ITAL 11 or ARTH 12. Does not serve in partial satisfaction of the Distributive or World Culture Requirements.

ITAL 11 Intensive Italian

1-credit course is designed for students with little or no knowledge of the Italian language, but who have a strong background in another Romance language (i.e. Spanish, French, Rumanian, Portuguese, Catalan, or Latin). Italian 11 is an accelerated course that combines Italian 1 and 2 in one term offering an exciting and fast-paced atmosphere to learn Italian. The course will have a hybrid component, that through cultural, grammar and multimedia introductory exercises will prepare students for the in-class activities. In this course, students will learn to talk about familiar events in the present and the past, as well as formulate plans for the future. Weekly cultural videos will situate in context the grammatical content of the course making it relevant and meaningful. Students will be actively engaged in a variety of creative written and oral activities that will help them develop their language skills. Upon successful completion of this course, students

will be able to sign up for Italian 3 or apply for our Italian LSA+ program in Rome. Students who have not yet taken ITAL 003 may take the course after completing ITAL 011. The goal is to facilitate the acquisition of the target language, therefore this course will be conducted entirely in Italian. This course is not open to students who have received credit for Italian 1, 2 or 3.

Italian Upper-Level Courses

ITAL 9: Italian Culture

Expands on the skills acquired in the Italian language sequence (Italian 1, 2, 3, and/or the LSA) as well as offering a transition to Italian 10 and our upper-division literature and culture courses. This course introduces students to modern and contemporary Italian literature, culture and society through a focus on topics such as evolving political and regional identities, gender relations, the role of the media, and the culture of daily life. Students expand their active use of Italian, refine communicative, reading, and writing strategies, and comprehensively review grammar. Course work includes active participation in class discussions, oral presentations, and regular reading and writing assignments in the areas of narrative and poetry, cinema, music, and journalism. Instructors usually choose one or several "anchor" texts around which coursework revolves. Prerequisites: ITAL 3 or permission of the instructor.

ITAL 10: Italian Texts and Contexts

An introduction to Italian literature, culture, and media across time that provides students with the tools to read and analyze texts critically. Through a selection of literary works, films, and other cultural artifacts, students will explore key themes such as the city, food culture, the environment, and evolving artistic forms. The course examines how ideas, genres, and narratives develop and intersect. Topics and materials vary based on the instructor's focus, allowing for an engaging and dynamic exploration of Italy's literary and cultural landscape. Not open to students who have received credit for ITAL 10.01-10.99. Prerequisites: Italian 3 or permission of the instructor. W and LIT.

Please refer to the website for the upper-level Italian courses offered.

ITAL 1 - Introductory Italian I

Instructor: See department website

An introduction to Italian as a spoken and written language, with emphasis on practical conversation. The course includes regular practice in class and scheduled drill-sessions in understanding and using the spoken language. Does not serve in partial satisfaction of the Distributive or World Culture Requirements. This course is not open to students who have received credit for ITAL 11.

ITAL 2 - Introductory Italian II

Instructor: See department website

Rapid review and continued study of the fundamentals of Italian, with intensive work in vocabulary building. The course will also include an introduction to the culture and civilization of Italy. Never serves in partial satisfaction of the Distributive or World Culture Requirements. This course is not open to students who have received credit for ITAL 11 or ARTH 26.03.

Prerequisite: ITAL 1 or qualifying placement

ITAL 3 - Introductory Italian III

Instructor: See department website

This course is designed to reinforce and refine spoken and written language skills through a review of grammar, exposure to a broad spectrum of language ranging from colloquial to literary styles, and the use of samples of Italian language from multiple sources such as advertising, comics, television and literature. Frequent compositions, quizzes, plus linguistic and thematic analysis of texts. Does not serve in partial satisfaction of the Distributive or World Culture Requirements.

Prerequisite: ITAL 2, ITAL 11 or ARTH 12 or qualifying placement

ITAL 4 - Reading Rome

Instructor: Canepa

This course introduces students to various topics of Italian culture through specific examples taken from the context of Italy's capital, largest city, and one of the West's most complex symbols: Rome. Topics include stereotypes and the idea of national identity, society and politics, youth culture, family and gender roles, the arts, and gastronomy. Students will learn to engage with Italian cultural phenomena through in-class lectures and discussions, frequent site visit sites pertinent to the material we study, as well as 6 half-day guided tours of important monuments and museums of Rome.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ITAL 7 - First-Year Seminars in Italian Literature

Instructor: Canepa

ITAL 8 - Exploring Italian Culture and Language

Instructor: See department website

This course will serve as an introduction to Italian culture and society in the past and the present. It will focus on topics such as evolving political and regional identities, gender relations, the role of the media, and the culture of daily life, as they appear informs as diverse as narrative and poetry, cinema, music, and journalism. Students will also focus on specific grammatical and stylistic issues in order to improve their fluency in Italian. Course work will consist of frequent essays, student-led discussions and experiential learning laboratories in the city.

Prerequisite: Acceptance into the Dartmouth Language Study Abroad Program or Advanced Language Study Abroad Program.

Degree Requirement Attributes: Dist:SOC; WCult:W

ITAL 9 - Advanced Language Through Culture

Instructor: Convertini

Italian 9 expands on the skills acquired in the Italian language sequence (Italian 1, 2, 3, and/or the LSA) as well as offering a transition to Italian 10 and our upper-division literature and culture courses. This course introduces students to modern and contemporary Italian literature, culture and society through a focus on topics such as evolving political and regional identities, gender relations, the role of the media, and the culture of daily life. Students expand their active use of Italian, refine communicative, reading, and writing strategies, and comprehensively review grammar. Course work includes active participation in class discussions, oral presentations, and regular reading and writing assignments in the areas of narrative and poetry, cinema, music, and journalism. Instructors usually choose one or several "anchor" texts around which coursework revolves.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 11 - Intensive Italian

Instructor: See department website

This 1-credit course is designed for students with little or no knowledge of the Italian language, but who have a strong background in another Romance language (i.e. Spanish, French, Romanian, Portuguese, Catalan, or Latin). Italian 11 is an accelerated course that combines Italian 1 and 2 in one term, offering an exciting and fast-paced atmosphere to learn Italian. The course will have a hybrid component that will prepare students for in-class activities through cultural, grammar and multimedia introductory exercises. Weekly cultural videos will situate

in context the grammatical content of the course, making it relevant and meaningful. Students will be actively engaged in a variety of creative written and oral activities that will help them develop their language skills. Upon successful completion of this course, students will be able to sign up for Italian 3 or apply for our Italian LSA program in Rome. The goal is to facilitate the acquisition of the target language; this course will be conducted entirely in Italian. Students who have not yet taken ITAL 003 may take the course after completing ITAL 011. This course is not open to students who have received credit for ITAL 1 or ITAL 2.

ITAL 12 - Advanced Writing and Speaking in Italian

Instructor: See department website

An advanced language and composition course in which students will work with a wide range of linguistic and cultural materials in order to achieve competence in Italian grammar, and oral and written expression.

Prerequisite: Acceptance into the Dartmouth Advanced Language Study Abroad Program

Degree Requirement Attributes: WCult:W

ITAL 14 - Journey to Italy: An Introduction to Italian Culture

Instructor: Convertini

This course introduces students to Italian culture through a representative selection of texts and topics from past to present, as well as encouraging students to think critically about notions of culture and identity. Topics include stereotypes and the idea of national identity, modern history, society and politics, food culture, the visual arts, music, cinema, religion, science and technology, the environment, Made in Italy, immigration, sports, and mafia. In many units, guest lecturers will widen the discussion by considering the global impact of Italian cultural production across time and space. Students will actively engage with Italian cultural phenomena through in-class lectures and discussions, hands-on exercises, and site visits.

Degree Requirement Attributes: Dist:SOC; WCult:CI

ITAL 21 - Early Italian Literature and Culture

Instructor: See department website

This course will offer an introduction to medieval Italian literature and culture through readings of literary masterworks of the period. The approach will be interdisciplinary: we will consider connections between literary texts and medieval art, music, philosophical currents, and historical events. Specific topics will vary for each offering; themes may include the importance of writing in the vernacular, discourses of love, conceptions of sex roles and gender, personal and political aspirations of the self in society, and the constitution of ideal forms of

social organization. Readings will be selected from Dante, Boccaccio, Petrarch, Caterina da Siena, and others.

Prerequisite: Italian 10 or permission of the instructor

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 22 - Humanism and Renaissance

Instructor: Canepa

This course explores the extraordinary cultural production of Italy from the late fourteenth to the end of the sixteenth century—the Renaissance. Specific topics will vary for each offering; students will examine broader social and historical contexts through themes such as the birth of humanism; attitudes toward the ancient world and the “discovery” of new worlds; developments in the visual arts and in science; court society; sexuality and courtesan culture; gender and family life; religious reform. Authors may include Petrarch, Alberti, Machiavelli, Michelangelo, Isabella di Morra, Veronica Franco, Ruzante, Castiglione, Ariosto, Bandello, Tasso, and others.

Prerequisite: ITAL 10, or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 23 - Seventeenth and Eighteenth-Century Italian Literature and Culture

Instructor: Canepa

This course explores the transformations that marked Italian literature and arts over the course of the seventeenth and eighteenth centuries, from the Baroque culture of crisis and change to the Enlightenment's reassessment of earlier forms of knowledge and representation. Specific topics will vary for each offering; themes may include the poetics of the marvelous, popular culture, the *nuova scienza*, evolving gender identities, the dialogues among the arts, the "cult of reason," and the relevance of both Baroque and Enlightenment categories to post-modernity. Emphasis is on the fundamental interdisciplinarity of this period's culture and on its formal innovations in genres including the fairy tale, travel literature, the *commedia dell'arte*, the novel, and the opera. Authors and artists may include Basile, Marino, Galileo, Tarabotti, Isabella Andreini, Monteverdi, Bernini, Caravaggio, and Goldoni.

Prerequisite: ITAL 10, or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 24 - Nineteenth-Century Italian Literature and Culture

Instructor: See department website

This course examines the changes in literary vision and artistic forms from the beginning of the nineteenth century, through the country's unification, to the First World War. Emphasis will be placed on Italy's growing self-awareness as a nation and on analysis of aesthetic and intellectual

issues. Specific topics will vary for each offering; themes may include the emergence and significance of popular art such as satire and cookbooks; opera and national identity; and women's literature as an innovative cultural force. Readings and artists may include Foscolo, Leopardi, Manzoni, Verga, Verdi, Puccini, Marchesa Colombi, Collodi, Artusi, Montessori, Grazia Deledda, and F. T. Marinetti.

Prerequisite: ITAL 10, or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 25 - Twentieth and Twenty-first Century Italian Literature and Culture

Instructor: See department website

This course examines the radical transformation of literary form and vision that characterizes twentieth and twenty-first century Italy with its two World Wars, its colonial conflicts, and the challenges to Italian identity posed by modernization, immigration, and globalization. We will use poetry, fiction, autobiography, political writings, television, documentaries, and film to explore cultural movements such as the avant-garde and neo-realism. Specific topics will vary for each offering; themes may include modernism, fascism, the resistance movements, and terrorism. Readings will be both canonical and non-canonical and may include, for example, recent immigrant and minority writers. Readings and films may include works by Bontempelli, Montale, Moravia, Morante, Calvino, Pavese, Maraini, Fellini, Tornatore, Wertmueller, and Jadelin Mabiala Gambo.

Prerequisite: ITAL 10, or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 25.01 - Terrorism Made in Italy

At the end of WWII a number of amnesties allowed former fascists, some of them guilty of genocide, to go free. Italy did not have a postwar process of truth and reconciliation. While fascism was deemed unconstitutional in the newly born republic, fascist groups continued to flourish, attempting numerous coups-d'etat aimed at re-establishing a fascist regime. Consequently, terrorist groups of the extreme left emerged and targeted those in government who had been so tolerant of fascists. Through historical documentation, films, literature, and personal testimonies, we will explore these tumultuous thirty years of Italian history.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ITAL 26 - Italian Cinema

Instructor: See department website

Conducted in Italian, this course introduces students to classic Italian cinema, including its history and its predominant genres—from the silent film to comedy and melodrama and thriller. Students will become familiar with Italian cinematic movements such as Neorealism, directors such as Federico Fellini and Roberto Benigni, and with important concepts in film analysis. Not open to students who have received credit for ITAL 15.

Degree Requirement Attributes: Dist:ART; WCult:W

ITAL 27 - Topics in Italian Literature

Offerings of this course will consist of various topics in Italian literature.

ITAL 27.01 - Animals and Animality in Modern Italian Literature and Thought

Instructor: See department website

With the modernization of their country, Italian authors have been increasingly interested in animals, using representations of non-human creatures to reflect upon themselves and their changing relationships with the environment. This course focuses on modern Italian literary and philosophical texts (from Leopardi's *Operette Morali* to Agamben's *L'aperto*) which strongly feature non-human animals and animality, in order to explore how modern Italian culture offers an original contribution to the re-thinking of the limits of anthropocentric humanism.

Prerequisite: Italian 10 or permission of the instructor

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 27.02 - Crossing Cultures: Translation in Theory and Practice

Instructor: Canepa

Human communication depends on translation. Much of what we know about worlds different from our own comes through translations and the dialogues between languages and cultures that they create. In this course we will focus on translation between Italian and American cultures, and consider the larger question of the representation of "foreignness." We will explore the theory and practice of translation in various contexts—literature, film, popular media—and gain direct experience in the art of translation through workshops and a final project.

Prerequisite: Italian 10 or permission of instructor

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ITAL 27.03 - Miracolo! Italy, 1958-63

The years of the economic "boom," or "miracle" following post-WW II reconstruction were, for Italy, a time of unprecedented economic growth and social transformations, of new hopes about also new challenges. As Italy left behind its predominantly agrarian past and

entered full force into the global industrial economy, Italians rapidly made themselves modern: investing in new status symbols and consumer goods in the form of cars, TVs, and refrigerators, listening to new music, cultivating new pastimes and lifestyles, and even making more babies. Yet with modernization came contradictions. Optimism for the future was accompanied by a loss of traditional points of reference and community; economic expansion, by a widening of the gap between Northern and Southern Italy; mass exodus from rural areas to cities, by the creation of the no-mans lands of the urban *borgate* or shantytowns; and the proliferation of goods, by the perils of unbridled consumerism and existential crisis.

In this course we will explore how the developments and radical shifts of these years were investigated and represented in literature, film, and music, by a remarkable group of writers, film directors, and including Pier Paolo Pasolini, Italo Calvino, Natalia Ginzburg, Alberto Moravia, Anna Maria Ortese, Dario Fo and Franca Rame, Federico Fellini, and others.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 27.04 - The Revolutionary Classroom. Lessons from Great Italian Educators

Great educators continue to speak to us long after they are gone. This course explores the values and lessons of visionary Italian educators. From Maria Montessori's child-centered approach to Don Milani's focus on social justice, Gianni Rodari's imaginative storytelling, and Alberto Manzi's educational television—we will examine how their ideas reshaped education. Through readings, films, and hands-on projects, we will reflect on their relevance in the classroom and beyond today.

Degree Requirement Attributes: Dist:SOC; WCult:W

ITAL 33.01 - Into and Beyond Dante's Inferno -

The work of Dante Alighieri (1265-1321) stages from beginning to end a struggle between personal desire, social obligation, and the conflicting cultures of Christian religion and the body politic. The unprecedented fusion Dante made of these elements in the *Commedia* [The *Divine Comedy*] has guaranteed his great poem a vast public, extending across world cultures and the seven centuries since it initially traveled among elite readers in north-central Italy in the early decades of the fourteenth century. This course will first examine the development of Dante's poetic voice in *La vita nova* [The *New Life*, ca. 1293-94] and then focus on its subsequent expansion into an all-encompassing vision of life and death in *Inferno* [Hell, ca. 1306-09], the first of the three canticles of the *Commedia*. Situating Dante in his own time and place will be essential to our analysis of his poetry, but attention to the multiple ways that Dante's work has been interpreted, translated, and appropriated in other periods, languages, and media will provide a critical framework for

understanding its enduring appeal, why – in the words of Italo Calvino – it “has not finished saying what it has to say.” Readings, lectures, discussion, and written work – to include a mid-term exam, two short essays, and a final digital project – will be in English. Students taking the course for major or minor credit will attend a weekly X-hour and write the two essays in Italian.

Cross-Listed as: REL 32.02

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 34 - Renaissance Studies in Translation

Instructor: See department website

An examination of Italian Renaissance masterpieces in translation, which will explore the centrality of Italian ideas and ideals to the development of literary and cultural norms in Italy and Europe. Topics offered under the ITAL 034 rubric will vary.

Open to all students. Text, lectures and discussion in English. Students taking the course for major or minor credit in Italian will attend a weekly x-hour and do all written work in Italian.

ITAL 34.01 - Sex and Gender in the Italian Renaissance

This interdisciplinary course explores conceptions of sex and gender in Italian Renaissance literature and visual art. We'll trace a social history of love and sex in Renaissance Italy, examine how sex and sexual bodies were represented in literature and in images, and look at how governments and the Church attempted to manage and punish sexual transgression. Themes we will investigate include representations of male and female bodies, gender roles for both men and women, sexual violence, same-sex desire, and cross-dressing.

Open to all students. Text, lectures and discussion in English. Students taking the course for major or minor credit in Italian will attend a weekly x-hour and do all written work in Italian.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 35.01 - From Dagos to Sopranos

Are Italians white? Where does the word “dago” come from? What is “dago red”? Can Italians be “Afrocentrists”? Are Italians racist? What do you know about the mafia? These and other questions will be at the center of this course. We will also work on the portrayal of ItalianAmericanness in “The Sopranos,” “The Godfather,” and Jim Jarmush's “Ghost Dog.” The last week of the course will be devoted to the music by Italian Americans such as Sinatra and Madonna.

Open to all students. Text, lectures and discussion in English. Students taking the course for major or minor

credit in Italian will attend a weekly x-hour and do all written work in Italian.

Cross-Listed as: COLT 57.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

ITAL 35.02 - How to Be a Fascist

How do people become fascists? How do they rise to power? Why did people support fascism? We will focus initially on the original model for fascist dictatorships, that is Italian fascism, but we will also have in-class presentations by Dartmouth professors on German, Spanish, French and Japanese forms of fascism. This is a course that will concentrate on history, film, literature, and fashion in order to talk about the slippery definitions of fascism.

Cross-Listed as: COLT 57.09 INTS 17.10

Degree Requirement Attributes: Dist:INT; WCult:W

ITAL 35.03 - Migration, Ecology, and the Mediterranean

Why do people migrate? How does their migration impact the places they cross? How have migration trajectories changed in the last 150 years? Why do people embark on a risky journey across the Mediterranean Sea? How do their destination countries react to their arrivals? How does migration change Europe? These are some of the questions we will try to answer in this class. Using an interdisciplinary approach, we will look at the impact of migration on the environment and the changing of old ideas about what Europe looks like now. Through an interdisciplinary approach using material that originates from both the humanities (film and literature) and the social sciences (mainly geography and sociology), we will explore the present and discuss the possible futures of migrations across the Mediterranean.

Cross-Listed as: COLT 57.11

Degree Requirement Attributes: Dist:INT; WCult:W

ITAL 37 - Topics in Literature and Culture

Instructor: Canepa

Offerings of this course will consist of various topics in Literature and Culture. Open to all students. Text, lectures and discussion in English. Students taking the course for major or minor credit in Italian will attend a weekly x-hour and do all written work in the Italian.

ITAL 37.01 - Nature: A Cultural History

Civilization's essence lies in its distinction from nature. Both physically and symbolically, city walls separate the world of citizens, societies, and cultures from the uncultivated land, the wild beasts, and the illiterate savages that lie without. But how solid are these walls? And how real or even desirable are the distinctions they seek to

make? We may prefer the civilized to the wild, but do we not also, paradoxically, prefer the natural to the artificial? Is nature to be dominated, or revered? Is it our nemesis or our mother? Exploring texts in the Italian tradition, this course will trace the history of nature from the beginning of civilization to the present time, and uncover our ever changing, ever contradictory opinions about it. Students will explore how the human/nature relationship is imagined and represented in Italian literature, cinema, and art. They will also examine how these representations reflect, critique, and animate the approach that Italian culture has had toward the physical environment and its ecology, both inside and beyond the Italian peninsula. Open to all students. Texts, lectures, and discussions in English. Texts and x-hour in Italian for major or minor credit in Italian.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ITAL 37.04 - Italian Fairy Tales

We will study the rich and precocious Italian fairy-tale tradition, from the Renaissance to our times, and the ways in which its forms and contents have evolved. We will address questions concerning canon formation; the role of “marvelous” genres such as the fairy tale in socialization and the expression of national identity; and the appropriation of fairy-tale subjects and motifs by contemporary popular culture. We will also acquaint ourselves with a variety of critical approaches to the fairy tale, and consider some of the other European fairy-tale traditions, especially the French and the German.

Degree Requirement Attributes: Dist:LIT; WCult:W

ITAL 37.10 - Mafias

What is “mafia”? Organized crime, global big business, shadow state, deeply entrenched mentalities, glamorized myth, all of the above? This course focusses on Italian mafias (primarily the Sicilian Cosa Nostra) and, to a lesser degree, other Italian and Italian-American mafias. We will examine the conditions in which mafias emerged; those that make it possible for mafias to continue to thrive today; the social “codes” of the mafias, such as honor, omertà, and vendetta; and the forms that mafias take in the collective cultural imagination, in particular as they have been translated and represented in fiction and film on both sides of the Atlantic. In the process, we will explore Italian history and contemporary society and discuss topics such as the uses and abuses of power and the attraction of outlaw cultures.

This course is not open to students who have received credit for ITAL 07.07.

Cross-Listed as: COLT 57.12

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

ITAL 37.11 - Migrants, Sopranos, Race, and Italian American Film

This course considers the role of culture and identity, migration, evolution of language, gender, race, and class issues, and studies the diverse cultural and artistic productions (literary, cinematic, musical, multi-media) that exemplify the tensions and negotiations between cultures and people.

Cross-Listed as: COLT 57.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

ITAL 37.12 - A Bite-Sized History of Italy: The Story of how Italy became Italy through Food & Beverage Culture

While Italy as a nation-state has only existed since 1861, a sense of Italian identity long pre-existed that reality, thanks largely to a deeply-rooted, shared enogastronomic culture that became the envy of the world. Departing from the dormice and garum of the Roman Empire and arriving at the heresy of pineapple pizza, “A Bite-Sized History of Italy” will present a long-view, wide-lens portrait of a place that has become so well-known for its food as to almost preclude interrogation, even as it might be said that food is the very reason for its existence. Open to all students. Texts, lectures, and discussions in English. Reading, writing, and x-hour in Italian for major or minor credit in Italian.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

ITAL 85 - Independent Reading and Research

Instructor: LaGuardia

Students may arrange a program of study and research with individual faculty members. Open only to Italian, Italian Studies, and Romance Language Majors or by permission of the instructor. A proposal, signed by the faculty advisor, must be submitted to the Department for approval by the fifth day of classes of the term.

ITAL 88 - Senior Independent Reading and Research

Instructor: LaGuardia

A program of individual study directed by a member of the staff. Open only to senior Italian, Italian Studies, and Romance Language (whose primary language is Italian) Majors. A proposal, signed by the faculty advisor, must be submitted to the Departmental Committee on Independent Studies and Honors Theses for approval by the fifth day of classes of the term.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for ITAL-089 and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace

the “ON” for both ITAL-089 and this course upon completion of this course at the end of the third term of coursework.

ITAL 89 - Honors Thesis

Instructor: LaGuardia

Honors students will arrange a program of research and writing during the winter or spring term of the senior year with an individual faculty member. A thesis written in Italian and a public presentation are the standard culmination of this course. A student proposal signed by the faculty advisor must be submitted to the department for approval by June 1 of the student's junior year. For more information about application procedures, please review the department website.

Geography

Chair: Xun Shi

Professors: M. Domosh, S.E. Freidberg, C.S. Sneddon, X. Shi; Associate Professors: L.A. Leon, J.S. Mankin, A.H. Neely, J.M. Winter; Assistant Professors: E.E. Collins, J. Henderson, A.M. Varuolo-Clarke; Senior Lecturers: C.A. Fox; Adjunct Professors: L.V. Adams, D.E. Carey, J.W. Chipman; Professor Emeritus: L.E. Conkey, F.J. Magilligan, R.A. Wright.

To view Geography courses, click here.

GEOGRAPHY MAJOR, MINOR, AND MODIFICATION REQUIREMENTS**MAJOR:**

Minimum number of courses: 10

1. One *Introductory* Course: GEOG 1.01, GEOG 1.02, GEOG 2.01, GEOG 3.01, or GEOG 4.02

2. Two *Methods* Courses: GEOG 9.01, GEOG 11, or GEOG 12.01 (GEOG 12.01 is required for Senior Honors Thesis students)

3. Four *Thematic* Courses (breadth): one from each theme, Physical, Cultural-Social, Nature-Society, and GIS-Spatial Analysis

4. One *Upper Division* Course (depth): GEOG 60-80.99

5. One *Additional Geography* Course

6. One *Culminating Experience* Course: GEOG 90.01-90.05 (Advanced Seminar in Geography)

Thematic Courses:

- Physical: GEOG 5.01, 13-20.99; GEOG 1.01 or GEOG 1.02 if not taken as an Introductory Course
- Cultural-Social: GEOG 6.01, 21-36.99; GEOG 2.01 if not taken as an Introductory Course
- Nature-Society: GEOG 8.01, 37-49.99; GEOG 3.01 if not taken as an Introductory Course

- GIS-Spatial Analysis: GEOG 50-59.99; GEOG 4.02 if not taken as an Introductory Course, GEOG 9.01 if not taken as a Methods Course

MINOR:

Minimum number of courses: 7

1. One *Introductory* Course: GEOG 1.01, GEOG 1.02, GEOG 2.01, GEOG 3.01, or GEOG 4.02
2. One *Methods* Course: GEOG 9.01, GEOG 11, or GEOG 12.01
3. Four *Thematic* Courses (breadth): one from each theme, Physical, Cultural-Social, Nature-Society, and GIS-Spatial Analysis
4. One *Upper Division* Course (depth): GEOG 60-80.99 or GEOG 90.01-90.05 (Advanced Seminar in Geography)

Thematic Courses:

- Physical: GEOG 5.01, 13-20.99; GEOG 1.01 or GEOG 1.02 if not taken as an Introductory Course
- Cultural-Social: GEOG 6.01, 21-36.99; GEOG 2.01 if not taken as an Introductory Course
- Nature-Society: GEOG 8.01, 37-49.99; GEOG 3.01 if not taken as an Introductory Course
- GIS-Spatial Analysis: GEOG 50-59.99; GEOG 4.02 if not taken as an Introductory Course, GEOG 9.01 (p. 422)if not taken as a Methods Course

PRIMARY MODIFICATION (Geography modified with another major):

Minimum number of Geography courses: 8

1. One *Introductory* Course: GEOG 1.01, GEOG 1.02, GEOG 2.01, GEOG 3.01, or GEOG 4.02
2. Two *Methods* Courses: GEOG 9.01, GEOG 11, or GEOG 12.01 (GEOG 12.01 is required for Senior Honors Thesis students)
3. Three *Thematic* Courses (breadth): one from three different themes, Physical, Cultural-Social, Nature-Society, and GIS-Spatial Analysis
4. One *Upper Division* Course (depth): GEOG 60-80.99
5. One *Culminating Experience* Course: GEOG 90.01-90.05 (Advanced Seminar in Geography)
6. At least four courses in modifying department in consultation with Geography and Modifying Department Chairs

Thematic Courses:

- Physical: GEOG 5.01, 13-20.99; GEOG 1.01 or GEOG 1.02 if not taken as an Introductory Course
- Cultural-Social: GEOG 6.01, 21-36.99; GEOG 2.01 if not taken as an Introductory Course
- Nature-Society: GEOG 8.01, 37-49.99; GEOG 3.01 if not taken as an Introductory Course
- GIS-Spatial Analysis: GEOG 50-59.99; GEOG 4.02 if not taken as an Introductory Course, GEOG 9.01 (p. 422)if not taken as a Methods Course

SECONDARY MODIFICATION (Another major modified with Geography):

Minimum number of Geography courses: 5

1. One *Introductory* Course: GEOG 1.01, (p. 421)GEOG 1.02, GEOG 2.01, GEOG 3.01, or GEOG 4.02
2. One *Methods* Courses: GEOG 9.01, GEOG 11, or GEOG 12.01
3. Two *Thematic* Courses (breadth): one from each theme, Physical, Cultural-Social, Nature-Society, and GIS-Spatial Analysis
4. One *Upper Division* Course (depth): GEOG 60-80.99 or GEOG 90.01-90.05 (Advanced Seminar in Geography)

Thematic Courses:

- Physical: GEOG 5.01, 13-20.99; GEOG 1.01 or GEOG 1.02 if not taken as an Introductory Course
- Cultural-Social: GEOG 6.01, 21-36.99; GEOG 2.01 if not taken as an Introductory Course
- Nature-Society: GEOG 8.01, 37-49.99; GEOG 3.01 if not taken as an Introductory Course
- GIS-Spatial Analysis: GEOG 50-59.99; GEOG 4.02 if not taken as an Introductory Course, GEOG 9.01 (p. 422)if not taken as a Methods Course

URBAN STUDIES MINOR:

Minimum number of courses: 6

1. Two *Required* courses: GEOG 6.01 and GEOG 25
2. Two *Geographic Perspectives* Courses
3. Two *Multidisciplinary Perspectives* Courses

Perspectives Courses:

- Geographic: GEOG 28, GEOG 29, GEOG 46, GEOG 57, GEOG 67.01
- Multidisciplinary: ANTH 58, ARTH 17.01, ARTH 47.01, ECON 38, ENGS 44, HIST 32, PBPL 81.03, REL 30, SART 65

CLIMATE CHANGE SCIENCE MINOR:

Minimum number of courses: 6

1. One *Foundation* Course: GEOG 1.01, GEOG 15.01, EARS 14, EARS 15
2. Four *Elective* Courses: at least two Climate Drivers and Impacts and at least one Analysis
3. One *Upper Division* Course: GEOG 60, GEOG 61.01, EARS 78

Elective Courses:

- Climate Drivers and Impacts: GEOG 5.01, GEOG 16.01, GEOG 17.01/EARS 33, GEOG 18.01, GEOG 19.01, GEOG 62.01, EARS 34, EARS 70, EARS 75, BIOL 26, ENV5 15, ENV5 30
- Analysis: GEOG 9.01, GEOG 51/EARS 65, GEOG 54, GEOG 77, EARS 17, ENGS 20, BIOL 29, BIOL 59, COSC 1, MATH 40, MATH 46, MATH 50, MATH 70

GEOGRAPHY HONORS PROGRAM:

Students apply to the honors thesis program by submitting a formal letter of application and a preliminary proposal to the department in the Junior Year Spring Term. The department offers preliminary acceptance to the honors program based on these documents and an assessment of major and overall GPA. Proposals and research plans are developed further in Geography 90 during Senior Year Fall Term, with research occurring anytime Junior Year Summer Term to Senior Year Winter Term. Thesis public presentation and defense occurs in Senior Year May, with the final draft due shortly after the defense.

PREPARATION FOR GRADUATE STUDY:

The Department of Geography is committed to encouraging and preparing students to pursue graduate studies in geography and related disciplines. Interested students should contact a geography faculty member to receive mentorship in major design and graduate school preparation.

GEOG - Geography Courses

To view Geography requirements, click here (p. 419).

GEOG 1.01 - The Natural Environment

Our natural environment results from an array of climatic, biogeographic, and other physical processes that have changed dramatically over time in response to natural and human-induced disturbance. This course begins by presenting the fundamentals of atmospheric processes; then examines the physical controls on the resulting global pattern of landforms, soils, and vegetation biomes across spatial and temporal scales; and ultimately explains the form and pattern of the earth's physical geography. Emphasis is also placed on demonstrating the role of human disturbance on these natural processes through shifts in global climate, land use, deforestation and other anthropogenic mechanisms. The media of presentation will be lecture and both field and laboratory exercises.

Degree Requirement Attributes: Dist:SLA

GEOG 1.02 - The Natural Environment

Instructor: Mankin, Varuolo-Clarke

This course is an introduction to the study of physical systems that form the basics of the global environment: weather and climate, soils and vegetation, landforms and landscape evolution. We will be examining the spatial patterns of these systems over the globe, their inter-relationships, and their reaction to naturally and human-induced changes over time. Not open to students who have received credit for GEOG 01.01 or GEOG 003.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SCI

GEOG 2.01 - Introduction to Human Geography

Instructor: Henderson, Fox

The purpose of this course is to provide an understanding of how human societies organize their geographic space and why certain patterns emerge in the resulting human landscape. Principles of location, place, territoriality and geopolitics, migration, gender, economic change, and power are used to examine the geographic distribution of human activity. Geographic comparisons are drawn between North and South, and on global, regional, and local issues.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

GEOG 3.01 - Living with Nature: Introduction to Nature-Society Relations

Instructor: Fox

This course introduces key approaches to the geographic study of nature-society relations. It is organized around four topical themes (health, climate, energy, and environmental justice) as well as four analytical approaches (political ecology, coupled human-natural systems, non-Western natures, and the environmental humanities). Applying these frameworks to diverse case studies will help us understand how social processes drive ecological transformations, and how those transformations are experienced and understood by societies in different geographical contexts.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

GEOG 4.02 - Introduction to Geospatial Thinking

Instructor: Alvarez Leon

This course is an introductory survey into key concepts of geographical thought (e.g., place, space, and territory) and their interconnection with a range of geospatial tools and techniques (from paper maps to global positioning systems). By developing geospatial thinking, students will enrich their understanding of spatial data and technologies through concepts and debates in the field of geography. Conversely, command of geospatial tools and techniques will help integrate their use with other types of knowledge.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

GEOG 5.01 - Life in the Anthropocene

Most scientists believe we now live in The Anthropocene, a period defined by the unprecedented influence of human activity on the Earth and its ecosystems. This course will investigate the physical and ecological consequences of the Anthropocene. We will examine the global impacts of

climate change and land-use change to better understand the future feedbacks between climate, ecosystems, and human societies.

Degree Requirement Attributes: Dist:SCI

GEOG 6.01 - Urban Geography

Instructor: Domosh

This course examines the historical, cultural, and socio-economic geographies of cities. We begin by tracing the process of urban development from its inception over 5,000 years ago, to industrial modern cities, to postmodern urban forms, using case studies to illuminate certain key features and processes. We then focus on understanding the particular dynamics that shape cities today. Examples are widely drawn but particular attention will be given to American urban patterns and processes.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

GEOG 7 - First-Year Seminars in Geography

Instructor: Fox

Offered: Spring, Winter.

GEOG 8.01 - Introduction to International Development

Instructor: Fox

Why are some countries rich and others so persistently poor? What can and should be done about this global inequity and by whom? We address these development questions from the perspective of critical human geography. Focusing on the regions of Latin America, Africa and Asia, we examine how development meanings and practices have varied over time and place, and how they have been influenced by the colonial history, contemporary globalization and international aid organizations.

Cross-Listed as: INTS 016

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GEOG 9.01 - Geographical Information Systems (GIS)

Instructor: Shi

Geographical information systems (GIS) are computer-based systems that process and answer questions about spatial data relative to concerns of a geographic nature. This course focuses on the basic principles of GIS, including data capture and manipulation, methods of spatial interpolation, and GIS trends and applications. The course is not intended to train students to be GIS operators; rather, to explain the fundamentals of this rapidly growing

technology. A series of laboratory exercises will expose the students to GIS systems.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:TLA

GEOG 11 - Qualitative Methods and the Research Process in Geography

Instructor: Smith

Questions about how knowledge is produced, who produces it, and what "counts" as knowledge are fundamental to the research process. This course focuses on building understandings of qualitative research methods and methodologies employed by geographers to produce knowledge about social relations, human perceptions, and human-environment interactions. The course introduces several of the main qualitative methods available for geographic analysis and interpretation, and places these methods within broader questions of how research is conceived and carried out.

Offered: Winter.

Degree Requirement Attributes: SOC

GEOG 12.01 - Research Design

Instructor: Neely

This course provides students with the tools and perspectives necessary to plan and conduct independent research in Geography, as well as the ethical foundation for conducting research. The course is structured around the development of a well-crafted research proposal and works best when taken in addition to another research methods class. Through readings, proposal workshops, and peer review, students develop their own research proposal and plan in conversation with the rest of the class.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

GEOG 15.01 - Global Climate Change

Instructor: Winter

Climate is a fundamental driver of populations, economies, and cultures. Over the past century, humans have been modifying the atmosphere through the emission of greenhouse gases. This course will provide an overview of the Earth's climate system and the physical basis, impacts, and societal dimensions of climate change.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

GEOG 16.01 - A Climate for Human Security

Instructor: Mankin

This course examines the extent to which the biogeophysics of the climate system and global warming determines human welfare and security. Using original climate analyses and critical evaluation of the scientific literature, we will examine topics such as the consumptive and paradoxical dimensions of the climate problem, climate and political violence, climate mitigation, climate adaptation, and climate geoengineering.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI; WCult:W

GEOG 17.01 - Earth Surface Processes and Landforms

Instructor: Penprase

This course is an introduction to geomorphology – the study of the mechanisms that shape the Earth’s surface. Students will learn about river, glacial, hillslope, and wind-driven processes, and the resulting landforms and landscapes they produce. We will also delve into how landscapes respond to and affect tectonics and climate, and the implications for understanding the history of the Earth’s surface and its future. The techniques and tools we use as geomorphologists range from direct observations to chemical, physical, mathematical, and isotopic approaches, all of which we will explore in this course. The processes we discuss are not confined to the Earth, and as such, we will also touch on the geomorphic evolution of other planetary bodies as well.

Not open to students who have received credit for GEOG 033.

Cross-Listed as: EARS 033

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

GEOG 18.01 - Climate Extremes On A Warming Planet

Instructor: Mankin

Somalian drought and famine, Greenland wildfires, monsoonal floods and landslides in Southeast Asia, and the brutal hurricanes and post-storm neglect of Puerto Rico - climate related disasters such as these cost the U.S. alone a record of \$300B in 2017. With the world warming an order of magnitude faster than any time in the last 65 millions years and with more people, material, and money occupying the same space than ever before, it's unclear whether such climate impacts are part of a geophysical trend or reflective of our social, political, and economic choices.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

GEOG 19.01 - Climate Change and the Future of Agriculture

Instructor: Winter

The global agricultural sector faces the significant challenge of feeding a population projected to rise to 9 billion by mid-century under an evolving climate. This course will explore the physical geography of agricultural production systems throughout the world with an emphasis on the interactions between crops, climate, water, soils, and technology.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

GEOG 20.01 - The Global Food and Energy Landscape

Humans are dynamically transforming landscapes on rapid time frames and enormous spatial scales. In this course, we will investigate how and why humans transform landscapes and trade-offs between food, energy, and the environment. We will examine the socioeconomic and environmental drivers and consequences of these land-use changes. We will discuss topics such as the forest transition, land sparing and land sharing, land scarcity, and indirect land-use change; and highlight how globalization affects these processes. We will enhance our readings by examining spatial data to demonstrate how these processes unfold across different landscapes.

Degree Requirement Attributes: Dist:SCI

GEOG 21.01 - Global Health and Society

Instructor: Adams/Carey, Sosin

Only a few decades ago, we were ready to declare a victory over infectious diseases. Today, infectious diseases are responsible for the majority of morbidity and mortality experienced throughout the world. Even developed countries are plagued by resistant "super-bugs" and antibiotic misuse. This course will examine the epidemiology and social impact of past and present infectious disease epidemics in the developing and developed world. The introduction of drugs to treat HIV/AIDS in sub-Saharan Africa will be considered from political, ethical, medical, legal and economic perspectives. Lessons from past and current efforts to control global infectious diseases will guide our examination of the high-profile infectious disease pathogens poised to threaten our health in the future. Open to all students. Limited to 35 students.

Cross-Listed as: INTS 018

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 22.01 - New England Landscapes and Environments

Small enough to know well, New England boasts an enormous variety of human and physical features in a dynamic setting of change. In this class we focus on the physical aspects of the landscape, learning about its geology, flora, fauna, and climate as they set the stage for and are affected by human activities. The class includes two field trips, visitors, films, and readings from a variety of sources.

Degree Requirement Attributes: Dist:SCI

GEOG 22.02 - Global Poverty and Care

This course explores causes and patterns of global poverty and links this with the urgent need for care and care ethics in our lives and in society broadly. We will focus particularly on how care work is devalued and globalized through international flows of care that contribute to global inequality. Through our analysis of global interconnections we will think about our responsibilities to care for those who are near and those who are across the globe.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 23 - Power, Territoriality, and Political Geography

Territoriality, the geographic expression of power, is one of the most common strategies for exercising political control. This course explores the interaction of geography and politics, including the origin and function of nations and states, policing and social control, federalism, the role and status of racial and ethnic minorities, political representation and electoral redistricting. Through such topics, the class addresses questions regarding the nature of power, identity, democratic theory and the relationship between the individual and the state. We will focus particular attention on issues of scale, or how the application of territorial strategies at different spatial levels affects political relationships.

Degree Requirement Attributes: SOC

GEOG 24 - American Landscapes and Cultures

Someone once said that Americans are a people in space rather than a people in time. A political configuration of relatively recent vintage, the United States, nevertheless, occupies a vast amount of space. The occupation and ordering of that space has produced distinctive landscapes with many regional variations. This course will examine the formation of these cultural landscapes beginning with those produced by Native Americans, and following the settlement process up to contemporary, post-modern America. Along the way, we will explore, among other things, the development of such American landscape elements as grid-pattern towns, cowboy ranches, skyscrapers, shopping malls, and corporate office parks.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 25 - Social Justice and the City

Instructor: Collins

This course explores issues of social justice and cities in terms of the spatial unevenness of money and power within and among cities, between cities and their hinterlands, and between cities of the world. We will examine how multiple dynamic geographic processes produce spatial and social inequalities that make cities the locus of numerous social justice issues. We will also look at how urban communities and social groups are engaged in working for social change.

Cross-Listed as: SOCY 49.22; WGSS 37.03

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 26 - Women, Gender and Development

This course examines gender as it relates to both women and men and as constituted by multiple factors such as place, space, class, sexuality, age, race, ethnicity, nationality, and culture-what some call categories of "difference." We will explore how these categories of difference shape women's and men's daily lives, our institutions, the spaces and places we live in, and the relationships between social groups in different places and between different places in the world.

Cross-Listed as: WGSS 30.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 27 - Carceral Geographies: Explaining Mass Incarceration in the US

Why are there so many people incarcerated in the United States and why are so many people in the US and beyond calling for an end to police violence, some even for the abolition of policing? Is mass incarceration an inevitable product of slavery and Jim Crow? Why did prisons expand in the United States as crime rates were going down? Was it the War on Drugs, or the long term effects of housing discrimination?

Cross-Listed as: AAAS 80.09 AAAS 90.09 WGSS 37.04

Degree Requirement Attributes: Dist:SOC

GEOG 28 - Immigration, Race, and Ethnicity

This course examines 20th century immigration to the United States and pays special attention to issues of race and ethnicity. The course begins with a brief history of US immigration and then thematically covers specific topics such as economic impacts and costs, social mobility, citizenship, transnationalism, assimilation, and religious issues and their relationship to the immigrant experience. We feature nativist reactions to immigration and highlight

differences within and between Latino, Asian, and European groups throughout the course.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 29 - Global Cities

Instructor: Collins

This course examines contemporary urbanization in a global setting - paying attention to the intersection of numerous global and local forces (political, economic, historic and cultural) shaping the planning and design (or lack thereof) of city spaces in the global south and its implications for city residents. Utilizing examples from the Middle East, India, China, Latin America and Africa, we will explore how various demographics within these places experience and navigate the dynamically changing city spaces.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GEOG 30.01 - Jews and Cities: Urban Encounter and Cultural Transformations

The Jewish diasporic encounter in Europe took place almost entirely in an urban context. The legal, political and cultural framework of the European city shaped the trajectory of the Jews in a profound and lasting way, and cities and metropolises continue to shape Jewish civilization in many ways. From the Venetian ghetto to the Lower East Side, from the *pletzl* in Paris to the vast neighborhoods in the first Jewish metropolises in Eastern Europe, the different settings shaped Jewish civilization. \f

This course proposes a close reading of this urban context: what were the legal and political foundations, how did Jews organize themselves in cities, what economic opportunities did they develop? \f

This class will use a broad range of materials: literary texts, the press, scholarly analysis (historical, sociological, anthropological), film, art and art history.

Cross-Listed as: HIST 74.14/JWST 12.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 30.02 - Geographies of Displacement

This course examines geographies of displacement and what it means to not have a “place” in the world. We will think about how social (dis)locations are mapped onto bodies to define (un)belonging in place through an intersectional lens on race, class, gender, language, and more. This course privileges the voices, experiences, and perspectives from “the margins” in understanding the experiences of inequality, exclusion, and segregation within space. It specifically considers the relationship between power, identity, space/place, and agency.

Degree Requirement Attributes: Dist:SOC

GEOG 30.03 - Travel, Migration, and Diaspora in the Transpacific Asias

This interdisciplinary course provides an overview of migration and diaspora studies in Asia and across the Pacific. The course places travelers and migrants at the heart of modern Asian history and culture while examining the social, cultural, political, and economic implications of the movement of people across geographic boundaries. The course deals with a series of case studies that include, but are not limited to, imperial travelers, missionaries, colonial settlers, labor migrants, American GIs, international adoptees, orphans and refugees, transnational domestic workers, return migrants, and Asian diasporas in the Americas. With a strong emphasis on transpacific migrants and their residential, commercial, religious, and social spaces, the course will engage in an interdisciplinary dialogue and utilize a range of activities and media—site visits, walking tours, interviews, autobiographies, literature, and film—to offer students fruitful methods for understanding multifaceted aspects of transnational connections and diasporic identities that migrants have cultivated between Asia and the world.

Cross-Listed as: ASCL 70.23

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GEOG 32.01 - Economic Geography and Globalization

Instructor: Alvarez Leon

The new global economy has become integrated across national boundaries, profoundly altering the fortunes of countries, regions, and cities. This course addresses questions that stem from these changes: for example, why do industries locate where they do? What is the impact of foreign investment on local and regional economies? Why are rates of international migration increasing? What can workers and communities do after disinvestment and deindustrialization has occurred? Particular attention is devoted to the United States and the effects on minorities and labor of differential regional economic expansion, renewal, and decline.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

GEOG 33.01 - Geopolitics and Third World Development

Instructor: Sneddon

Political geographers have recently recovered a critical understanding of "geopolitics" in order to highlight how geographical representations - and the construction of spaces and places - are a constitutive part of politics from the global to the local scale. In keeping with this, this course will examine the mutual constructions of places,

identities, and politics from a Third World perspective. The course will begin with an overview of geopolitical discourses that underpinned the processes of Western imperialism and colonialism such as "civilization" and "social darwinism." It will then examine contemporary geopolitical (dis)orders through the lens of topics such as globalization, gender, environmental security, humanitarian aid, and terrorism. Finally, the course will examine alternative geopolitical imaginations as constructed through social movements and grassroots politics.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GEOG 35.01 - Geographies of Violence

Violence appears to be a constant problem for human society, although its forms, mechanisms and objects change over time. The last decade has seen the unprecedented increase of the use of targeted killing as the US has expanded its drone strike operations around the globe, and events such as those in Ferguson and Charlottesville have led police brutality and racialized violence to reemerge as national concerns. The aim of this course is to study the problem of violence through a geographic lens. It explores a range of topics relating to violence at three scales: the global, the national, and the body. The goal is to interrogate how each scale of unit of analysis reveals different ways of understanding violence and to draw connections between them; and the course will focus particular attention on the historical and political geographies of Western violence. Topics include drone warfare, humanitarian intervention and peacekeeping, police, fascism, the ethics of killing, slavery, colonialism, and the politics of nonviolence.

Degree Requirement Attributes: Dist:SOC

GEOG 36.01 - The Czech Republic in the New Europe

This course seeks to develop an understanding of the physical morphology and cultural landscape of the contemporary Czech Republic. Special attention will be given to the dialectic of transnational integration and decentralist reaction common in Europe today.

Degree Requirement Attributes: Dist:SOC; WCult:W

GEOG 37.01 - Social and Physical Landscapes of the Czech Republic

This course involves field trips led by the members of the Charles University faculty, designed in conjunction with lectures in GEOG 47. The excursions will include topics such as urban development and housing, international migration, health geographies, the environmental effects of energy generation production, and foreign direct investment. Employing short writing assignments and collaborative presentations, the course will expose students

to variegated landscapes of central Europe and to potential topics for independent research.

GEOG 38 - The Postcolonial City

What is a postcolonial city? What does the term *post* imply in the postcolonial? Does it mean a celebration of the end of colonialism? This course invites students to critically examine the term *post* to interrogate mutations of colonial trajectories in the postcolonial present. Far from being a monolithic entity, the postcolonial city should be understood as a historically specific and locally situated outcome of global imperialism. How has the postcolonial city engaged the reproduction of colonial inequalities in and through the built environment? How can we conceptualize "space" not as an abstract and passive container, but as an active agent that has played a constitutive role in giving colonialism its form?

Degree Requirement Attributes: Dist:SOC

GEOG 39.01 - Environmental Justice

Instructor: Greenleaf

Around the world, people suffer because of environmental degradation, from sickening industrial pollution to unnatural disasters to disruptive climate change. This course examines how environmental harms are unequally experienced, as well as how communities organize to protect themselves. We will discuss the concept of "environmental justice" as it has developed through social movements in the United States and elsewhere. We will also explore it as an analytical category that (a) explains how inequality manifests environmentally and (b) enables critical thinking about concepts like the "environment" and mainstream environmentalism and environmental policy. Drawing from Anthropology, Geography, History, Sociology, and other disciplines, we will focus on the lived experiences of environment justice and injustice around the world. Not open to students who have received credit for GEOG 068.

Cross-Listed as: ANTH 12.26 GEOG 068

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

GEOG 40.02 - Catastrophe and Human Survival

Climate change, terrorist attacks, genocides, contagious outbreaks, and economic collapse preoccupy narratives about human survival. As a result, we are told that our lives are increasingly unstable and precarious—our futures, uncertain. Examining historical evocations of catastrophic events, and how future calamities therefore become imagined, this course examines the relationship between thinking about the future as a yet undetermined sequence of events, and the ways that humans attempt to secure their own survival, or become more resilient to the inevitable. Drawing texts from geography, international relations,

literature, political philosophy, and ethics, this course surrounds the phenomena of catastrophe and human survival to ask: What does it mean to live in an age of extreme instability?

Degree Requirement Attributes: Dist:SOC

GEOG 40.03 - Race, Space, and Nature

Instructor: Henderson

Ideas of racial difference are frequently advanced as “natural” truths about the world, linked to normative conceptions of environmental relations. Reciprocally, racism—as a set of deadly ideological and material practices articulated around purported group differences—has profoundly shaped conceptions of non-human nature. This course asks how race is inflected in the politics and practices through which humans interact with the “natural” world, and explores the implications for contemporary movements and mobilizations for environmental justice.

Cross-Listed as: AAAS 28.10

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SOC

GEOG 40.04 - Energy Justice

Instructor: Kelly

Climate change and environmental degradation necessitate shifting energy systems away from fossil fuels. What issues of culture, power, and inequity are part of this energy “transition”? How can we make sure that it is socially just? These questions are the main focus of the course. This course includes an Energy Justice Clinic, supported by Dartmouth’s Irving Institute for Energy and Society, in which students will engage in community-driven service learning.

Cross-Listed as: ANTH 50.48

Degree Requirement Attributes: Dist:INT or SOC

GEOG 40.05 - American Anthropocene: Climate and Power in U.S. History

The climate crisis is no longer a prediction about the future, but an experience of the present. It also has a past, and in order to imagine what will come next we need to understand how we got here. While primarily concerned with the U.S. in the twentieth and twenty-first centuries—the era of petro-intensive growth in the country that consumes 30% of the earth’s resources for 5% of its population—our inquiry will require explicit reflection on the longer historical roots of energy use and the global framework of resource extraction.

Cross-Listed as: HIST 33.02

Degree Requirement Attributes: Dist:SOC; WCult:W

GEOG 40.06 - Geographies and Ecologies of Warfare in Asia & the Pacific

This course surveys the ecological and historical impacts of U.S.-occupied military bases in Asia and the Pacific Islands, through the activism and scholarship of Asians and Pacific Islanders. It brings together the fields of critical Asian studies, Asian American studies, geography, gender studies, and Indigenous studies to comparatively analyze the place-based forms that U.S. militarism, settler colonialism, and empire can take in U.S.-occupied American Samoa, Bikini Islands, Guåhan/Guam, Hawaii, Korea, Okinawa, Vietnam, and the Philippines. Guided by the course instructor, students will engage Asian and Pacific Islander scholarship through course readings, films, podcasts, poems, and guest lectures featuring Asian and Pacific Islander demilitarization organizers. The course will culminate in a final Story Maps project that analyzes a social movement discussed in class and presents the group’s findings about it in multimedia form.

Cross-Listed as: ASCL 70.27

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GEOG 42 - Water Policy and Politics

This course is designed to provide students with a general background to the issues confronting water resource management. The course covers the political, social and legal aspects confronting effective water policy decision making. One of the goals is to demonstrate that the technical aspects of hydrology occur within a socio-political arena. The material also covers the environmental aspects of water issues and the manner in which these issues are handled by regulatory agencies and the legal sector.

Cross-Listed as: JWST 067

Degree Requirement Attributes: Dist:INT or SOC

GEOG 43 - Food and Power

Instructor: Freidberg

In a world glutted with food, why do millions still suffer chronic hunger? In an international community committed to free trade, why is food the most common source of trade wars and controversies? In a country where less than five percent of the population farms, why does the “farm lobby” remain so politically powerful? In societies where food has never been faster or more processed, why are organic and “slow” foods in such demand? These are among the questions this course will consider, drawing on the insights of both political economy and cultural analysis.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GEOG 44 - Environment and Politics in Southeast Asia

Over the past several decades, the people and environments of Southeast Asia have confronted a host of political, economic and cultural processes commonly grouped together under the heading "development". As witnessed by recent media reports detailing massive forest fires in Indonesia and dam controversies in Malaysia and Thailand, these development processes have resulted in drastic transformations in the landscapes, forests, and river systems of the region. These processes have likewise produced dramatic alterations in the livelihoods of the people who depend on and interact with the region's ecological systems.

Cross-Listed as: ENVS 044

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GEOG 45 - Exploring Nature and Culture in New England

From abandoned stone walls to red-brick mill towns, segregated cities to grass-lawn suburbs, the people and places of New England offer interesting lessons about the interactions between culture and nature. This course introduces students to landscape studies in geography by focusing on Dartmouth's immediate surroundings and its regional setting. Includes several required field trips.

Degree Requirement Attributes: Dist:SOC; WCult:W

GEOG 46 - Urbanization and the Environment

Over half the world's population live in urban areas. The 1992 Rio Summit raised awareness of the potentially serious environmental, health, and social implications of continuing urbanization. This course explores the environmental effects of urbanization from an international comparative perspective. How do the environmental consequences of urbanization in the developing world (Global South) differ from those associated with the developed world (Global North)? How are notions of environment socially constructed as "nature" and how does this translate into political action in different places? The course critically assesses the ability of planners to make lasting improvements in the urban environment.

Cross-Listed as: PBPL 081

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 47.01 - Political Ecology

Instructor: Sneddon

Political ecology is an approach to human-environment relations that links a broad understanding of biophysical systems (e.g., tropical forests, coastal ecosystems, river basins) to knowledge regarding the political and economic forces that drive ecological change. Drawing on examples

from North America, Southeast Asia, Africa and other regions, this course employs a political ecology framework to examine contemporary debates over urbanization, water resources, the role of science in environmental conflicts and the cultural landscape.

Cross-Listed as: ENVS 067

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 48 - Indigeneity and Development

This course asks how historical and contemporary development efforts have shaped indigenous communities. What ideological and technical tools have been used to transform native territories? How have national development programs shaped experience in settler-colonial contexts? Finally, how has native sovereignty been articulated through indigenous development efforts? We will draw on examples from the Americas, Africa, and Asia to understand how place-based development has been part of global networks of imperialism and resistance.

Cross-Listed as: NAS 30.14

Degree Requirement Attributes: Dist:SOC

GEOG 49 - Wilderness, Culture and Environmental Conservation

The purpose of this course is to describe and examine the manifold ways that environmental alterations have occurred - over both geologic and historical timescales. Considerable research over the past several decades has shown that anthropogenic disturbance has significantly modified natural processes frequently leading to degraded conditions. The goal of the course is first to establish that shifts in climate, vegetation, and landscapes are "natural" and have occurred over geologic time and that the timing and magnitude of these shifts provides the necessary background to evaluate the type, magnitude, and frequency of anthropogenic disturbance. The second, and major theme is to present and examine the types of human-induced changes in biotic, atmospheric, and terrestrial conditions (e.g. logging, grazing, urbanization), and to evaluate the social and management issues resulting from these anthropogenic disturbances. Lastly, the third part of the course will focus on the human dimensions of global change by exploring the social aspects of environmental change. In the last part of the class, we will focus on how global environmental changes generate impacts at the local scale, and how small-scale transformations propagate into large-scale global environmental issues.

Cross-Listed as: JWST 030

Degree Requirement Attributes: Dist:SOC

GEOG 50.02 - Web Mapping and Application

This course is an introduction to creating web mapping applications on the Internet and serves as an introduction to building map-based web applications. Students will design, develop, and implement web mapping applications using ESRI software and open source software. Students will work with web authoring tools, learn basic javascript, and work with basic visualization tools. Content will focus on the theories and principles behind web mapping, distributed and cloud computing, graphic design, application building, and critical aspects of web-based cartography.

Degree Requirement Attributes: Dist:TAS

GEOG 50.03 - GIS Programming and Databases

Instructor: Li

This course is an introduction to Python programming and database (SQL) programming and design for intermediate Geographic Information Systems (GIS) users. This course teaches students to design and write clearly structured programs in Python in the ArcGIS environment. Students will develop programs to manage geospatial data, perform geoprocessing analysis to solve spatial problems, and automate mapping and visualization tasks. This course emphasizes the challenges and uniqueness of spatial data organization from specific database models to national spatial data infrastructures. Students gain theoretical and practical experience in designing, implementing, and managing geo-relational and object-relational databases.

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

GEOG 50.04 - Remote Sensing of the Environment

This course is an introduction to remote sensing of the environment – the acquisition of information about the earth from a distance, typically via spaceborne sensors. In this course, we will examine all components of the remote sensing process, from the electromagnetic radiation environment, to sensor design and data collection, to image interpretation and analysis. Not open to students who have received credit for EARS 65.01.

Cross-Listed as: EARS 039

Degree Requirement Attributes: Dist:TAS

GEOG 53 - Critical Mapping and the Geohumanities

Maps are amongst the most important tools for understanding the world geographically. But maps are not simply neutral diagrams that display factual data. In this course, we will take a critical approach to maps, examining how they are made, what kinds of ideologies are embedded within them, and how they circulate in society. We will explore the emerging field of GeoHumanities, which connects maps and spatial thinking to qualitative questions

about aesthetics, culture, imagination, and social life. We will also learn how new types of geographic engagements, using digital methods, interactive technologies, and novel data sources, offer both promises and pitfalls for experimenting with representations of society and space.

Degree Requirement Attributes: Dist:SOC

GEOG 54 - Geovisualization

Geovisualization is the science and art of visualizing and interpreting spatial information. Students will learn the principles and methods of visual analysis of geographic data, using geospatial tools for visual communication and visual thinking. Beginning with the traditional principles of cartography, the course will then cover advanced topics such as flows and networks, 3D landscapes and spaces, animation, and interactive web-based geovisualization. Class time will be divided between discussion of principles and practices, and hands-on laboratory activities.

Prerequisite: GEOG 9.01 or any statistics course

Degree Requirement Attributes: Dist:SLA

GEOG 55 - Critical Analysis in GIS

Instructor: Alvarez-Leon

This course develops the elements of critical analysis using geographic information science (GIS). While using GIS as a method to ask questions and analyze geospatial data, students will also explore the ways that GIS is shaped by its underlying assumptions, embedded politics, societal impacts, knowledge-generation capabilities, and other limitations. Lab sessions will incorporate learning GIS analysis in the open source statistical package “R”, in tandem with readings and discussions about the theoretical and social dimensions of GIS.

Cross-Listed as: EARS 022

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

GEOG 56 - The Geographies of Health and Disease

This interdisciplinary course introduces the principles and methods used to understand health and disease in the geographical context. Topics include monitoring epidemics, tracking disease outbreaks, identifying environmental factors that may promote or hinder health, and studying geographic impediments in accessing health care services. Learning takes place through lecture and discussion, readings of selected manuscripts, hands-on experience in the GIS lab, assignments, and completion of a term project. Prerequisite: GEOG 50 or professor's permission.

The new prerequisite will begin Spring 2016.

Prerequisite: GEOG 9.01

Degree Requirement Attributes: TAS

GEOG 57 - Urban Applications of GIS

Instructor: Feng

This course is about how to use GIS technology to solve urban problems. The application problems that will be discussed in the class are from areas including urban planning and design, public administration, business decision-making, environment assessment, land use change, and social and political issues. The data, spatial analytical techniques, and GIS software that have been used in these applications will be examined through studying real-world examples. The class contains three components: the lectures, the lab exercises and the term project. The software packages used for the lab exercises include ArcGIS and MapInfo.

Prerequisite: GEOG 9.01

Offered: Spring.

Degree Requirement Attributes: TLA

GEOG 60 - Earth System Modeling

What will Earth look like in 2100? Scientists use the world's most sophisticated computer programs—climate models—to answer such questions. This applications-based class introduces the theory and practicalities of process-based modeling for climate science. We will employ a range of models, from 0-dimensional to fully-coupled global-scale Earth System Models. Focusing on climate change, we will learn the potentials and pitfalls of modeling complex systems and how to evaluate models and their societal relevance.

Cross-Listed as: EARS 060

Degree Requirement Attributes: Dist:SCI

GEOG 61.01 - Hydroclimatology

Instructor: Winter

Interactions between energy and water shape the natural environment and society. This course will examine the spatial and temporal dynamics of the hydrologic cycle, focusing on radiative and turbulent fluxes, precipitation, evapotranspiration, vegetation, soil moisture, runoff, and anthropogenic influences. Lectures will introduce key topics, followed by student-led discussions of relevant journal articles, and a research project will allow students to apply the concepts learned in class to a topic of interest.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

GEOG 62 - Black Women's Activism: 1970 – Present

In this course we will explore the political, intellectual and cultural production of Black women beginning with the liberation moment of late 1960s and early 1970s. We will read creative, scholarly, and activist writing of Black women of all genders from 1970 to the present. How does Black women's activism constitute a political intellectual tradition that impacts how we do research and pose questions?

Cross-Listed as: AAAS 88.15 WGSS 40.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 62.01 - River Processes and Watershed Science

Role of surface water and fluvial processes on landscape formation; magnitude and frequency relationships of flood flows; soil erosion, sediment transport, and fluvial landforms. This course examines the links between watershed scale processes such as weathering, denudation, and mass wasting on the supply of water and sediment to stream channels on both contemporary and geologic timescales and further evaluates the role of climate change on the magnitude and direction of shifts in watershed and fluvial processes. Not open to students who have received credit for GEOG 035.

Cross-Listed as: EARS 071

Degree Requirement Attributes: Dist:SLA

GEOG 65.01 - Global Movements: Migrants, Refugees, and Diasporas

The focus of this course is the voluntary and involuntary movement of people around the globe. Questions of borders, nativism, transnationalism, the global economy, and legality thread will through our discussions as we consider the factors shaping decisions to leave a home or homeland. Creative works, case studies, and theory regarding these topics will inform and animate our discussions.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 66 - Geopolitics of Humanitarianism

In this course, students will critically examine the dramatic changes to the geopolitics of humanitarian intervention, development, and capacity-building since the end of the Cold War. The end of the Cold War saw the transformation of humanitarianism from a marginal position to the center of international policy and a rapid increase in militarized humanitarian interventions. The "new humanitarianism" led to a change from needs-based to rights-based humanitarian interventionism, transforming humanitarian action from short-term emergency aid to long-term involvement, assistance, and capacity building.

Degree Requirement Attributes: Dist:SOC

GEOG 67.01 - Scenes from the City: Urbanism and Modern American Visual Culture

From silent films to *Mad Men*, the American city has been the site through which “modern” identities have been imagined and created. This course draws on Cultural Geography and Film and Media Studies in order to interrogate this development. Through a variety of readings and screenings of films and TV shows, we will be examining American downtowns, suburbs, and homes as sites for the construction of classed, racialized, sexualized and gendered identities in three different time periods: the early 20th century, the post WWII era, and the contemporary period. We will interrogate such topics as: the real and imagined role of “shopping” women and gender in the shaping of modern downtowns; the relationship between the American suburb, new sexual identities and the film *Pillow Talk*; and how a particular nostalgia for the past that has led to the popularity of such shows as *Mad Men* can also be seen on the streets of Hanover (neo-traditional urbanism).

Cross-Listed as: FILM 47.21

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 68.01 - Witchcraft and Biomedicine

Instructor: Neely

This course examines the question of health, what it is, who it's for, and who decides. By focusing on three themes – becoming a doctor or healer; health, illness, and suffering; and health as a nature-society question – through both biomedicine and witchcraft, we approach health from multiple angles. So doing, we will learn about a number of different methodological approaches and theoretical orientations, learning not just about specific case studies, but also about how geographers and related social scientists ask and answer questions.

Degree Requirement Attributes: Dist:SOC

GEOG 69 - Postcolonial Geographies - Empire, Diaspora, Decolonization

In this class we use tools of critical geography to think relationally about colonization, post-colonialism, and decolonization. We begin with the material and imaginative geographies produced through colonization—identifying the mappings, categories, and binaries integral to empire. We then consider how diaspora, migration, and displacement have reconfigured these relationships. Finally, we turn to the ongoing work of decolonization—an imperative both in the world and in our own thinking about the world. **Not open to students who have received credit for GEOG 031.

Degree Requirement Attributes: Dist:SOC

GEOG 70.02 - Histories of the Carceral State

This course examines the construction of and resistance to the carceral state across United States history. How race and the law have shaped each other over time is the central question of the course, one we will parse alongside a focus on gender, sexuality, immigration, disability, and political economy. We will approach criminalization as a political, economic, and cultural process that reflects and reproduces dominant ideologies for those behind bars and those on the outside.

Cross-Listed as: HIST 36.03 WGSS 66.36

Degree Requirement Attributes: Dist:SOC; WCult:W

GEOG 70.04 - Imaging Polar Geographies

Instructor: Kerby

The polar regions are in transition as they undergo rapid climate and environmental changes that in turn have cascading consequences for society, both locally and across the globe. But how do we conceptualize and then measure environmental change in polar systems, particularly in areas with sparse population densities and/or challenging climatic conditions that make monitoring difficult?

Cross-Listed as: INTS 80.05

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

GEOG 71 - Racial Geographies: Race and the Politics of Place

This course will explore various themes surrounding the ways in which race shapes the way we understand ideas of place. With a focus on Africa and its diaspora, the course looks at the movement of people and ideas inherent in the concept of diaspora and reflects on how people also reshape social worlds that challenge the way we commonly understand the world to be divided (i.e. by political territories like “countries” or by physical geographies like “continents”). The goal of the course is to start with the concept of “Blackness” and unpack the complexity of various other racial and spatial categories like “Sub-Saharan Africa” “Arab North Africa” “the West” and “diaspora.” The three general themes of territory, flows, and space/futurisms, will be explored in relation to the way they are experienced by people in everyday life, therefore the readings will primarily be ethnographic, following African descendant communities in Africa, Europe and the Americas. However, we will tackle these issues through history and fiction writings as well. Not open to students who have received credit for GEOG 063.

Cross-Listed as: AAAS 60.50 ANTH 50.28

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 72 - Black Consciousness and Black Feminisms

This seminar seeks to decenter mainstream (what bell hooks calls “imperialist, white supremacist, capitalist, [heteronormative], patriarchal”) thinking to understand the world differently. Reading primary and scholarly texts from the US, Caribbean, and Africa about the Black Consciousness Movement and black feminisms, we will trace the evolution of thinking about race, gender, sexuality and their interrelationships through time and across space. Assignments include weekly reading response papers and an independent research project.

Cross-Listed as: AAAS 67.50 ASCL 54.04 HIST 92.04 WGSS 66.09

Degree Requirement Attributes: Dist: SOC; WCult: CI

GEOG 72.02 - Racial Capitalism

Instructor: Henderson

This class provides students with an advanced geographic understanding of the relationship between race and capitalism using three core questions: What is racial capitalism, and under what conditions did it emerge? How do we understand the role of the Atlantic World historically in the development of this economic system? How do these histories permeate into 20th century and early 21st century global economic policy?

Cross-Listed as: AAAS 21.77

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GEOG 73 - Advanced Topics in Political Ecology

Instructor: Freidberg

Political ecology is an interdisciplinary field that critically assesses the political dimensions – broadly understood – of both environmental problems and environmental knowledge production. Born out of late 20th century research into the political drivers of resource degradation in the global South, the field of political ecology now examines environmental change, harms, and controversies in a wide range of social and spatial contexts. Political ecology is also home to ongoing interdisciplinary debates about how critical social scientists can most productively engage with the environmental knowledge of natural scientists and others who work with nature. This course offers students the opportunity to explore these debates – especially as they apply to students’ own research interests – while also deepening their understanding of political ecology’s core concepts and epistemological concerns. The course will meet weekly and will run as a seminar.

Offered: Spring.

Degree Requirement Attributes: Dist:INT

GEOG 74 - Moral Economies of Development

During the past quarter century, the gap between the world’s richest and poorest regions has steadily widened, even as technological advance has shrunk the distances between them. This class begins by examining how globalization has shaped awareness and expressions of care for distant strangers. It then focuses on the moral economies underlying practices such as Fair Trade, corporate social responsibility, and transnational labor justice campaigns. Some background in international development is recommended.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 77 - Environmental Applications of GIS

Instructor: Chipman

This course uses geographic information science (GIS) to analyze environmental systems. Students will learn advanced GIS techniques such as topographic analysis, spatial modeling, spatial statistics, remote sensing, and spatiotemporal data analysis. These methods will be explored through a wide variety of applications, including watershed hydrology, water quality, vegetation, land use/land cover, climate, wildlife ecology, and natural hazards. In lectures, laboratory exercises, and class projects, students will gain experience in designing and implementing GIS-based solutions to environmental problems.

Cross-Listed as: EARS 077

Offered: Winter.

Degree Requirement Attributes: Dist:TLA

GEOG 78 - Geospatial Technologies and Society

Instructor: Alvarez-Leon

Beyond mapping the world, how do geospatial technologies help shape it? This course analyzes the political, economic, social, and cultural implications of geospatial data, media, and technologies. Topics covered include self-driving cars, Google Maps, and big geospatial datasets like satellite imagery repositories. Drawing on a variety of conceptual frameworks, students will learn how to evaluate geospatial technologies not only through their technical underpinnings, but also via their space-making processes and embeddedness in our everyday lives.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

GEOG 79 - Applications of GIS in Public Health,

Instructor: Shi

This interdisciplinary course introduces the principles and methods used to understand health and disease in the geographical context. Topics include monitoring epidemics, tracking disease outbreaks, identifying

environmental factors that may promote or hinder health, and studying geographic impediments in accessing health care services. Learning takes place through lecture and discussion, readings of selected manuscripts, hands-on experience in the GIS lab, assignments, and completion of a term project.

Degree Requirement Attributes: Dist:TAS

GEOG 80 - Seminar in Geography

This course focuses on topics in advanced human geography that are not regularly taught as part of the curriculum. Course content will vary and reflect the interests and expertise of the instructor.

Prerequisite: GEOG 1 or permission of the instructor.

Degree Requirement Attributes: SOC

GEOG 80.09 - Humanitarian Emergencies and Geographic Methods

Over 134 million people worldwide are affected by humanitarian emergencies. Geographic methods (e.g. spatial statistics, remote sensing, and mapping) answer questions about the role of place in humanitarian emergencies. We will 1) investigate the use of spatial data and 2) identify challenges that must be addressed to generate technically rigorous and ethical conclusions in humanitarian environments. Critical theory and empirical case studies will inform our discussions. No prior experience with geographical information systems is required.

Degree Requirement Attributes: Dist:TAS

GEOG 80.10 - COVID-19 and the Social Life of Epidemics

This course interrogates the COVID-19 pandemic, putting it in broader historical, geographic, and scientific contexts. To do so, it focuses on different disease epidemics, including the Plague, flus, cholera, and HIV/AIDS. A COVID-19 journal gives students a chance to think, reflect, and process what they are learning and their experiences together. Through this course, students will better understand science, biomedicine and other healing systems, the medical system, the United States, and global health today.

Degree Requirement Attributes: Dist:INT or SOC

GEOG 80.11 - Placing Anthropocene Stories: The Imaginative Space of Environmental Transformations

Within this course, students will gain an understanding of the scientific, political, and social challenges associated with the Anthropocene while also identifying and crafting stories capable of catalyzing the creation of more desirable, vibrant futures. Students will engage with writings from a variety of fields—including human geography, history,

literary studies, philosophy, and critical design studies—as well as produce a creative work that tells a spatial story of the Anthropocene.

Degree Requirement Attributes: Dist:SOC

GEOG 80.12 - Climate, Natural Disasters, and Environmental History

This course explores the politics of natural disaster in a global historical perspective. We will begin by studying different logics under which humans have worried that 'natural' disasters might be manmade, focusing on recent scholarship that argues that social inequalities shape the impacts of disaster. We will then consider the political processes by which events have come to be recognized as environmental disasters. Finally, we will analyze the politics of disaster in our changing climate.

Cross-Listed as: HIST 90.19

Degree Requirement Attributes: Dist:SOC

GEOG 80.13 - Land Struggles and Worlding Otherwise

Instructor: Shoffner

In this seminar, we will examine the radical politics of Black, Indigenous and marginalized communities across the Americas as they produce alternative visions of space, belonging and the relationships between people and their environments. Through the study of struggles over land, we will engage racialization, indigeneity and colonial processes, thinking with scholarship and activism from throughout the hemisphere. In class, we will center the political possibilities of struggle, vitality, and everyday practices of environmental justice.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

GEOG 85 - Senior Thesis I

Description

A thesis on a geographic topic selected by the student with the instructor's approval.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for GEOG-087 and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both GEOG-087 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: Permission of the instructor and the Chair.

Offered: Fall, Spring, Summer, Winter.

GEOG 86 - Independent Study in the Czech Republic

This course offers the qualified student an opportunity to research a topic of special interest in the Czech Republic

under the joint direction of a Dartmouth staff member and Charles University staff. This course is taken as part of a three course sequence by FSP participants (Geography 47, 81, 82).

Degree Requirement Attributes: Dist:SOC; WCult:W

GEOG 87 - Senior Thesis II

A thesis on a geographic topic selected by the student with the instructor's approval.

Students are awarded one course credit for successful completion of this course. Students who have registered for GEOG-085 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both GEOG-085 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: permission of the instructor and the Chair.
Open to seniors, and required of honors majors

Offered: Fall, Spring, Summer, Winter.

GEOG 90 - Research in Geography

Instructor: Fox, Sneddon

This culminating experience exposes students to the elements of conducting geographic research. Students synthesize their knowledge of geography by exploring the epistemological and methodological foundations of geographic research. The course involves the preparation of a research proposal on a topic each student chooses in consultation with the geography faculty.

Prerequisite: GEOG 1 or GEOG 3, two courses from GEOG 11, GEOG 50 to GEOG 59, or permission of the instructor.

Offered: Fall.

German Studies

Chair: Yuliya Komska

Professors G. Gemünden; Associate Professors V. Fuechtner, K. Mladek, Y. Komska, P. McGillen; Assistant Professor: M. Deniz, M. McGillen; Senior Lecturer/Research Assistant Professor N. Ostrau; Senior Lecturer H. Denzel; Senior Adjunct Lecturer E. Miller

To view German Studies courses, click here (p. 437).

Important Note: The Department of German Studies has made significant changes to the Major & Minor, beginning with the Class of 2029. Classes 2026-2028 may opt into the new Major/Minor requirements or continue with their earlier edition. See below for the earlier Major/Minor requirements.

New Requirements for the Major

Students design their major plan in consultation with a faculty advisor/ the Chair prior to declaring it on DartWorks. There are two major types, Major in German Studies and Modified Major in German Studies, each consisting of a minimum of ten courses. These include two prerequisites and eight required courses.

Prerequisites to graduating with a German Studies major and modified major:

- Two courses at the intermediate level (GERM 6, GERM 10.00, GERM 10.01, GERM 10.03, GERM 10.06, or permission of the Chair). Please note:
 - Students completing the summer Language Study Abroad (LSA) receive credit for GERM 6;
 - Students completing the summer Language Study Abroad+ (LSA+) receive credit for GERM 6 and GERM 10.00;
 - GERM 5 may never count toward the major.

I. Major in German Studies

A major in German Studies focuses on understanding and interpreting texts, cultural artifacts, material mediums, and mediums of communication in their historical and intellectual contexts. This major is ideal for students whose priority it is to deepen their competencies in the German language while also expanding their knowledge of Germanophone cultures and societies.

Prerequisites: See above.

Required courses:

- Eight German Studies courses numbered 13 or above, in addition to the prerequisites. A third German 10-level course may replace one of these courses. Please note:
 - All three courses in the Foreign Study Program (FSP) receive major credit (GERM 29, GERM 30, and GERM 31);
 - GERM 13-16 and 42-47 are taught in English. No more than two may count toward this major. With permission of the Chair, you may replace one such course in the German Studies department with an appropriate course in another department. At least one-third of the work in the substituted course should be on topics related to German Studies;
 - A GERM 65 course must be completed as the culminating experience in the winter of the senior year. German 65 may also be taken prior to the senior year, with a different number in the decimal, but that iteration will not count as the culminating experience.

II. Modified Major in German Studies

A modified major combines the resources of the German Studies department with a coherent selection of courses from one or more other departments and programs. It is ideal for students whose priority it is to develop a cross-disciplinary profile.

Prerequisites: See above.

Required courses:

- Four German Studies department courses numbered GERM 13 or above, in addition to the prerequisites. A third German 10-level course may replace one of these courses. Please note:
 - GERM 13-16 and 42-47 are offered in English, and no more than one such course may count towards the Modified Major;
 - A GERM 65 course must be completed as the culminating experience in the winter of the senior year. German 65 may also be taken prior to the senior year, with a different number in the decimal, but that iteration will not count as the culminating experience.
 - Four courses beyond the introductory level (numbered 11 or above) that are taught in other departments or programs, such as Art History, Comparative Literature, Film Studies, Geography, Government, History, Jewish Studies, Music, Philosophy, Women's, Gender and Sexuality Studies, Religion. At least one-third of the work in these courses should be on topics related to German Studies, with the appropriate syllabus is submitted for consideration to the Chair at the time of planning. The four courses should amount to a coherent intellectual program. At the time of planning, the students should also submit a single-paragraph rationale to the department (when declaring, also to the Registrar) to explain how the four courses cohere and how they complement the rest of the major. None of these courses may count toward other majors or minors.

New Requirements for the Minor

Prerequisites:

- Two courses taught in German at the intermediate level: GERM 6, GERM 10.00, German 10.01, GERM 10.03, GERM 10.06, or permission of the Chair. Please note:
 - Students completing the summer Language Study Abroad (LSA) receive credit for GERM 6; Students completing the summer Language Study Abroad+ (LSA+) receive credit for GERM 6 and GERM 10.00;
- GERM 5 may not count toward the minor.

Required courses: Four courses numbered German 13 or above, as follows:

- If GERM 6 is taken a prerequisite, an additional German 10-level course may count among the minor-level courses;
- GERM 13-15 and GERM 42-47 are taught in English. No more than one may count toward the minor. By permission of the Chair, you may replace such a course with an appropriate advanced course in another department or program, such as Film Studies, Government, History, Jewish Studies, Music, Women's, Gender, and Sexuality Studies, Comparative Literature, or Philosophy. At least one-third of the work in this course should be on topics related to German Studies;
- GERM 29, 30, 31 (LSA+/FSP), and 64-87 are taught in German. A minimum of two must be taken to complete the minor;
- GERM 65 may be taken more than once, with a different number in the decimal.

Earlier Edition Requirements for the Major

Prerequisite : Two courses in the GERM 10.XX range (GERM 10.00, GERM 10.01, GERM 10.03 etc.) or permission of the Chair. Students majoring in German Studies design an individual program in consultation with a departmental adviser and/or chair.

The Department of German Studies offers three routes to the major:

1. *Major A* focuses on literary and non-literary texts in their historical and intellectual contexts, comprising courses offered by the Department of German Studies. With permission of the Chair, one appropriate course in another department or program may be substituted.

Requirements : eight courses numbered above 14 (GERM 42-47, which are in English translation, require additional work in German), three of which normally come from participation in the Foreign Study Program in Berlin (GERM 29, GERM 30, and GERM 31). All majors must take the upper-division seminar offered in the winter term of their senior year (normally a GERM 60s course). At the end of their senior winter term, all majors will give a presentation based on their work done for this seminar.

2. *Major B* combines resources of the Department of German Studies with a coherent selection of those of other departments and programs, such as Art History, Comparative Literature, Film Studies, Geography, Government, History, Music, Philosophy, and Religion. In principle, any relevant course in the Dartmouth curriculum that is approved by the Department of German Studies may qualify for this major.

Requirements : six courses in the German Studies Department numbered above 14 (GERM 42-47, which are in English translation, require additional work in German),

three of which normally come from participation in the Foreign Study Program in Berlin (GERM 29, GERM 30, and GERM 31); four advanced courses from among those offerings in other departments or programs that deal substantially with the culture of German-speaking countries. All majors must take the upper-division seminar offered in the winter term of their senior year (normally a GERM 60s course). At the end of their senior winter term, all majors will give a presentation based on their work done for this seminar.

3. *Modified Major* combines German Studies with another discipline in a coherent program of study. This major is designed individually by the student with a departmental adviser. It may include participation in the Foreign Study Program in Berlin.

Requirements : six courses numbered above 14 (GERM 42-47, which are in English translation, require additional work in German); four courses beyond the introductory level in another department or program of the College and approved by the Chair of the Department of German Studies. All majors must take the upper-division seminar offered in the winter term of their senior year (normally a GERM 60s course). At the end of their senior winter term, all majors will give a presentation based on their work done for this seminar.

Senior Culminating Experience : All German majors must take the upper-division seminar offered in the winter term of their senior year. This course will count as one of the eight courses required for Major A and one of the ten courses required for Major B or the Modified Major. In addition to regular participation in the seminar, senior majors will meet with its professor during designated x-hours to discuss methodology and to develop a research topic. Additional work will culminate in a significant essay, the argument of which will be presented orally in German to classmates and to the faculty of the Department of German Studies at the end of winter term.

Earlier Edition Requirements for the Minor

Prerequisites: Two courses taught in German at the intermediate level: German 6 (LSA/+), German 10.00 (LSA+ or on campus), German 10.01, German 10.03, German 10.06, or by permission of the Chair.

Minor-Level Courses: Four courses numbered German 13 or above, as follows:

- German 13-15 and German 42-47 are taught in English translation. No more than two may count toward the minor. Only one course from German 13-15 may count.
- German 29, 30, 31 (Berlin FSP/LSA+), and 61-87 are taught in German. A minimum of two must be taken to complete the minor.

One of the German courses in English translation may be replaced with an appropriate advanced course in another

department or program, such as Film Studies, Government, Engineering, History, Jewish Studies, Music, or Philosophy, with permission of the Chair. At least one-third of the coursework should be on a topic directly related to German Studies, or by permission of the Chair.

Dartmouth Language Study Abroad Program in Germany (LSA/LSA+)

LSA/LSA+ are German-language programs that run jointly in Berlin during the summer term. Students live with local families, take courses taught by on-site instructors and the Dartmouth faculty director, and enjoy numerous cultural events and field trips in Berlin and outside.

LSA prerequisite: GERM 2 with a grade of B- or higher, or equivalent preparation, and admission to the program.

LSA+ prerequisite: GERM 3 with a grade of B- or higher, or equivalent preparation, and admission to the program.

Upon successful completion of the LSA, students receive credit for GERM 3, GERM 5, and GERM 6. GERM 3 serves to complete Dartmouth's foreign language requirement. Upon successful completion of the summer LSA+, students receive credit for GERM 5, GERM 6, and GERM 10.

Dartmouth Foreign Study Program in Germany (LSA+/FSP, Germany on the World Stage)

LSA+/FSP are German-language programs that run jointly in Berlin during the fall term. Students live with local families, take in-depth courses taught by on-site instructors and the Dartmouth faculty director, and enjoy a long study trip to Vienna as well as numerous events, field trips and live performance outings in Berlin.

LSA+: GERM 3 with a grade of B- or better, or equivalent preparation, and admission to the program.

FSP prerequisite: Admission to the program and a grade of B or better in any two German-language courses from among German 6 (LSA/LSA+), German 10.00 (LSA+ or on campus), German 10.01, German 10.03, German 10.06 or equivalent (with the Chair's permission). Please note:

- students who have successfully completed the summer LSA/LSA+ qualify without additional coursework;
- students who receive credit for German 10.00 as the result of a placement test must complete one further course (GERM 10.01, GERM 10.02, or GERM 10.03, for example.)

Upon successful completion of the fall LSA+, students receive credit for GERM 10, GERM 30, and GERM 31. Upon successful completion of the FSP, students receive credit for GERM 29, GERM 30, and GERM 31.

For the programs the department runs in cooperation with other units on campus—namely, the **Jewish-German**

Studies Migration and Memory (Fall Term +) and **German Studies-Engineering FSP: Green City** (every other spring term)—please consult the Frank J. Guarini Institute for International Education at <https://guarini.dartmouth.edu/programs>.

German Honors Program

German Studies seniors with a strong interest in in-depth research and motivation to do long-form writing are encouraged to participate in the Honors Program. By the start of the fall term of their senior year, all prospective honors students must secure an advisor. By October 1, they must submit to the advisor and Department Administrator a thesis proposal demonstrating adequate knowledge of the topic, with a bibliography appended at the end. Examples appear on the department website under "Honors Program", which describes the Honors timeline in detail. The proposal must be approved by the department. In senior winter, the prospective honors students must enroll in GERM 65 and produce sufficient written work to qualify them for continuing their project in GERM 87 in the spring term.

GERM - German Studies Courses

GERM 1 - Introductory German

Instructor: Deniz, Denzel, Ostrau

Introduction to written and spoken German. Immersive study of German language and culture in a diverse German speaking world with a focus on basic grammar and vocabulary through fictional and non-fictional readings, film, oral and written drills, composition exercises, authentic conversation, and project work. *Never serves in partial satisfaction of the Distributive or World Culture Requirement.*

Prerequisite: 1

Offered: Fall, Winter.

GERM 2 - Introductory German (continued)

Instructor: Deniz, Komska; McGillen, M

Continued work on written and spoken German. Immersive study of German language and culture in a diverse German speaking world with a focus on basic grammar and vocabulary through fictional and non-fictional readings, film, oral and written drills, composition exercises, authentic conversation, and project work. *Never serves in partial satisfaction of the Distributive or World Culture Requirement.*

Offered: Spring, Winter.

GERM 2.03 - Fast-Track German in Berlin (Green City FSP)

Instructor: McGillen, P

This course takes advantage of the city of Berlin as a full-immersion environment to combine the contents of German 2 and German 3 into one accelerated course. Continued intensive work on the fundamentals of oral and written German and cultural knowledge through conversation, readings, grammar, composition exercises, and interactive projects. The course satisfies the college language requirement.

Prerequisite: Acceptance into the FSP S22

GERM 3 - Introductory German (continued)

Instructor: Denzel; Miller

Continued work on written and spoken German. Immersive study of German language and culture in a diverse German speaking world with a focus on basic grammar and vocabulary through fictional and non-fictional readings, film, oral and written drills, composition exercises, authentic conversation, and project work. *Never serves in partial satisfaction of the Distributive or World Culture Requirement. Successful completion satisfies the college's language requirement.*

Offered: Fall, Spring.

GERM 5 - Discovering Berlin (in German)

Instructor: Komska; Mladek

Taught in Berlin, this beginner-intermediate course introduces students to the city as an object of study—a crossroads of cultures and a sometimes dark and sometimes inspiring site of German and international history. The syllabus is based on weekly field trips to architectural, historical, religious, scientific, and industrial landmarks and on short student responses to them, in speaking and in writing. (in German)

Prerequisite: Acceptance into the Dartmouth Language Study Abroad Program.

Degree Requirement Attributes: WCult:W

GERM 6 - Introduction to Germanophone Literature

Instructor: Fuechtner; Komska; Mladek

Taught in Berlin, this beginner-intermediate course introduces students to how to read and appreciate a wide variety of literary forms, some established and others experimental. The discussions encourage students to tap into the vast possibilities of the German language and its entanglements with other languages, to discover what makes literature so mind-changing, and to grow their vocabulary as well as the range of expression and facility in speaking, writing, reading, and listening. Conversations with authors and live performances are usually part of the syllabus, making the course one-of-a-kind.

Prerequisite: Acceptance into the Dartmouth Language Study Abroad Program.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 7 - First-Year Seminars in German Literature

Instructor: Denzel; Miller

Consult special listings

Offered: Winter.

GERM 10.00 - Intermediate German Language and Culture: Contemporary Germany (in German)

Instructor: Fuechtner; Gemunden; Komska; Mladek; Ostrau

German 10.00 is an intermediate-level German Studies course designed to consolidate and expand the cultural and linguistic proficiencies gained in German 1–3 or equivalent training. The course focuses on society and culture in contemporary Germany but also addresses those key moments since 1945 that have made the country what it is today. Using methods of historical inquiry and social observation and analysis, the course introduces students to Germany's emergence and existence as a multicultural society and a pivotal actor in Europe and the world. Through predominantly short readings and viewings, students work on improving oral expression and writing, with emphasis on the expansion of vocabulary and the reinforcement of grammatical structures. Classroom interaction are entirely in German, since input and interaction are the engines of second language acquisition and help students get to know each other and build a community. (in German)

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

GERM 10.01 - To Be Young in Germany (in German)

Instructor: Ostrau

This class investigates youth cultures in the German-speaking world, analyzing different ideas of youth and their political and cultural impact in four distinct units: fairy tales and nation building in the early 19th century, sexual awakenings in the early 20th century, authoritarian regimes of the mid- and late 20th century, and youth rebellion in post-war and post-unification Germany. This course will review more complex grammar, expand vocabulary, and strengthen listening, speaking and writing skills. (in German)

Prerequisite: GERM 3, or equivalent

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GERM 10.02 - From God's Subjects to Global Citizens (in German)

This course surveys the history and culture of the German-speaking lands to investigate the individual's role in a

changing society. Discussions will stress the uneven path of subjects, dependent on God, the ruler, or social hierarchy, towards becoming autonomous citizens. What role has philosophy, poetry, art, architecture, or music played in this emancipation process? Thinking and writing about this question will help intermediate language learners practice grammar, acquire vocabulary, and strengthen listening, speaking, and writing skills. (in German)

Prerequisite: GERM 3, or equivalent.

Degree Requirement Attributes: Dist:TMV; WCult:W

GERM 10.03 - Understanding German Media (in German)

Instructor: Komska

This intermediate course explores the media scene of contemporary Germany, with a focus on newspapers, TV, radio, and blogs. We will compare these media, study the kinds of language they produce, and analyze their place in contemporary German culture. Students will develop writing skills by practicing the stylistic conventions of each medium, learning to communicate effectively with different audiences. The course reviews grammar topics in detail, expands vocabulary, and strengthens listening, speaking, and writing skills. (in German)

Prerequisite: GERM 3, or equivalent.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 10.06 - Look! A Visual History of Germany (in German)

Instructor: Denzel

This course explores Germany's history from pre-modernity to the present through visual sources ranging from medieval manuscripts to contemporary film. Students analyze the iconography of major social, political, and artistic events and developments by "reading" posters, paintings, architectural plans, newspaper illustrations, and art installations as well as "texts" in other visual media. Analyzing such visual evidence of German history, intermediate learners of German will refine their grammar, expand their vocabulary, and improve their listening, speaking, and writing skills. (in German)

Prerequisite: GERM 3, or equivalent.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 13 - Beyond Good and Evil (in English)

Instructor: Denzel

Borrowing its title from Nietzsche, this course examines some of the most famous and infamous figures--mythological, fictional and historical--that have profoundly shaped German identity. As we explore the actual lives, works, and influence of the likes of Luther, Faust, and Leni Riefenstahl, students will develop a greater understanding of Wagner's question "What is German?" and learn how the answer to that question has come to epitomize notions of good and evil in general. This course is delivered in English in a lecture/discussion format. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 14 - Into the Woods: The Brothers Grimm and the European Folklore Tradition (in English)

Instructor: Ostrau

This course examines the classical origins, artistic form, and modern legacy of the folktales famously collected by the Brothers Grimm, situating them in both their German and their wider European context. Students investigate the cultural, political, and psychological influences of the folktale genre on individuals, social groups, and nation-states from antiquity to the present. Class discussions consider renditions of the tales in various media (including illustrated editions and films) and treat contemporary topics such as childhood pedagogy, gender, social (in)justice, psychology, and political ideology. This course is delivered in English in a lecture/discussion format. Open to all classes.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 15 - Nazis, Neonazis, Antifa and the Others: Exploring Responses to the Nazi Past (in English)

Instructor: M. McGillen

Why do the Nazis remain the world's epitome of evil? What did they actually do? And how specifically are they remembered, depicted, emulated, despised or ignored since the catastrophes of the mid-twentieth Century? In this course we will examine the main events connected with the Second World War, the genocide of European Jewry and Roma-Sinti, forced resettlements of various populations, and the Allied attacks on the German civilian population. We will analyze the different stages of coming to grips with that past on the part of German and some other postwar societies, by examining together a number of controversies like those surrounding the Nuremberg, Frankfurt, Eichmann and Barbie trials, the campaign to build a Holocaust memorial in Berlin, Neonazism, the Wehrmacht photo exhibition, and the current campaign to remember German civilian casualties and losses. Approaching our topic with interdisciplinary and comparative methodology, that is, by utilizing history, journalism, video testimony, music, literature, and art,

including film, photography and architecture, students will develop their own perspectives on the formation of postwar German identity and why Nazis remain the epitome of evil. An individual midterm project will allow students to practice the skill of summarizing different sides of a debate, and a final group project will invite students to solidify what they have learned in the course about the formation of national identity by creatively staging a contemporary debate about the Nazi past. This course is delivered in English in a lecture/discussion format. Open to all classes.

Cross-Listed as: COLT 64.01 JWST 37.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 16 - Curious George: A Secret History (in English)

Instructor: Komska

Where do children's book characters come from? The answer seems obvious: from their creators' imaginations! This was certainly how the German-Brazilian-American-Jewish serial migrants Margret and H. A. Rey liked to describe their creation, the "monkey" (rather, a correctly drawn young chimpanzee) Curious George. However, Curious George's origin is anything but clear. In this course, we will trace the figure's history, some of it completely unknown or misunderstood. In lectures, field trips, and lab-style archival forays, we will learn about the facts and fictions of colonial animal trade in Germany's north, where the authors were born; about the upkeep of apes in public and private zoos on three continents; about ape taming and circus spectacles; about press coverage of ape escapes; about the reception of Darwinism in Germany and about the Reys' interest in primatology; about the authors' own flight from Nazi-occupied Europe and their attention to war-displaced animals; and about simians as metaphors for human otherness and marginality. This course is delivered in English in a lecture/discussion format. Open to all classes.

Cross-Listed as: JWST 25.03

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 29 - A Cultural Studies Approach to Contemporary Germany and Berlin (LSA /FSP, in German)

Instructor: Gemünden

Introduction to contemporary German culture, identity and everyday life through close analysis of literary, visual (including filmic), architectural, political and other texts. Assignments develop skills in the analysis of visual material, of the construction of identity, and of the expression of sophisticated ideas in written and spoken German. Carries major or minor credit. (in German)

Prerequisite: Acceptance into the Dartmouth Foreign Study Program.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:CI

GERM 30 - Studies in German History (LSA /FSP, in German)

Instructor: Gemünden

More than any other German city, Berlin encapsulates Germany's complex recent past. From the Brandenburg Gate to the Olympic Stadium, from the Wannsee to Alexanderplatz, every corner of the capital evokes memories of industrialization, Nazi rule, World War II, Cold War divisions, re-unification, multiple waves of migration, and struggles for equality and justice. This course addresses these aspects of German history and cultural memory and complements their in-depth study with site visits. (in German)

Prerequisite: Acceptance into the Dartmouth Foreign Study Program.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

GERM 31 - Studies in German Theater (LSA /FSP, in German)

Instructor: Gemünden

Berlin is one of the most culturally vibrant cities in Europe. It has over a hundred theaters and several opera houses with performances that range from classical drama to vaudeville, from musicals to serious opera. We will read plays and libretti, view live stage productions, and reflect on our impressions in discussions and in writing. The repertory varies from year to year. (in German)

Prerequisite: Acceptance into the Dartmouth Foreign Study Program.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.04 - From the Typewriter to Virtual Reality: Modern Media Theory (in English)

Instructor: McGillen, P.

The media theorist Friedrich Kittler famously declared, "Media determine our situation." But what is a medium, and how can we understand its impact? Through analysis of foundational media-theoretical writings from the 20th and 21st centuries, this seminar will explore the relationship between modern media and fundamental cultural practices, ranging from the acoustic (gramophone, radio), to the visual (photography, film, virtual realities), to the tactile (typewriter, e-reader, touch screen). Topics will include the relationship between media technologies,

perception, and communication; the interplay of mass media and art; and changing notions of reality. The seminar will emphasize the "German tradition" of media studies with its focus on technology and material media and put it in dialog with international developments (McLuhan, Baudrillard, Virilio, Parikka).

Cross-Listed as: COLT 18.03

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 42.05 - Material Realities, Material Matters: A Brief History of Paper & Other Writing Surfaces (in English)

Instructor: McGillen, P

The age of paper is said to be over because so much data are digital now. Yet we are far from being a paperless society. Paper is still everywhere in our everyday lives (think money) and even in our language ("I have to write a term paper"). In this course, we will trace the media history of paper and other writing surfaces—from clay tablets, to papyrus, to Gutenberg's letterpress, to the industrial age of newsprint, to the pdf—to find out how paper permeated modern culture and civilization as deeply as it did.

Combining media-historical and literary readings, we will study the impact that paper had on literary and intellectual production. How might the choice of writing surface both enable and restrict the writer's creative possibilities? Theoretical readings by McLuhan, Foucault, Kittler, and Johns; selected literary writings by de Pizane, Diderot and D'Alembert, Defoe, Lichtenberg, Dickens, George, and Sudjic. Parts of the course will be taught hands-on with print objects from Rauner Library.

Cross-Listed as: COLT 40.05

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.06 - Freud: Psychoanalysis, Jews, and Gender (in English)

Instructor: Fuechtner

This course will examine how Freud's own writings, his biography, and his biographers have shaped the perceptions of psychoanalysis as a specifically Jewish theory and practice. Through a reading of Freud's texts on gender, sexuality, and religion, we will trace the connects between psychoanalysis, Jewishness, and gender that have impacted theoretical discussion. We will explore critique, including Horney, Reich, and Marcuse, and recent debate on the status of Freud in the U.S.

Cross-Listed as: COLT 66.03 JWST 051 WGSS 67.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

GERM 42.07 - Intercultural Communication (in English)

Instructor: Denzel

This interdisciplinary class introduces students to key topics of intercultural communication. Through role plays, experiential exercises, and analyses of case studies from the global industry and world politics students will learn about significant components of their own culture and other cultures. Drawing on concepts from linguistics, psychology, anthropology, sociology and business studies, we will problematize notions of an “essential” cultural identity, while analyzing international relations and common conceptions and misconceptions in a global context.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

GERM 42.08 - Mind Reading: Literature of the Inner Life (in English)

At the beginning of the 20th century, European authors became fascinated by the inner workings of the human mind, and invented new narrative methods for exploring and depicting them. Many of those experimental techniques were so successful that they have now become standard practice in novels and short stories. Against the background of early 20th-century psychology, this course will examine those literary techniques, both in a systematic theoretical development, as well as by reading and analyzing works and selected passages by Kafka, Mann, Joyce, Woolf, Proust, Gide, Schnitzler, Musil, Faulkner, and others.

Cross-Listed as: COLT 28.01

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.09 - The Power of Music In German Literature (in English)

This course treats prominent examples of the historically close relationship between the proverbial “sister arts” of literature and music. It treats hymns, plays, poems, and prose fiction set to music in cantatas, songs, song-cycles, and operas, as well as in ballets and in film. It also treats prose fiction describing music, singers, musicians, and composers.

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 42.10 - Naughty Nuns, Rowdy Knights and Feisty Poets: The German Middle Ages (in English)

Instructor: Ostrau

This course investigates instances of rebellion against worldly and spiritual powers in fictional and nonfictional texts of the German Middle Ages. Case studies include gender roles in the twelfth century correspondence of Hildegard of Bingen, the undermining of the court’s strict code of heroic behavior in chivalrous epics by thirteenth century courtly poets (Vogelweide, Straßburg) and the violation of sexual taboos and class borders in fourteenth century conduct literature.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.11 - Literature and Psychoanalysis: The Cultural Legacy of Sigmund Freud (in English)

Those new to Freud might be surprised by the role of literature in his texts. Why, for instance, are *Hamlet* and *Oedipus* so important in articulating theories of the psyche? Why might a medical practitioner analyze novels in addition to analyzing patients? Our goals for this course are twofold: First, we will work to understand Freud’s texts on their own terms as we familiarize ourselves with psychoanalytic theories. Second, we will situate these works within a broader cultural context, reading them alongside literary texts that Freud explicitly addresses and alongside literary, filmic, and theoretical works that draw on psychoanalytic concepts. Our discussions of the cultural imprint of Freudian thought will encompass a variety of themes, from gender and sexuality to Jewishness to the clinical techniques central to psychoanalytic practice. We will grapple with the promises and limitations of Freud’s own literary “archive” and the cultural products that archive Freudian thought.

Cross-Listed as: COLT 66.02

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.12 - Fictions of Survival: Robinsonades and Adventure Stories (in English)

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This seminar follows the traces of the Robinsonade and the adventure novel. Where do the roots of such adventures lie—adventures that are experienced and capable of being told as tales? When did it become possible to turn adventures into a business or entertainment? What is an adventure to begin with? Can it be described as a form? These questions themselves show just how wide a net we have to cast if we are to apprehend something of what constitutes adventures and adventurers. This question needs to be considered in the terms of literary, cultural, and media history. With regard to adventurers (both male and female), a highly interesting question to examine is whether they consciously expose themselves to danger in order to experience an adventure or whether the adventure is the inadvertent consequence of fate or accident. The character and significance of these questions changes as they approach the present, in which the pursuit of adventure is becoming ever more widespread and its documentation includes real-time transmission almost as a matter of course.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 42.13 - Gender and Jewish-German Culture (in English)

In this class we will investigate different texts and representations of female experiences by Jewish authors from the Weimar Republic to the end of the 20th

century. The intersection of gender with Jewish German culture became one of the most important topics in cultural and literary research during the last decades. We will read and discuss lyrical and political, essayistic and autobiographical texts written by authors under extremely different political and historical circumstances; and we also will discuss theoretical and methodological problems in the field of Jewish German history and culture. Taught in English translation. Students taking the class for major or minor credit in German Studies will have the option to enroll in an additional German-language discussion section.

Cross-Listed as: JWST 53.01 WGSS 66.13

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 42.14 - German-Jewish Exile Literature (in English)

Instructor: McGillen, M

The rise of fascism in Europe resulted in the displacement of countless Central-European Jews, who sought refuge in France, Switzerland, Sweden, Istanbul, Palestine, and above all in the United States. This course explores how German-Jewish writers, artists, and intellectuals responded to the condition of exile during the period of National Socialism and its aftermath. These writers constituted what Erika and Klaus Mann called “The Other Germany” by carrying forward the avant-garde possibilities of Weimar culture and offering political resistance to the Nazi regime from outside of Germany. Yet they were also confronted with the challenges of exile, including homelessness, alienation, and the struggle to form communities, along with painful questions about their own German identity and their relationship to the German language.

Examining works by Arendt, Mann, Brecht, Benjamin, Auerbach, Kracauer, Lasker-Schüler, Seghers, Sachs, Celan, Adorno, Werfel, Zinnemann, Lorre, and Schoenberg, the course will address key topics raised by the German-Jewish experience of exile, including nostalgia, loss, antisemitism, the corruption of the German language by National Socialism, bilingualism, the political significance of the refugee experience and resistance to fascism, the complex image of America in the works of German-Jewish refugees, and the religious meanings of exile.

Cross-Listed as: JWST 20.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

GERM 42.15 - Modern Sex: Weimar Republic Germany 1918-1933 (in English)

Instructor: Fuechtner

This course explores conceptions of gender and sexuality in Weimar Republic Germany – up until today considered the “laboratory of modernity.” After a general introduction into Weimar Republic history and culture through the eyes of the American graphic novel *Berlin: City of Stones*, we will examine a variety of historical practices, theoretical reflections and artistic representations. We will read pioneering theoretical texts from the fields of psychoanalysis and sexology (e.g., by Magnus Hirschfeld and Wilhelm Reich) as well as literary texts (e.g., by the poet Else Lasker-Schuler). We will also analyze feature films (e.g., the silent film “Different from the Others”) and artwork (e.g., by George Grosz and Hannah Hoch) and discuss the status of the women’s and gay rights movements, and legislation concerning gender and sexuality. The class will focus on the close connections between political and cultural movements and also relate our readings to discussions of modernity and urbanity in general. Throughout this course we will investigate different perceptions and representations of sexuality, homosexuality, transvestitism, sexual reproduction, prostitution, marriage and love. These theoretical discussions and artistic representations still continue to impact our discussions today, e.g., in political controversies about abortion or gay marriage.

Cross-Listed as: JWST 60.02 WGSS 67.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 43 - Migration, Mobility and the Movies: German Film in Global Context (in English)

European borders have become a popular setting in world cinema since the development of global tourism and the recently declared “international immigration crisis”. In this class, we study film as an aesthetic and political medium and explore how directors construct and deconstruct borders in their audience’s imagination. We analyze the concept of cinematic 'borderscapes' and examine how depictions of borders rely on narratives, images and imaginations. We do not only assess who is crossing international borders – commuters, tourists, immigrants, refugees, human traffickers and their victims – but we also examine who is welcome to cross, who is welcome to stay and who has to be expelled. We put German cosmopolitan road movies, tourist films and tales of successful and unsuccessful migration and integration in the context of global cinema and analyze differences in debates surrounding multiculturalism, migration and mobility, national identity and human rights.

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

GERM 43.01 - History & Theory of German Film: Contemporary German Film (in English)

Recent German films such as *The Lives of Others*, *Downfall*, *Head On* or *Run Lola Run* have enjoyed much international success at festivals and box

offices and drawn attention to a new generation of German-language filmmakers. This class will explore contemporary German culture of the last twenty years through their lens. We will discuss some of the main challenges that German society is facing today: overcoming the divide between East and West integrating immigrant cultures, and coming to terms with the history of the Third Reich. In our analysis of popular mainstream movies as well as low-budget independent productions, we will also address how filmmakers today refer to their rich tradition of German cinema before reunification, e.g. the Expressionist cinema of the 1920s or the New German Cinema of the 1970s.

Degree Requirement Attributes: Dist:ART

GERM 43.04 - The Berlin School (in English)

Instructor: Gemünden

This course examines the contemporary German film movement known as the "Berlin School," a group of approximately a dozen filmmakers with more than 40 features to their credit. Dissecting the everyday reality of post-wall Germany, this counter-cinema draws on Italian Neo-Realism, the New German Cinema, and contemporary international independent film to advocate radical notions of realism and narrative conventions, challenging viewers to rethink political filmmaking in a national and transnational environment. Screenings will include films by key filmmakers associated with the Berlin School as well as by Luchino Visconti, Wim Wenders, Kelly Reichardt, Apichatpong Weerasethakul, and others.

Cross-Listed as: FILM 42.20

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 43.05 - Of Golems, Vampires, and Robots: The Haunted Screen of Weimar Cinema (in English)

Instructor: Gemünden

Weimar Cinema prefigures the rise of the Third Reich, but it also reacts to the trauma of the lost War, and to the fear of changes brought on by modernity: secularization, industrialization, urbanization, the rise of the "new woman," and changing forms of sexuality. In this course, we will meet the most famous of these uncanny cinematic creations and study them in the larger cultural and social context that marked the transition from the demise of the German Kaiser to the advent of the Führer.

Cross-Listed as: FILM 42.17

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 44.02 - History of Jews in Germany

This course is designed as an introductory survey of the history, culture, and identity of the Jews in Germany from the 18th century to the present. Our interest will be in examining the unique Jewish identities, male and female,

religious and secular, that were shaped as Jews gradually emerged from a state of internal colonization and began their struggle for political emancipation and social integration during the era marked by the rise of anti-Semitism, liberalism, socialism, Christian tolerance, Nazism, two world wars, and, eventually, the emergence of the two Germanys and their unification after 1989.

Cross-Listed as: HIST 94.12 JWST 34.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

GERM 44.03 - Souls Sold to the Devil: The Faust Tradition (In English)

Instructor: Miller

Faust's famous story of selling his soul to the devil in return for knowledge, wealth, power, love, freedom, or youth has been told in many ways and in diverse media. This course concentrates on Marlowe's *The Tragical History of the Life and Death of Doctor Faustus*, on Goethe's *Faust*, and on Mann's *Doctor Faustus*. It also considers Fausts in French and Russian Literature and in New England as well as in art, music, and film. Students thus learn how historical, legendary, literary, and other Fausts reflect both hopes and fears of specific cultures at particular times while raising epistemological, ethical, and other issues inherent in the larger, limited modern human condition.

Cross-Listed as: COLT 35.04

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 44.05 - Where the Wild Things Are: The Culture of Environmentalism in Germany (in English)

Instructor: Komska

Long before it became a twenty-first century buzzword, "sustainability" (*Nachhaltigkeit*) was a term coined and propagated by nineteenth-century German pioneers of nature conservation. For inspiration they drew not on political thought or science, but on works of art, philosophy, and literature where nature—especially the forest—loomed large. This course will focus on culture as a primary vehicle for Germany's ecological consciousness through the nineteenth century, the Third Reich, the Cold War, and the present.

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 44.06 - German-Jewish History (in English. Fall)

Instructor: Fuechtner and Heschel

This course is an immersion in the interdisciplinary approach to the history, culture, religion, and philosophy of Jews in Berlin, Prussia, Germany, and Central Europe from the late 18th century to the present day that will include

reading primary and secondary sources and visiting the actual sites where the historical events occurred. Students participate in this course on-campus and then engage with the course during a three-week immersion off campus after the end of the exam period.

Cross-Listed as: JWST 34.03

Offered: Fall.

Degree Requirement Attributes: Dist:INT; WCult:CI

GERM 44.07 - Metropolis Berlin: Cultural and Political History in the Urban Landscape (in English)

Instructor: McGillen, P

This interdisciplinary class explores the German capital as a cultural and political center from the eighteenth century to the present day through historical and sociological readings, literary excerpts, films, conversations with Berliners, and excursions. Built around five core modules, the class provides a panorama of key moments in the city's history: City of Growth (tenement housing or Mietskasernen in the 1920s; the Bauhaus; contemporary architecture; migration); City of Intellectuals (Jewish salons and enlightenment culture in the eighteenth century; underground literature and music under conditions of GDR censorship; today's literary scene); City of Film (Weimar film; East German genre cinema); City of Ruptures (Fascism; the Berlin Wall; reunification); and City of Sustainability (a cultural history of water supply; public transportation; parks; and gentrification). Students will not only learn how to "read" Berlin's present-day characteristics in the context of modern Germany's cultural, political, and social history, they will also develop a refined understanding of the historically contested and emotionally charged nature of the city's urban landscape and analyze the conflicts that arise from the challenges of commemorating Germany's fraught past. The course will be taught in English by the German Studies Faculty Program Director. It will include the option to complete additional assignments in German during the x-hour for German major/minor credit. The Friday excursions will be open to all students on the FSP. Students enrolled in this course will serve as tour guides for their FSP peers.

Prerequisite: Acceptance into the Foreign Study Program.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

GERM 44.08 - Sustainability and German Environmental Imagination (in English)

Instructor: Deniz

Ecological crises and sustainability related issues such as climate change, loss of biological and cultural diversity, and natural catastrophes are among the most pressing issues we face today. Without a doubt, we are now called to think about our actions and the ways they shape the

future of our communities and planet. Sustainability challenges have multiple dimensions, requiring collaboration across various fields and disciplines. In this course, while focusing on the evolution of German ecological imagination and thinking from 1800 to the period in which we currently live, i.e., the Anthropocene, we will constantly highlight the connections among environmental, social, cultural, political, economic, and technological factors and perspectives. Through literary, scientific, and journalistic texts, films, plays, musical and visual art works, we will analyze catastrophic and ecologically impactful events such as the Second World War, Chernobyl, and Fukushima; try to capture the changing modes of the relationship between the human and the nonhuman; and discuss environmental justice and various forms of environmental activism.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

GERM 45 - The Burden of the Nazi Past: World War, Genocide, Population Transfer, and Firebombing (in English)

This course studies the main events of World War II and the different stages of processing the past in the post-1945 period. In an interdisciplinary fashion we take up selective controversies in order to understand the formation of post-war German identity, e.g., the Nuremberg, Frankfurt, and Eichmann trials, the Berlin Jewish Museum and Holocaust Memorial, Neonazism, and current efforts to remember German civilian casualties. Taught in English. By special arrangement, this course can count toward a German Studies major or minor. Open to all classes.

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 46 - The German Novel (in English translation)

GERM 46.02 - Kafka and Brecht: Alienation, Satire, and Revolt (in English)

Instructor: Mladek

Franz Kafka (1883-1924), the most influential prose writer of the 20th century, and Bertolt Brecht (1898-1956), probably the most influential dramatist, both examine the alienated and un-heroic modern individual in her/his unhappy relationship to hostile social environments: dysfunctional families, impenetrable bureaucracies, heartless capitalist economies. Both use experimental techniques in form and content to shake their audiences out of their complacent worldviews and lazy habits of thought and feeling; both are darkly, mordantly, hilariously funny.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 46.03 - 8 Short Books That Will Change Your Life (in English)

This course is for anyone who has ever been afraid of great literature, for anyone who has fallen in love with good

books before, and for anyone who has used them to make a difference in someone's life. You will learn how to read, understand, and see the world differently. We will read short but revolutionary books from different centuries, different kinds of writers, and different media; they will be about loss and love and loyalty and law, parasites and the climate catastrophe. Some of them will be about you. You will develop interpretive skills and will learn how to think about what it means for something to be "poetic," whether it is a mountain range, a crime, a love interest, or a toilet. Can the books we read in this class really change your life? (What would that even mean?) Maybe; maybe not. But they're certainly going to try.

Beginning with novels of the eighteenth and nineteenth centuries, and continuing up to the present day, it will focus on topics such as love, politics and the importance of death. This course includes film adaptations.

Readings will include Goethe's *Werther*, Kleist's *Michael Kohlhaas*, Droste-Hülshoff's *The Jews' Beech*, Nietzsche's *The Birth of Tragedy*, Rilke's *The Notebooks of Malte Laurids Brigge*, Kafka's *The Trial*, Musil's *Törless*, Thomas Mann's *Death in Venice* and *Visitation* by Jenny Erpenbeck.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 46.04 - Mobs, Crowds, and the People: Activism in Populist Times (in English)

Instructor: Gomez and Mladek

It is no accident that we find ourselves today in the midst of populist unrest. Our course *Mobs, Crowds, and the People: Activism in Populist Times* explores the longstanding history of popular unrest and mobilization, fear of the people in literature, philosophy, theology and film from across three continents. Populism is central to current debates about politics and the future of democracy, from radical right organizations in Europe to left-wing parties and presidents in Southern Europe and Latin America to the Occupy Wall Street Movement, Bernie Sanders, Donald Trump and the "Capitol Riot" in the United States. But populism is also one of the most contested concepts in the humanities and political theory. Is populism an ideology or a revolutionary strategy? A style of politics? And, crucially, who are "the people" in populism?

Cross-Listed as: COLT 63.03 HUM 03.07

Degree Requirement Attributes: Dist:TMV; WCult:W

GERM 46.05 - Friends, Enemies, Lovers: Civil War and Revolution (in English)

Instructor: Mladek and Godley

Equality, freedom, justice—we tend to think of these values as bringing about reconciliation and unity, as foundational to political communities. But surprisingly, the most

canonical thinkers in political theory have favored a different set of concepts: strife and civil war. For Plato, Hobbes, Marx, Arendt, Freud, Lenin, Schmitt, and many others, it is not the social contracts of government and laws that hold people together, but *love* and *hate*, the most intense passions of our closest human relationships. Of course, these passions are highly unstable, which leads us to many of the most profound paradoxes of philosophy and art: Why are tragedies dangerous to public morale and yet indispensable for public education? What do we do when families are torn apart by unreconcilable beliefs? How can a foe be a better friend than your friends? Similarly, the idea of "fraternity," so central for modern revolutions and the birth of the nation, is fraught with enmity and quarrel. This course will pursue these problematics in key texts of philosophy, literature, and contemporary critical theory, and bring the philosophical paradigm of civil war to bear in relation to US and German culture.

Cross-Listed as: COLT 08.01 ENGL 55.25 HUM 03.08

Degree Requirement Attributes: Dist:TMV; WCult:W

GERM 47.01 - Marketplace Germany: Language and Culture of the German Economy (in English)

Marketplace Germany examines the economic culture and language of the German speaking world. It includes intercultural case studies on production, trade and consumer culture from Germany, Austria and Switzerland as well as Germany's relationship with the E.U. and other global trading partners. Through readings, compositions and hands-on projects students learn how German business is conducted in major German industries and they acquire basic business German. No prior knowledge of German required.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

GERM 61 - The Age of Goethe (1749-1832) (in German)

Johann Wolfgang von Goethe (1749-1832) was the most notable creative force of the period that bears his name, but his contemporaries included an astonishing number of other great geniuses, including Kant, Mendelssohn, Lessing, Schiller, Kleist, Tieck, and Hoffmann. Satisfies the culminating-experience requirement for seniors who are German majors and minors. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.01 - Franz Kafka and the Modern Self (in German)

Instructor: McGillen, M

Kafka's stories are the epitome of modern tragicomedy. In few other writers do we find despair and hope, guilt and redemption, dream and reality, in such close proximity. Kafka expresses the struggles of the modern self through

the labyrinth-like character of his prose, through which we as readers must find a path. The course will read Kafka closely - with attention to questions of authority, law, and self-fulfillment - and develop strategies of literary criticism and interpretation. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.02 - Pulp Fiction Meets High Literature: Media and Writing in 19th-Century Germany (in German)

Instructor: McGillen, P

To be a writer in 19th-century Germany meant to interact with a thriving media market: For the first time, writers wrote for a mass readership and published in illustrated magazines, where their writings appeared together with news items, pulp fiction, other kinds of entertainment, and images. Reading works by Heine, Fontane, Droste, and others, we will explore the complex aesthetic strategies with which they responded to this media challenge. The course will refine key research methods in German Studies. Open to all classes. Can be taken as a Culminating Experience by doing additional work. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.03 - Weimar Republic Culture (in German)

This class provides an introduction into Weimar Republic Culture and its rich political and aesthetic legacy. Writers, artists, filmmakers, scientists, philosophers, and political activists collaborated widely and produced new perspectives and forms for understanding the self and its relationship to language, to others and to the world. We will discuss among others artistic movements such as expressionism, Dada and New Objectivity, modernist genres such as the collage or the stream-of-consciousness novel, groundbreaking authors such as Thomas Mann and Bertolt Brecht, the rich German-Jewish cultural life before the rise of fascism and the way in which sciences and the arts converged. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 64.04 - Theater and the Revolution (in German)

The modern theater is born from the spirit of unrest and revolution. This course is an introduction to the concept of the revolution and its relation to some of the most groundbreaking plays of modern drama. Particular emphasis will be given to the intersection between theater and history, art and politics, stage and the passion for justice. But along the way, we will cross the question of love, betrayal, disgust, rage, melancholia and death. We will read plays by Georg Büchner, Bertolt Brecht and Peter Weiss, and by contemporary playwrights Heiner Müller and Elfriede Jelinek. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.05 - Black German Writing (in German)

Instructor: Oholi

This class provides an introduction to Black German literature—its history, its politics, and its aesthetics. While Black people have been part of Europe for centuries, Black German writing received only little attention so far. In this class, we will map Black German literature, from poems and rap songs to short stories and novels, between the 1980s to the present. What role does it play in society? What does it contribute to the German literary and linguistic landscape? To place these artifacts in context and to gain an understanding of the Black German community's diversity, we will discuss Germany's colonial legacy and the roots of the Black diaspora in Germany, the Black German political and cultural movement in the 1980s, the racist violence in the 1990s, and the concerted and vocal critique of racism in the 2000s. (in German)

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

GERM 64.06 - The Age of Goethe (1749-1832) (in German)

Johann Wolfgang von Goethe (1749-1832) was the most notable creative force of the period that bears his name, but his contemporaries included an astonishing number of other great geniuses, including Kant, Mendelssohn, Lessing, Schiller, Kleist, Tieck, and Hoffmann.

Not open to students who have received credit for GERM 061.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.07 - Novella versus Fairy Tale (in German)

Kunstmärchen are literary fairy-tales more refined than popular *Volksmärchen*. *Novellen* are narratives more akin to drama than to the novel or short story. This seminar treats outstanding examples of both genres, showing how they work as well as how they compete and conflict with each other.

Not open to students who have received credit for GERM 65.05.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.08 - Taboo Relationships: Deviant Desires in German Literature and Film (in German)

This course will critically examine representations of forbidden sexual desires within human relationships in German literature, film and the visual arts that deviate from present norm(s) set by the dominant culture(s). Discussions are based off of material from the Middle Ages to the Present and center on artistic fantasies that involve social taboos including adultery, object-love, voyeurism,

exhibitionism, prostitution, masturbation, sadomasochism, the art of pornography, same-sex love and age-difference relationships. We will situate each theme in its historical and literary context and investigate in what ways imagining sexual desires beyond the publicly acceptable may be read 1) as a call for non-conformism and rebellion against the repressive politics of the state exacted on the individual subject, 2) as a response against the psycho-medical field's narrow labeling of sexual desires as degenerate perversions of middle class morals, 3) as cautionary tales that aim to redress such perceived acts of deviance and reestablish the moral order of the majority and 3) as artistic expression of that which is fundamentally human, i.e. the wide range of human sensory perception between the self and the other, which leads to such desires. The fictional material will be supplemented by medical, legal and political texts that seek to classify, regulate and fight for the expression of sexual relationships that are considered "beyond the norm."

Not open to students who have received credit for GERM 65.09.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.09 - German Drama: Drama Queens: Madness on Stage (in German)

This course analyzes how dramatic literature captured significant changes in ideas on emotions, nerves and madness over the centuries. After a brief introduction into dramatic theory, we will read seminal works by German language dramatists from the 18 through the 21 centuries such as Schiller, Büchner, Schnitzler, Brecht and Jelinek. The class will conclude with a public reading or performance.

Not open to students who have received credit for GERM 067.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 64.10 - After Nazism: Germany in Ruins (in German)

Germany after Hitler is a case study in collapse on a vast scale. Not only cities lay in rubble, but also beliefs, ideologies, gender roles, age hierarchies, human relationships, and even the German language, warped by years of Nazi abuse. Was there something left to glean from the inertia of stone, dust, shame, resentment, uncertainty, and apathy? Could this barren ground give birth to any new values, creative energies, and aspirations? Or would "new" amount merely to a restoration of the old, from before Hitler? In the course, we explore the artworks and mediums that attempted to shape a more hopeful future against an overwhelming present and a disgraced genocidal past and reflect on their resonances today. (in German)

Degree Requirement Attributes: Dist:TMV; WCult:CI

GERM 65.02 - German Humor--Not an Oxymoron! (in German)

Instructor: Fuechtner

German Humor--Not an Oxymoron! This seminar analyzes texts, artwork, films, and songs ranging from the early 20th-Century literary tradition to contemporary visual humor. The topics for discussion will include political satire on war, nationalism, and reunification, Hitler comedies, immigrant comedies, humor on gender, and satires on what it means to be German. This seminar also provides an introduction to German Studies research methods. German majors may take this course as their Culminating Experience by doing additional work. (in German)

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.05 - Realism and its Discontents: Novella versus Fairy Tale (in German)

Kunstmärchen are literary fairy-tales more refined than popular *Volksmärchen*. *Novellen* are narratives more akin to drama than to the novel or short story. This seminar treats outstanding examples of both genres, showing how they work as well as how they compete and conflict with each other. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.06 - Belonging in Germany (in German)

Instructor: Komska

In the 21st century, Germany is de facto an "immigration country." That means that non-Germans have a chance of becoming German. But it hasn't always been this way. The German understanding of belonging has a long and complicated history that spans several centuries. In our readings and viewings, which will range from Nazi films to memoirs of GDR-born writers, we will trace this history's twentieth-century course. Our discussions will tackle the themes that cross boundaries: home, nostalgia, assimilation, cosmopolitanism, and patriotism. Senior majors will participate in a weekly culminating experience workshop focused on more intensive interpretation and analysis of works. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.07 - Babylon Berlin (in German)

Instructor: Fuechtner

This interdisciplinary class investigates representations of the city of Berlin from the 19th to the 21st Century. We will draw from literature, autobiography, philosophy, film, and architecture to discuss Berlin's shifting political geographies. This course also counts as the culminating experience for seniors majoring in German, who will meet

as a group five times over the term during the x-hour. (in German)

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

GERM 65.09 - Taboo Relationships: Deviant Desires in German Literature and Film (in German)

This course will critically examine representations of forbidden sexual desires within human relationships in German literature, film and the visual arts that deviate from present norm(s) set by the dominant culture(s). Discussions are based off of material from the Middle Ages to the Present and center on artistic fantasies that involve social taboos including adultery, object-love, voyeurism, exhibitionism, prostitution, masturbation, sadomasochism, the art of pornography, same-sex love and age-difference relationships. We will situate each theme in its historical and literary context and investigate in what ways imagining sexual desires beyond the publicly acceptable may be read 1) as a call for non-conformism and rebellion against the repressive politics of the state exacted on the individual subject, 2) as a response against the psycho-medical field's narrow labeling of sexual desires as degenerate perversions of middle class morals, 3) as cautionary tales that aim to redress such perceived acts of deviance and reestablish the moral order of the majority and 3) as artistic expression of that which is fundamentally human, i.e. the wide range of human sensory perception between the self and the other, which leads to such desires. The fictional material will be supplemented by medical, legal and political texts that seek to classify, regulate and fight for the expression of sexual relationships that are considered "beyond the norm." (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.10 - Cultures of Memory (in German)

Instructor: McGillen, M.

Contemporary Germany is often held up as a model of a "culture of memory"—a society whose introspective engagement with the horrors of its racist, fascist, and totalitarian pasts has not only resulted in countless museums and memorials but has also become part of the fabric of social life. This course examines how works of memory by key German writers, artists, and intellectuals over the past 70 years respond to collective amnesia and contend with the difficulties of remembering in the face of trauma.

Exploring the unique possibilities of different media of cultural memory, such as novels, poetry, theater, documentaries, photography, photo essays, museums, monuments, and memorials, the course will address key questions of memory studies: How do cultures of memory balance remembering the suffering of victims and the violence of perpetrators? In what sense do the children of perpetrators inherit the guilt of their parents' generation?

And why did a broad social engagement with the crimes of the Nazi past not begin in Germany until decades after the end of the World War II?

For German Studies majors, the course serves as the Culminating Experience for the major. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.11 - Pulp Fiction Meets High Literature: Media and Writing in 19th-Century Germany (in German)

To be a writer in 19th-century Germany meant to interact with a thriving media market: For the first time, writers wrote for a mass readership and published in illustrated magazines, where their writings appeared together with news items, pulp fiction, other kinds of entertainment, and images. Reading works by Heine, Fontane, Droste, and others, we will explore the complex aesthetic strategies with which they responded to this media challenge.

Not open to students who have received credit for GERM 064.02.

This course introduces students to research methods in the field of German Studies. It also counts as the culminating experience for all senior majors, which may involve additional work.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 65.12 - Turkish German Literature and Culture (in German)

One in five people in Germany now has a so-called "background of migration" (Migrationshintergrund); in other words, either themselves or their parents or grandparents migrated to Germany in the second half of the 20th century or at the beginning of the 21st century. After the World War II, Germany needed a massive workforce to reconstruct its economy, especially in the manufacturing sector, and invited "guest workers" (Gastarbeiter*innen) from other countries. Immigration from Türkiye, in particular, has significantly changed Germany's overall cultural, political, and economic landscape. The course will explore the following questions: How do literary, filmic, and musical works and theatrical performances produced by Turkish German writers and artists describe and explain the constitution of the "German" identity and "Germanness"? How do the themes, topics, and literary and artistic styles in their works intersect with those produced by writers and artists from other minoritized groups, such as Black Germans, Middle Eastern Germans, Jewish Germans, and refugee writers and artists? How do these works contribute to creating a multicultural, inclusive, and anti-racist society in Germany? (in German)

Degree Requirement Attributes: Dist:INT; WCult:CI

GERM 67 - German Drama: Drama Queens: Madness on Stage (in German)

This course analyzes how dramatic literature captured significant changes in ideas on emotions, nerves and madness over the centuries. After a brief introduction into dramatic theory, we will read seminal works by German language dramatists from the 18 through the 21 centuries such as Schiller, Büchner, Schnitzler, Brecht and Jelinek. The class will conclude with a public reading or performance. Open to all classes. (in German)

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 82 - Topics in German Creative Writing (in German)

Instructor: Johnson-Spain

What is it like to work with the German language creatively? This seminar gives upper-intermediate and advanced students of German a unique opportunity to learn directly from the most exciting voices in contemporary Germanophone culture. Seminar topics vary and are chosen by the year's Max Kade Visiting professor—an internationally recognized writer, filmmaker, journalist, comic artist, etc. Each seminar helps students understand, from the inside, what questions to ask of creative works, how to play with meaning and form, how to scaffold a creative project in a particular genre or medium, and how to position oneself vis-à-vis it. Students will continue to work on their written and oral expression and complete a small creative project in German. (in German)

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

GERM 82.11 - The Secrets of Writing

A magician never reveals their tricks—but a careful reader can unlock even the most skilled writer's secrets. This course, taught in German by a professional writer, is aimed at anyone who loves to read and would like a better grasp of the nuts and bolts of writing. Through close readings of five giants of German-speaking literature—Franz Kafka, Vicki Baum, Stefan Zweig, Patrick Süskind and Yoko Tawada—coupled with writing exercises focusing on essential craft elements such as structure, character, narrative voice, dialogue, sentences and paragraphs, profluency, etc., we will understand the toolkit a writer has at their disposal and learn how to use it in our own writing.

Degree Requirement Attributes: Dist:LIT; WCult:W

GERM 82.12 - Topics in German Creative Writing: Re-Appropriating Identity in Autobiographical Film (in German)

A complex world demands that each of us constantly position themselves as a clearly identified “I”. For this, we often must first unlearn what we had been told about who we are or should be. This course introduces

autobiographical film as a medium and artistic form for unraveling the externally imposed “I” and re-appropriating it.

Using simple filmmaking exercises, we will practice unbiased observation to trace the unknown, ignored or hidden aspects of our personal stories. Through examples of autobiographical films made by a range of international filmmakers, we will get to know various dramaturgical approaches and analyze modes of interactions between camera and protagonists. We will employ creative writing to reveal how each of our private and unique stories is always also part of a bigger narrative. Screenings will include films of Karim Ainouz, Sarah Polley, Agnes Varda, Peter Lichti and Alejandro Jodorowski. The course will be taught by professional documentary filmmaker Ines Johnson-Spain.

Degree Requirement Attributes: Dist:ART; WCult:CI

GERM 85 - Independent Study

All terms: Arrange

Offered: Fall, Spring, Summer, Winter.

GERM 87 - Honors Thesis

See German Honors Program

This course completes the honors program requirements in German Studies and must be taken in the spring of the senior year. Enrolling students will have worked with a department faculty mentor in the field of interest consistently starting senior summer. They will also have done substantive thesis-writing while in German 65 in their senior winter. Chair's override will be necessary to register.

Government

Chair: L.A. Swaine

Professors L. Baldez, J. Barabas, S.S. Bedi, S.G. Brooks, J. M. Carey, J.L. Jerit, D.P. Lacy, J.R. Muirhead, J.B. Murphy, B.J. Nyhan, D.G. Press, L.A. Swaine, B.A. Valentino, W.C. Wohlforth; Associate Professors D.J. Brooks, M.T. Clarke, M. Costa, J.A. Ferwerda, J.A. Friedman, J.M. Lind, J. Lyall, N. Miller, K. Powers, J.L. Rose, D.J. Vandewalle, S. Westwood; Assistant Professors A.N. Breuer, C.D. Crabtree, K.J. Roy, Y.Y. Zhou; Visiting Professors B. Avishai, G. Rosenberg; Visiting Senior Lecturers H.C. Clark, B. Fredrickson, J. Horowitz, A. Schiller, S. Simon; Visiting Research Professors H. Nachlis.

To view Government courses, click [here](#).

Department Median Grade Standards

Except under extraordinary circumstances, median grades in government courses will not exceed A- in seminars, and B+ in all other courses.

Requirements for the Major

Political Science is a highly diverse field united around a core interest. Political scientists study power, and especially power used for public purposes: how it is created, organized, distributed, justified, used, resisted, and sometimes destroyed. American political science is traditionally divided into four subfields: American Politics, Comparative Politics, International Relations, and Political Theory and Public Law. Students may choose to study within one of these subfields or may choose courses according to some other intellectual plan.

Prerequisite: One course in statistics and the methods of social science: GOVT 10, ECON 10, MATH 10, or QSS 15. The courses LING 10, PBPL 10, PSYC 10, or SOCY 10 also may be substituted for Government 10.

Requirements: The Government Major comprises at least ten courses chosen to constitute an intellectually coherent program. (The prerequisite is not considered one of the ten courses). These courses should include:

1. Two introductory courses;
2. Six additional courses at any level;
3. Two advanced seminars in Government or one advanced seminar in Government and the Honors Program, as the culminating experience.

The Culminating Experience: To meet the requirement of an integrative academic experience in the Major, all Majors will be required to complete one of the following:

1. Advanced Seminar (GOVT 81–86). To complete the Major in Government, a student must take an advanced seminar consistent with the goals of the student's program. Seminar requirements will include a research paper in which each student has the opportunity to integrate material from the study of political science in the analysis of a specific issue or phenomenon. It is expected that under normal circumstances seminar size will not exceed 16. Students are encouraged to take additional advanced seminars. An Independent Study (GOVT 80) may also be accepted as a culminating experience.

OR

2. Honors Program. The Department offers an Honors Program. Seniors participating in the program and completing the thesis (whether or not they receive honors) will thereby fulfill the culminating experience requirement. Those who enter the program and do not finish the thesis, but complete at least one term of the program, may, with

the approval of the Director(s) of the Honors Program, be given credit for GOVT 80.

Requirements for the Minor

The Minor in Government shall consist of:

1. Two introductory courses;
2. Four upper-level courses, chosen to constitute an intellectually coherent program (GOVT 10 may count as one of the upper-level courses);
3. One advanced seminar consistent with the goals of the student's program.

Requirements for the Modified Majors

The Department of Government offers three Modified Government Majors that combine Government with Economics or Philosophy or both. Student transcripts will note the **BOLD** titles of these modified majors.

Government Modified with Economics

Prerequisite: Total of three courses, which should include: MATH 3, ECON 1, and GOVT 10, or MATH 10, or ECON 10, or QSS 15. The courses LING 10, PBPL 10, PSYC 10, or SOCY 10 also may be substituted for Government 10.

Requirements: The Government Modified with Economics Major comprises at least 10 courses in addition to the prerequisite. These courses should include:

1. Two introductory courses in Government (GOVT 3, 4, 5, 6); and two upper-level GOVT courses in Political Economy recommended.
2. ECON 21, ECON 22, and two additional Economics courses numbered between 20 and 69.
3. Two advanced seminars in Government or one advanced seminar in Government and the Honors Program, as the culminating experience.

Government Modified with Philosophy

Prerequisite: Total of two courses, which should include: PHIL 1 or PHIL 3, and GOVT 10, or MATH 10, or ECON 10, or QSS 15. The courses LING 10, PBPL 10, PSYC 10, or SOCY 10 also may be substituted for Government 10.

Requirements: The Government Modified with Philosophy Major comprises at least 11 courses in addition to the prerequisite. These courses should include:

1. Two introductory courses in Government (GOVT 6 and 3 or 4 or 5); and any three additional courses in Political Theory (any government courses level 60's or 86's).
2. Four additional Philosophy courses, at least 3 of which must be courses numbered 11 or above, in moral, legal, or political philosophy (see modified major study form for approved courses).
3. Two advanced seminars in Government or one advanced seminar in Government and the Honors Program, as the culminating experience

Government Modified

Prerequisite: Total of two courses, which should include: ECON 1, and GOVT 10, or MATH 10, or ECON 10, or QSS15. The courses LING 10, PBPL 10, PSYC 10, or SOCY 10 also may be substituted for Government 10

Requirements: The Government Modified Major comprises at least 10 courses in addition to the prerequisite. These courses should include:

1. Two introductory courses in Government (GOVT 6 and 3 or 4 or 5); and any two upper-level courses in government.
2. Two Economics courses in political economy recommended (must be above ECON 10) and two Philosophy courses in moral or political philosophy recommended.
3. Two advanced seminars in Government or one advanced seminar in Government and the Honors Program, as the culminating experience

The Culminating Experience: To meet the requirement of an integrative academic experience in the Major, all Majors will be required to complete one of the following:

1. Advanced Seminar (GOVT 81–86). To complete the Major in Government, a student must take an advanced seminar course consistent with the goals of the student's program. Seminar requirements will include a research paper in which each student has the opportunity to integrate material from the study of political science in the analysis of a specific issue or phenomenon. It is expected that under normal circumstances seminar size will not exceed 16. Students are encouraged to take additional advanced seminars. An Independent Study (GOVT 80) may also be accepted as a culminating experience.

OR

2. Honors Program. The Department offers an Honors Program. Seniors participating in the program and completing the thesis (whether or not they receive honors) will thereby fulfill the culminating experience requirement. Those who enter the program and do not finish the thesis,

but complete at least one term of the program, may, with the approval of the Director(s) of the Honors Program, be given credit for GOVT 80.

Apart from these three pre-set modified majors, no other modified Government majors will be approved under any circumstances. This includes both Modified Majors in which Government is the primary component (e.g., Government Modified with History) and those in which it is the secondary component (e.g., History Modified with Government). Students who seek to modify a Major in another department with courses in Government may do so by using the option of a Modified Major without indication of the secondary department (e.g. History Modified).

Special Provisions

1. Under College policy, GOVT 7 (First-Year Seminar) may not be counted toward the Major, Modified Majors or Minor.
2. Transfer students will normally be expected to complete:
 - a. At least five of the ten courses required for the Major or Modified Majors on campus, or in courses taught by members of the Department.
 - b. At least four of the seven courses required for the Minor on campus, or in courses taught by members of the Department.

Non-Recorded Option

Government courses may not be taken under the Non-Recorded Option (NRO). Courses from other departments taken under the Non-Recorded Option may not be counted toward the Major, Modified Majors, or Minor (including prerequisite courses).

Major GPA

The Major GPA is calculated using the average of all completed Government courses (even if the student has completed more than the 10 required courses) with the following exceptions and provisions:

1. The Major prerequisite(s) are not included in the calculation of the Major GPA;
2. Government courses being used to fulfill the requirements of other majors or minors are not included in the calculation of the Major GPA;
3. The Modified Major GPA is calculated using the average of all courses listed in the modified major plan (not including the Prerequisites);

4. Under College policy, GOVT 7 (First-Year Seminar) may not be counted toward the Major, Minor, or Modified Majors. Therefore, GOVT 7 grades are not included in the calculation of the Major GPA.;
5. Although GOVT 99 (the third course in the Honors Program) may not be counted as one of the Major, or Modified Majors, courses its grade is included in the Major GPA;
6. Courses with grades E, CT, W or TR are not included in the calculation of the Major or Modified Majors GPA.

Off-Campus Study

Off-Campus Program in London

The Department of Government sponsors a foreign study program at the London School of Economics and Political Science during the fall term. Sixteen students will be selected for the program during the preceding winter term; The prerequisites for this program consist of any two government introductory courses of the following courses: GOVT 5, and any one of the following courses GOVT 3, GOVT 4, or GOVT 6. Relevant coursework in other departments will also be considered by the program director. Students take two midlevel courses with members of the LSE Department of International Relations (GOVT 90 and GOVT 91). The third course (GOVT 92) is a seminar with the Dartmouth faculty member accompanying the group. Please check the Frank J. Guarani Institute for International Education website at <https://guarini.dartmouth.edu/> for further information or contact the program director.

Off-Campus Program in the Baltic Countries

The Department of Government and The Arthur L. Irving Institute for Energy and Society offer an interdisciplinary program for government or energy policy students, the Baltics LEAP. This program features custom-designed courses focusing on evolving governance strategies, energy transitions, and the dynamics of democratization, identity, culture, and language in the region. Courses will be provided by the program directors and members of the Vilnius University in Lithuania and the University of Tartu in Estonia. Students in the program will take three courses, two of which can be used toward the government major, modified majors, or minor. These courses are "Baltic Energy Systems and Transition Strategies" (GOVT 96.05/EEER 24, a midlevel) and a seminar offered by the supervising government faculty member (GOVT 96.04). Please check the Frank J. Guarani Institute for International Education website at <https://guarini.dartmouth.edu/> for further information or contact the program director.

Off-Campus Program in Washington

Students in any major may apply to participate in the Government Department's off-campus program, which is held in Washington, D.C., during the spring term. The program offers three course credits for the following: an independent study that reflects on the links between the internship experience and the academic courses (GOVT 93) and two seminars (GOVT 94 and GOVT 95) offered in Washington by the supervising faculty member. In Washington, students work at their internships Monday through Thursday. Fridays are reserved for excursions and visits to guest speakers drawn from the Washington community (such as members of Congress, government officials, reporters, lobbyists, political activists, and staff at non-governmental organizations). Each seminar meets twice a week in the evening. Please check the Frank J. Guarani Institute for International Education website at <https://guarini.dartmouth.edu/> for further information or contact the program director.

Honors Program

The Government Department Honors Program provides qualified undergraduates with an opportunity to complete independent research under the supervision of the members of the Department. Participants define and analyze a specific issue or hypothesis in the field of political science and write a thesis (normally 75 to 125 pages in length). Students should consider the possibility of participating in the Honors Program when first planning their Major. Students must take courses providing necessary preparation in their sophomore and junior years and an advanced seminar in their junior year to allow them to develop a proposal. Students interested in participating in the Government Department Honors Program should obtain information on the Program from the Department Office.

Formally, the Honors Program consists of submission and acceptance of a proposal by the end of the spring term of the junior year and of completion of an Honors thesis within the framework of a three-course sequence during the senior year: GOVT 97 (Fall), GOVT 98 (Winter), and 99 (Spring). GOVT 97 will count as a seminar and GOVT 98 will count as a midlevel course toward either the Major or Minor. GOVT 99 will not count toward the Major, Modified Majors, or Minor.

Each student writing an Honors thesis will be supervised by an advisor(s) who, insofar as possible, have expertise in the area concerned. Students are responsible for securing an advisor from the Government Department before submitting an application to the Honors Program. Participation in Government 98 and 99 also entails regular interaction among Honors students under the direction of the Department's Honors Program Director(s). The Director(s) share with thesis advisor(s) responsibility for determining grades for the two courses.

Admission to the Honors Program and enrollment in GOVT 97 are granted by the Directors if the following requirements are met:

1. Grade point average of 3.3 or higher overall and 3.5 or higher in the Major;
2. Completion of six courses from your Major or Modified Major, plus the methods and statistics prerequisite to the Major (Government 10 or its equivalents). These six courses must include at least one introductory course, two upper-level courses and one advanced seminar before the end of the junior year;
3. Submission of a proposal by the end of the junior year, and approval by the advisor and the Honors Program Director(s); and
4. A written statement by a faculty advisor, submitted as part of the thesis proposal, supporting the proposed thesis and indicating a willingness to supervise the student. Advisors must confirm that they will be in residence during the terms when they have responsibility for supervising the Honors thesis.

Admission to the Honors Program will be granted by the Director(s) of the Honors Program and advisor(s) if they approve the thesis proposal and are satisfied that the student has the ability to conduct the necessary research. Students enrolled in GOVT 97 or 98 who, for any reason, cannot continue in the Honors Program may have their course enrollment converted to GOVT 80 (Readings in Government) and complete the requirements for this course under the supervision of their original advisors. Conversion must be formally recorded with the Registrar.

The courses GOVT 098 and GOVT 099 will qualify as the Registrar's official two course credits for participation in the Honors program.

Students who will be away on an FSP or LSA during the spring term of their junior year are encouraged to discuss their thesis topics with potential advisors before the end of winter term. Extensions will not be granted on account of FSP or LSA participation.

Course Levels

The Department of Government offers courses at different levels:

- Prerequisite: a course in the statistics and methods of social sciences (GOVT 10 or its equivalents).
- Introductory courses: The Department offers four courses (GOVT 3, 4, 5, and 6), designed to provide an overview of each of the four subfields in Government: American Politics, Comparative Politics, International Relations, and Political Theory & Law. Introductory courses are generally designed to be taken as the first

courses in the major and usually not later than the end of a student's second year.

- Midlevel courses: Courses that explore specific topics in Government in greater depth (these courses are assigned numbers between 11 and 69).
- Seminar courses: Advanced, discussion-based, research and writing-intensive courses (these courses are assigned numbers between 80 and 86). Seminars are generally designed to be taken in a student's third or fourth years.
- Upper-level courses: Any course except for introductory or prerequisite courses

Government Website

Please check the Department website at <http://www.govt.dartmouth.edu> for further information, including updated course offerings.

GOVT - Government Courses

To view Government requirements, click here (p. 449).

Introductory Courses

GOVT 3 - The American Political System

Instructor: Costa, Gothreau, Mahoney

An examination of the American political process as manifested in voting behavior, parties and their nominating conventions, interest groups, the Presidency, Congress, and the Judiciary. Special emphasis is placed on providing the student with a theoretical framework for evaluating the system including discussions of decision-making, bargaining, and democratic control.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 4 - Politics of the World

Instructor: Horowitz, Zhou

This course will introduce students to the field of comparative government and politics through an examination of selected political systems. Special attention will be given to analytic techniques involved in the study of the field and to certain basic concepts, such as power and political culture, decision-making, and communications.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 5 - International Politics

Instructor: S. Brooks, Powers, Press, Wohlforth

This course introduces the systematic analysis of international society, the factors that motivate foreign policies, and instruments used in the conduct of international relations. Particular attention is given to power and economic relations; to cultural differences that may inhibit mutual understanding or lead to conflict; to nationalism and other ideologies; to the requisites and limits of cooperation; and to the historical structuring and functioning of international institutions.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 6 - Political Ideas

Instructor: Clarke, Murphy

This course introduces student to political theory by reading and discussing classic works. We will discuss the meaning and significance of law, justice, virtue, power, equality, freedom and property. Readings may include: Plato, Aristotle, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Burke, Kant, Hegel, Tocqueville, Mill, Marx and Nietzsche.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 7 - First-Year Seminars in Government

Political Analysis

GOVT 10 - Quantitative Political Analysis

Instructor: Costa, Ferwerda, Nyhan, Westwood

This course will provide students with useful tools for undertaking empirical research in political science and will help them to become informed consumers of quantitative political analysis. The course will first consider the general theoretical concepts underlying empirical research, including the nature of causality, the structure and content of theories, and the formulation and testing of competing hypotheses. The course will then employ these concepts to develop several quantitative approaches to political analysis. Students will be introduced to two statistical methods frequently used by political scientists, contingency tables and linear regression. By learning to systematically analyze political data, students will gain the ability to better conduct and evaluate empirical research in both its quantitative and qualitative forms.

Because of the large overlap in material covered, no student may receive credit for more than one of the courses LING 10, PBPL 10, ECON 10, GOVT 10, MATH 10, PSYC 10, ENVS 10, QSS 15, or SOCY 10.

Degree Requirement Attributes: Dist:QDS

GOVT 16 - Data Visualization

Instructor: Cooper

Big data are everywhere – in government, academic research, media, business, and everyday life. To tell the stories hidden behind blizzards of data, effective

visualization is critical. This course primarily teaches R, a free software environment for statistical computing and graphics, which is widely regarded as one of the most versatile and flexible tools for data visualization and, more broadly, data science. Students completing the course will know how to “wrangle” and visualize data critical to their scientific endeavors.

Cross-Listed as: QSS 17

Degree Requirement Attributes: Dist:TLA

GOVT 18 - Introduction to Political Game Theory

Instructor: Herron

Game theory is used to study how individuals and organizations interact strategically, and this course introduces game theory with a focus on political science applications. Game theory is a standard tool in the social sciences, and insights from game theory are essential to understanding many facets of politics, such as political party competition, legislative politics, international relations, and the provision of public goods. Among other topics, the course will cover normal and extensive form games, Nash equilibria, imperfect information, mixed strategies, and, if time permits, the basics of games with incomplete information. A course in game theory will change that way that one views the world.

Prerequisite: MATH 3 or the equivalent.

Cross-Listed as: QSS 18

Degree Requirement Attributes: QDS

GOVT 19.01 - Applied Multivariate Data Analysis

Instructor: Lacy

This course introduces mathematical and statistical models in the social sciences beyond the level of bivariate regression. Topics to be covered include multivariate regression, selection bias, discrete choice, maximum likelihood models, multi-level modeling, and experiments. We will use the Use models to study voter turnout, elections, bargaining in legislatures, public opinion, political tolerance, the causes and duration of wars, gender bias in employment, educational testing, poverty and income, and a host of other topics. Students will write a paper of original research using some of the methods covered in class.

Degree Requirement Attributes: Dist:QDS; WCult:CI

Upper-Level Courses that Cross-Subfields

GOVT 20.01 - Women and Politics

Instructor: D. Brooks

This is a general course about gender and politics in which we will examine the roles of women and men as voters, activists, and politicians. We will begin by examining a

wide range of relevant issues, including: how gender affects political participation and partisan preferences, how boys and girls are socialized differently into politics, how public opinion regarding domestic and foreign policy sometimes differs for women and men, and how a different gender balance among office holders might be expected to affect representation, policy, and governance. The course will then critically examine various barriers that women may face in the pursuit of elected office in the U.S., and we will also expand our view beyond politics, by analyzing women in non-political leadership positions in order to draw useful comparisons. Finally, the course will examine the role of gender in an international context, comparing gender dynamics in the U.S. with those of other countries in order to better understand the future of women in politics in the U.S. and in the world at large. This course is appropriate for all students, from all majors (there are no prerequisites).

Cross-Listed as: WGST 31.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

GOVT 20.02 - Capitalism and Government

Instructor: Avishai

We use the term government and "commonwealth" interchangeably because we expect government to advance the actions of free people creating wealth—not just rich and propertied people, but all who benefit from economic development. As Adam Smith put it, it is the responsibility of the "sovereign" to "facilitate commerce-in-general." This course will trace the career of this assumption back to its originators. It will begin with the evolution of market relations from the peculiar history of seventeenth-century Britain. It will then look at the succession of thinkers who, having embraced the novel scientific methods of the day, sought to understand economic affairs as themselves governed by scientific laws; and who then sought to ground the legitimacy of commonwealths in laws, regulations and interventions that engendered wealth. One goal of the course is to familiarize students with foundational thinkers who gave us the discipline of economics: Hobbes, Locke, Rousseau, Smith, Ricardo, Marx, Mill, and Spencer. But the final goal is to consider how foundational ideas have shaped political economic debates in America for the past hundred years: Keynes, Von Hayek, and Schumpeter.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

GOVT 20.03 - Morality and Political Economy

Instructor: Clark

How do people attach moral significance to their economic activity? How durable or malleable are religious and philosophical traditions in shaping moral ideals surrounding economic phenomena? And what is the role of

government in promoting a "moral" economy? By surveying the thought of Greeks and Romans, Christians, Muslims and Jews, ancients and moderns, students will experience a wide-ranging introduction to the problem of how to define economic virtue in an age of globalization.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

GOVT 20.05 - Revolution, Reform and Reaction: The Cold War in Latin America

Instructor: DeShazo

This course examines and analyzes the key variables that determined the course of Latin America's political, economic, and social evolution during the period of the Cold War (1946-1990). It focuses on the relationship of Latin America to the global Cold War, the manifestation of U.S. and Soviet foreign policy in the region, and the responses of key actors in Latin America to the geo-strategic, ideological and political rivalry between the two superpowers.

Cross-Listed as: LACS 30.16

Degree Requirement Attributes: Dist:INT; WCult:NW

GOVT 20.07 - Religion and World Politics

Instructor: Baum

Modernization theorists confidently predicted that religion would cease to be a matter of public concern and would become limited to individual and private spheres by the end of the twentieth century. The Iranian Revolution put an end to such speculation. This course examines the relationship between religious pluralism and political affairs in European, African, and Asian nations. Case studies will include Northern Ireland, Nigeria, South Africa, the Middle East, and India.

Cross-Listed as: REL 069

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

GOVT 20.08 - America and the Middle East

Instructor: Fishere

The United States has played a major role in shaping the political, economic and cultural development of the Middle East. Oil, global security, Israel's survival, and promotion of democracy, all have drawn the US into the complex politics of the Middle East since the 1920s. This course introduces students to various aspects of this role and the reactions it triggered. It covers the role played by American missionaries and travelers/immigrants around the turn of the 20th century. It analyzes the transformative impact of the discovery of Oil, the establishment of the state of Israel, the Cold War, Turkey's integration into

NATO and the US attempts to establish a security regime for the Middle East. It also examines how Americans viewed the Middle East and their role in its life. In addition, the course then takes the students in a *tour d'horizon* of US role in Middle East politics: its involvement in the Arab-Israeli Peace Process, its responses to Radical Islamism and 9/11, the invasion of Iraq and its consequences, the uneasy relationship with a changing Turkey, and its policy of “democracy promotion”. It discusses the doctrines defining US role in the region since Truman until Obama’s “disengagement”. Combining academic books with novels and movies, this course should give students a rounded view of the role and lasting impact of the United States in one of the world’s most turbulent regions.

Cross-Listed as: JWST 40.08 MES 12.04

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 20.10 - Markets and Their Critics

Instructor: Clark

The purpose of this course is to explore the nature and implications of the market primarily as a political, but also as a social, economic and even moral phenomenon. From being a marginal, controlled, and secondary social institution in most early societies, markets have risen to become a central mode of social coordination and economic production, distribution and exchange in modern ones throughout the Western and non-Western world. What is the best way of thinking about this transformation in the prominence of the market in human life? Why has it happened, whom has it benefited, whom has it harmed, what functions has it served, what new problems has it created, and what if anything are the limits on the social utility of markets?

Cross-Listed as: SOCY 49.26

Degree Requirement Attributes: Dist:INT or SOC

GOVT 20.11 - Entrepreneurship and Public Policy Workshop

Instructor: Avishai

The course will study entrepreneurship as both a strategic logic and a social fact. Students will simulate the business planning process in teams; and, as a class, they will consider public policy from the perspective of entrepreneurs—that is, consider why officials must understand the strategic questions aspiring entrepreneurs ask if government is to propose investment, standards, and regulations that encourage business development. Students will also benefit from a weekly lecture by a guest speaker.

Cross-Listed as: PBPL 053

Degree Requirement Attributes: Dist:SOC

GOVT 20.12 - Politics and Artificial Intelligence

Instructor: Breuer

Algorithms and machine learning are changing political processes that are fundamental to democracy, free markets, interstate conflict, and justice. To name just a few examples, governments ranging from Russia to Iran have used AI to plant over 10 billion fake accounts on Facebook and Twitter to influence US civic discourse by pretending to be Americans voicing support for US presidential candidates; Authoritarian regimes now regularly use facial recognition technologies purchased from US-based companies in order to track and persecute minorities and advocates for democracy; Social media companies’ political ad targeting algorithms tend to target voters from certain demographics with specific political ads in biased ways that are often unanticipated by the political candidates themselves; American courts frequently consult commercial AI tools to predict (via confidential and/or biased algorithms) whether Americans would commit future crimes before deciding whether they will be paroled or permitted bail. This course will survey both the algorithms that are central to these changes and the new social science research that seeks to understand their impact on contemporary politics. Our main goals are to create opportunities for students—including those with no background in algorithms—to engage with ideas, research, and people who are at the forefront of these topics, and then to use what they learn to develop their own research ideas.

Degree Requirement Attributes: Dist:TAS

GOVT 20.13 - Growth and Its Critics

The purpose of this course is to explore economic growth as a broader human phenomenon. From being an unprecedented achievement with the Industrial Revolution, growth gradually became a policy lever for addressing a multitude of social and political objectives in the rich world, as well as a vital imperative for less developed countries. All the while, it never ceased to be a source of public controversy. What forces prevented the discovery of growth for so long? What factors bring it into being where and when it does emerge? What effects does growth have on those who experience it in a sustained way? Why has such a breakthrough so regularly drawn such passionate criticism and resistance? Above all, how might a study of growth and its critics prepare us for the policy debates of the future?

In the Long Stagnation before the Industrial Revolution, humans were caught in a so-called Malthusian Trap, in which every temporary trend toward improved living standards was met with an increase in population that tended to restore subsistence living. After reviewing this historical background, the course will touch upon four triggers for debate over growth since the dawn of the industrial age: population, resource depletion,

environmental stewardship, and climate change. For two hundred years, a steady stream of commentators have argued that economic growth has either generated these sorts of problems, or is at least unable to address them.

Cross-Listed as: PBPL 029 SOCY 79.14

Degree Requirement Attributes: Dist:INT or SOC

GOVT 25 - Introduction to Public Policy

Instructor: Barabas, Nachlis

This course is designed as the gateway offering for students beginning to pursue a minor in public policy through the Rockefeller Center. The term will be divided into four main components: The Nature of Public Policy, Making Public Policy, The Policy Players, and The Policy Game. In the concluding section of the course, we will pursue specific policy domains—environmental policy, education policy, health care policy, welfare policy, immigration policy, and defense policy.

Cross-Listed as: PBPL 005

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 26 - Elections and Reform

Instructor: Carey

This course examines the problem of how politicians and policies are selected by citizens. Politicians fight tenaciously to shape the rules under which they compete because how elections are conducted has enormous impact on what sorts of choices voters are offered, what sorts of coalitions politicians form, and whose interests get represented. This course investigates what rules matter, and why. It draws from a broad array of cases to illustrate the most important issues at stake in current electoral reforms around the world, and here in the United States.

Degree Requirement Attributes: Dist:SOC

GOVT 29 - Leadership, Sex, and Gender in Politics and Business

Instructor: D. Brooks

Why are there still so few women running companies, countries, and the governments? Nearly everywhere in the world, gender equity continues to be an aspiration, rather than a reality, with no end in sight as to when a reasonable degree of parity will ever actually be achieved. Despite widespread awareness of principles around the equality of women in the modern era, it continues to be the exception rather than the rule for women to become corporate board members, C-suite members, partners in law firms, college presidents, tenured professors, political leaders, or leaders in nearly any kind of organization where pay and/or power are considerable. Moreover, parity continues to be even more elusive for women of color and others who face “double difference” than for white women, and non-binary individuals face yet another set of hurdles

with respect to equity. Why is this the case? How does it matter? What would need to be done to change it? And what are the roles of individuals versus institutions in instituting change? We will be examining the latest scholarly research and real-world examples to grapple with these important questions through active discussion and through writing assignments, with a podcast project focused on educating the class on student-selected topics as a highlight of the quarter.

Cross-Listed as: WGSS 66.38

Degree Requirement Attributes: Dist:SOC; WCult:CI

American Government

GOVT 30.04 - Political Misinformation and Conspiracy Theories

Instructor: Nyhan

Why do people hold false or unsupported beliefs about politics and why are so those beliefs so hard to change? This course will explore the psychological factors that make people vulnerable to political misinformation and conspiracy theories and the reasons that corrections so often fail to change their minds. We will also analyze how those tendencies are exploited by political elites and consider possible approaches that journalists and civic reformers could employ to combat misperceptions.

Cross-Listed as: PBPL 023

Degree Requirement Attributes: Dist:SOC

GOVT 30.09 - Law, Courts, and Judges

Instructor: Nachlis

This course explores fundamental questions about American law, courts, and judges. Do courts administer “Equal Justice Under Law,” as the Supreme Court’s facade promises, or are cases determined by “what the judge ate for breakfast,” as Judge Jerome Frank famously claimed? Are judges political? Can courts produce social change, or is law a conservative force? What incentives shape the legal profession? Issues addressed range from civil rights to small claims courts and street harassment.

Cross-Listed as: PBPL 028

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 30.11 - Policy Implementation

Instructor: Nachlis

Good policies are neither self-executing nor self-enforcing. Likewise, bad policies are not self-destructing. Indeed, when the President signs a law, this is but the beginning of a new set of equally important political activities and policy battles. This course explores central features of implementation, including bureaucratic activity, judicial review, and street-level administration,

and central concepts including principal agent relationships, delegation, oversight, interpretation, maintenance, and erosion, through key cases, including police, health care, and civil rights.

Cross-Listed as: PBPL 046

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 30.12 - Who Gets In? College Admissions Post Affirmative Action

Instructor: Herman

Given the US Supreme Court's 2023 ruling on affirmative action, how can public and private policies adapt to meet the legal standards for choosing applicants to highly selective colleges and universities? Through a careful examination of legislation, executive policies, and legal action, this course looks at both the intent and the implementation of affirmative action, its history, its consequences, and its future. Students will consider why institutions of higher education are interested in recruiting a diverse range of students, why they have experienced lawsuits against their affirmative action policies, and how things are changing with the SCOTUS decision. Teaching methods include some traditional classroom techniques (text analysis, writing, discussion) as well as experiential education techniques (such as creating a public policy portfolio project, conversing with professionals who administer admissions programs at colleges and universities, and pitching proposals to a panel of policy experts). This course seeks open-minded people of all political persuasions to have robust discussions that will lead to policies with a chance of succeeding in our polarized environment.

Cross-Listed as: EDUC 035 PBPL 027

Degree Requirement Attributes: Dist:SOC; WCult:CI

GOVT 30.14 - Health Politics and Policy

Instructor: Nachlis

Is health care a right? Why does the United States spend more than comparable countries on health care but experience worse outcomes, and also lack universal coverage? How might the health care system be reformed to increase access and quality, and reduce costs? We consider these fundamental questions and explore a range of key issues, including health equity, mental health care, overdiagnosis and overtreatment, drug regulation, state policies, comparative health care systems, and the COVID-19 pandemic.

Cross-Listed as: PBPL 026

Degree Requirement Attributes: Dist:SOC

GOVT 30.15 - Identity, Liberalism, and Democracy

Instructor: Mounk, Plunkett

What would a just form of democracy look like in a pluralistic society that involves people with diverse identities and values? What policies and laws should the state adopt to counter discrimination and social inequality, and how do they fit (or conflict) with ideals of liberalism? What are social identities, and how do they operate? How are social identities mobilized in different social movements, such as forms of fascism and populism? In this interdisciplinary course, we will examine these and other questions about social identity and its relation to ideals of liberalism, democracy, and justice.

Cross-Listed as: PHIL 01.19

Degree Requirement Attributes: Dist:SOC

GOVT 30.16 - The Politics of Climate Change

Instructor: Jerit

There is scientific consensus regarding the scope of the climate problem and how to manage natural resources. Yet successful climate mitigation and adaptation is going to require ordinary people to change their behavior on a massive scale. This is a problem that is well-suited for the social sciences (as opposed to the physical sciences). Drawing upon research from political science, communications, and psychology, this class investigates the public's climate beliefs, attitudes, and behaviors. Students will explore an array of communication strategies for influencing behavior and policy opinions before developing a climate communication final project.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 31 - Campaigns and Elections

Instructor: Bafumi

Do campaigns change election outcomes? When do they matter and when do they not? How should campaigns be conducted for optimal results on Election Day? This course will seek to answer these questions from both academic and practical perspectives. Particularly, it will investigate campaign strategies; issues, money and communications in political races; the behavior of voters; and possible election reforms. Students should leave this class with a deep understanding of political campaigns for elective office.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 34 - Congress and the American Political System

Instructor: Westwood

This course introduces students to the analysis of public policymaking in the U.S. Congress. Special attention is paid to the evolution of the House and Senate as institutions, to elections and to the interactions among elections, institutional arrangements, and policymaking.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 35 - The Presidency

Instructor: Nyhan

This course highlights central themes in the development, organization, and functioning of the American Presidency. It combines the study of presidential behavior with an analysis of its complex and evolving institutional framework. Since the office requires the President to play multiple political roles simultaneously, the course will assess the institutional and behavioral components of these roles. It will present an integrated theoretical and empirical conception of presidential governance.

Prerequisite: GOVT 3 or by permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 37 - Election Polling

Instructor: Barabas

The results of opinion polls often dominate election and campaign coverage and alter the behavior of politicians in modern democracies. Although surveys are more common than in the past, they vary considerably in terms of quality. To better understand the potential sources of error, this course introduces students to survey research methods with an emphasis on the election polling techniques used by social scientists to study political attitudes and policy preferences. A primary goal of the course is to help students understand fundamental concepts like sampling or response rates as well as best practices for designing questionnaires and response options. The class will also cover advanced topics such as survey experiments, nonprobability panels, statistical power, and post-stratification weighting among others. During the course, students will explore and analyze public opinion patterns in survey data archives before ultimately writing and programming an original election-related study. Learning survey methodology should be particularly useful for anyone who plans to (A) take more advanced quantitative methodology courses, (B) write an honors thesis, (C) serve as a research assistant, (D) attend graduate school, or (E) work in professional areas that make use of opinion data, including campaigns and elections, consulting, law, journalism, education, business, health care, policy evaluation, or government.

Cross-Listed as: PBPL 044 QSS 30.20

Degree Requirement Attributes: Dist:QDS; WCult:W

GOVT 39 - Political Psychology

Instructor: Jerit

This class examines the psychological origins of citizens' political beliefs and actions. We analyze different aspects of human psychology, including personality, motivation, values, information processing and emotion. This course is for anyone who has ever wondered how people form their political opinions, why they vote the way they do, and

whether ordinary citizens are well suited to democracy. Readings will be drawn from the fields of political science and psychology.

Degree Requirement Attributes: Dist:SOC

*Comparative Politics***GOVT 40.03 - Politics of Japan: A Unique Democracy?**

Instructor: Horiuchi

This course offers a survey of Japanese politics with a focus on understanding the electoral and policy-making processes in Japan from theoretical and comparative perspectives. No prior knowledge of Japanese politics is required. The course will explore electoral systems and voting behavior, candidate selection and electoral campaign, dynamics of party competition, executive-legislative relationships, local politics and central-local relationships, the roles of the mass media and civil society in policy making, etc.

Cross-Listed as: ASCL 67.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GOVT 40.09 - Politics of Israel and Palestine

Instructor: Avishai

This course explores the century-old conflict as seen from the political structures and changing narratives of Israelis and Palestinians, including the Zionist movement and the responses of the Palestinian Arab community to it; the formation of the Arab national movement as a whole—and within this, the claims of Palestinians before and after the British Mandate; the founding of the state of Israel and the formation of the post-1948 Palestinian national movement; the aftermath of the 1967 war; the start of the Israeli occupation and the latter's impact on Israeli institutions, economy, and political parties; and the Palestine Liberation Organization and the founding of Hamas. We will explore contemporary political and economic developments in light of the global forces operating on the region, and consider the plausibility of a two-state solution.

Cross-Listed as: JWST 40.01 MES 12.09

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GOVT 40.14 - Latin America's Search for Democracy and Development

Instructor: DeShazo

This course examines the political, economic, and social development of the five countries of the Andean region of South American (Venezuela, Colombia, Ecuador, Peru, Bolivia). It contrasts the current governance and economic policy approaches taken by the five countries as a means of

analysing variables linked to the consolidation of democracy and sustained economics development.

Cross-Listed as: LACS 30.13

Degree Requirement Attributes: Dist:INT; WCult:NW

GOVT 40.15 - Commodities, Globalization, and Development in Latin America

Instructor: DeShazo

The course traces the economics history of Latin America since 1870 by highlighting the different stages in macro-policy (export-led growth, import substitution industrialization, current models juxtaposed) and by focusing on the role of commodities in the national and regional developmental process. Specific commodities to be studied include silver, guano, nitrates, coffee, sugar, cereals, beef, henequen, rubber, cocaine, and oil. Topics will be covered more or less chronologically, with the last classes analyzing current developments. Particular attention will be paid to the larger economies of the region (Mexico, Brazil, Argentina, Colombia, Peru, Chile, Venezuela) and the development strategies they pursued. The course will take on the issues of why Latin America has failed to reach levels of development achieved by industrialized countries in Europe and Asia and what can be done to achieve sustained development.

Cross-Listed as: LACS 30.14

Degree Requirement Attributes: Dist:INT; WCult:NW

GOVT 40.20 - Immigration Politics

Instructor: Ferwerda

This course examines how countries in Europe and North America are responding to (and being transformed by) international migration. In the first half, we will focus on the determinants of migration, as well as governments' attempts to manage and control population flows. In the second half, we will examine the increasingly contentious politics surrounding immigrant settlement, and will investigate the consequences of policies that seek to promote the exclusion or inclusion of immigrants after arrival.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

GOVT 40.21 - Superpowers and Cold Wars

Instructor: Vandewalle

The last half of the twentieth century was marked by a great rivalry between the United States and the Soviet Union, resulting in a "confrontation in which the major powers had the ability to destroy life on earth." Across the globe, in a series of either direct or indirect conflicts, at different levels and in dissimilar ways both sides aimed to minimize and circumscribe the power and influence of the other side, often using local proxies to promote their

interests. In this course we look not only at a number of Cold War conflicts since 1945—the Korean War, the Cuban Missile Crisis, the Berlin Wall crisis, the war in Vietnam, and the attempts at destabilization in Latin America—but also investigate the driving motives and perceptions on each side that fueled each crisis and its outcome.

Degree Requirement Attributes: Dist:INT

GOVT 40.23 - Energy and Society in the Middle East and North Africa

Instructor: Elias, Vandewalle

This course focuses on the economic, political, social and cultural consequences of rapid development in the hydrocarbon states of the Middle East and North Africa: states whose development is highly dependent on access to the global economy for income from oil. The course aims to provide students with an understanding—from both a Social Science and a Humanities perspective—of how hydrocarbon-led development has dramatically changed the economic, political, and cultural life of what were previously tribal societies.

Cross-Listed as: MES 4.01

Degree Requirement Attributes: Dist:INT; WCult:NW

GOVT 40.25 - Introduction to Middle East Politics

Instructor: Fishere

This is a gateway course to the political life of the Middle East. It will introduce students to the main political issues and dynamics of the region, including: - Conflict and civil wars, from the Arab-Israeli conflict to the Syrian collapse - Security arrangements, especially in oil-rich countries - The political economy of (mal)development - Political ideologies and the conflict between liberalism, nationalism and Islamism - International politics and the American presence in the region - Rivalries and alliances among Middle Eastern powers, including Iran and Turkey - The return of authoritarianism and stalled democratic processes - Terrorism - Anti-colonialism We will cover the basic contours and intellectual debates around these issues, analyzing the main texts tracing their development. The aim of this course is not only to familiarize students with the basic political features of the Middle East but also to equip students with the tools necessary to pursue future academic and analytical work on the politics of the region.

Cross-Listed as: MES 08.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

GOVT 40.28 - Feeding the World: The Politics of Food and Farming

Instructor: Johnson

With the world population nearing 8 billion and climate change threatening both existing industrial and non-industrial modes of food production, long-standing debates about how to best feed the world have grown even more pressing. Where should food be produced and how? What forms of agricultural can meet global need in the immediate term and over the long run? And what systems of trade and global governance are needed to feed the world? In this course, we dive into these debates from a policy and political science perspective.

We first learn the basics about how farming and food production is organized in different parts of the world, as well as how international food trade is structured, and we become familiar with the major challenges created by existing food and farming systems. We then consider the many political and policy solutions being offered to address these challenges and weigh their costs and benefits to form our own educated conclusion about the best way forward to feed the world.

We further delve into the politics of food, asking how access to food and support for or attacks on farming are used to achieve political aims. For example, we examine how governments use restrictive food trade policies to accomplish foreign policy goals and how rebel groups appropriate humanitarian food aid to finance civil wars. Overall, the course illustrates just how central food and farming are to politics.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 40.29 - Democratic Erosion

Instructor: Johnson

In his provocative 1992 book *The End of History and the Last Man*, Francis Fukuyama wrote that Western liberal democracy had displaced other political systems and would quickly become the only universally accepted way of organizing politics. Fast forward 30 years, and his prediction seems naïve. Observers around the world warn of imminent threats to democracy in both Western and non-Western countries, and non-democratic powers like China and Russia offer alternative forms of governance that appeal to many global leaders. Democracy seems to be eroding.

This course asks whether, in fact, liberal democracy is being displaced by other forms of governance. Is democracy in the world eroding? If so, what does democratic erosion in the contemporary period look like, why is it happening, and how does it differ from processes of democratic breakdown in earlier historical periods? If processes of democratic erosion are underway, how can they be resisted and democracy strengthened? To address these questions, this course explores democratic breakdown and erosion in comparative and historical perspective. We examine countries from around the world, using readings from academic and media sources to

examine both empirical and normative questions about the quality and persistence of democracy.

This course is part of a cross-university collaboration. Faculty from across 40 universities teach from the same syllabus, with students contributing to a collaborative database on democratic erosion and writing for the Democratic Erosion blog. This course helps bridge the gap between the classroom and the public sphere and allows you to be part of a larger discussion about the quality of contemporary democracy.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 40.30 - Language, Politics and Power in the Middle East

Instructor: Glinert

This course explores the sociopolitical dimensions of language at the macro level in the Middle East, past and present. How have political, ideological and social forces affected the fate of Arabic, Hebrew, Persian, Turkish, Ancient Greek, and other major regional languages such as Kurdish and Berber? How does language affect and reflect heritage, ethnicity, religion and nationhood, with their linguistic ideologies? What, objectively and subjectively, are "languages" and "dialects"? What are the causes of language conflict or repression? Is 'one state one language' an economically or politically rational policy? How and why might language and literacy be planned and managed? No prior knowledge of a particular language or culture is assumed.

Cross-Listed as: MES 16.12

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

GOVT 40.31 - Red Terror: History and Culture of the Stalin Labor Camps

Instructor: Kan

The destruction of human beings in the Soviet labor camps (GULAG) is one of the most tragic chapters in the history of the twentieth century. Between the early 1920s and the early 1950s, some 25 million people were arrested and sent to the so-called "correction-labor" camps to perform back breaking work under the most inhumane conditions. The focus of this course is on the history and culture of the Stalin labor camps. Beginning with the violence inflicted by the young Bolshevik regime on the Russian people, we will examine the creation of a network of camps during the "great terror" of 1937-1938 and the economic, political, and cultural features of the camps, through such topics as work, food, camp administration and guards, the relationship between the "political prisoners" and the common criminals, the special plight of women, the hardening of conditions in the camps during and after World War II and the zenith of the GULAG in the early 1950s. Finally, the course will examine the GULAG's

demise and the experience of dissidents in the camps of the 1960s-1980s; the way modern-day Russia deals with the memory of the camps; and GULAG-style camps in several socialist countries.

Cross-Listed as: COCO 039

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 40.32 - Africa in World Affairs

Instructor: Becker

How do Africans—and in particular, African political actors—interact with each other and the rest of the world? What are some of the key global challenges faced by African countries? This course examines Africans' roles in world politics beginning with the continent's first modern contacts with Europeans and subsequent colonization. The dominant focus, however, will be on contemporary patterns of global politics, considering how African political actors relate to each other and to the rest of the world—especially China, Europe, and the United States—in issue areas from security to economics to environmental change.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 40.33 - China as Economic Superpower: From Mao to Shenzhen

Instructor: Vandewalle

This seminar investigates the rapid economic rise of China since 1978. It focuses on the unorthodox ideas and strategies China's policymakers followed as they embarked upon economic liberalization; on China's foreign economic policies including the Belt and Road Initiative; and on relations with the United States. The seminar finishes with a review of the social, political and economic challenges China faces as it emerges as a powerful middle income country with global ambitions.

Not open to students who have received credit for GOVT 84.41.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 42 - Politics of Africa

Instructor: Horowitz

This course examines post-colonial politics in sub-Saharan Africa, with particular focus on the events of the last decade. The course will be structured around three main themes: (1) patterns of economic growth and decline; (2) the transition to democratic political systems; and (3) political violence and civil conflict. While the course covers broad trends across the continent, it will also draw on case studies from particular countries.

Prerequisite: GOVT 4 is strongly recommended but not required.

Cross-Listed as: AAAS 87.05

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 44 - Power and Development in the Global Economy

Instructor: Vandewalle

The latest wave of economic globalization has differently affected various regions of the world. One of the most often repeated (and disputed) assertions is that the economic power of the United States is fading and that the fortunes of the so-called BRIC countries (Brazil, Russia, India, and China) as well as other selected Emerging Economies ("the Second World") will mark the dawn of a more equal and, economically speaking, a more balanced global economy. The most recent financial crisis has put into question many of the assertions on both sides of this debate, in ways that question the very basic assumptions analysts of the global economy have been making since the creation of the Bretton Woods system in the aftermath of World War II. In this course we investigate the impact of the economic boom of the last two decades, the current crisis, and their impact on the economic fate and standing of particularly the United States, India, China, and Russia. We focus in part on efforts to create a new financial architecture for the global economy, and investigate how the debate between markets and state intervention has been affected by the ongoing financial crisis—and what this may mean for both countries that rely extensively on markets, and for those that strategically promote state intervention.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 48 - Redistribution, Inequality, and Diversity

Instructor: Ferwerda

This course examines the comparative politics of redistribution within Europe and North America. In the first half of the course, we will focus on understanding public attitudes towards redistribution and will explore cross-national variation in inequality and redistributive policy. In the second part of the course, we will grapple with the political sustainability of the welfare state. In particular, we will examine the degree to which racial and ethnic diversity poses a challenge to redistributive policy.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

GOVT 49.01 - Politics in Latin America

Instructor: Carey

This course is an introduction to the political development and the current context of politics in Latin America. It

combines material on historical and theoretical topics with material on the current politics of specific countries. The central theme of the course is to evaluate the development of political institutions in Latin America and the challenges currently confronting democracy in the region. We examine the conditions under which Latin American republics gained independence in the 19th Century, and their trajectories of political and economic development. We then consider a range of political challenges confronting Latin American countries, including corruption and criminal violence, human rights abuses past and present, and revolutionary and populist challenges to state authority.

Cross-Listed as: LACS 051

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 49.04 - Sex and the State in Latin America

Instructor: Baldez

This course examines women's movements in Latin America. Women in Latin America are perhaps the most highly mobilized population in the world. Throughout the region women have organized around myriad issues, including the right to vote, human rights, poverty, legal rights, anticommunism, the workplace, race, ethnicity and war. Women's efforts to challenge fiercely repressive regimes, deeply entrenched norms of machismo and extreme poverty defy conventional stereotypes about women and provide us with inspiring examples of how to sustain hope during difficult times. The seminar will introduce students to recent scholarship on women's movements in Latin America in the 20th century and seek to understand the emergence, evolution and outcomes of women's movements in particular countries and cross-nationally.

Cross-Listed as: LACS 35.12

Degree Requirement Attributes: Dist:SOC; WCult:NW

GOVT 49.05 - Protest and Parties in Latin America

Instructor: Baldez

This course will examine the conditions that prompt people organize on behalf of their collective interests, how those movements evolve, and under what conditions efforts to mobilize will succeed. We compare protests, revolutionary movements, social movements, political parties and other forms of political action in various countries throughout the region.

Cross-Listed as: LACS 35.13

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

International Relations

GOVT 50.02 - Civil War and Counterinsurgency in the Modern World

Instructor: Friedman

This course examines why civil wars begin, how they are fought, how they end, and what the international community can do to mitigate their cost. We use these ideas to understand trends in civil conflict throughout the world and to inform in-depth analyses of U.S. counterinsurgency in Iraq and Afghanistan. Each student writes a policy memo and a research paper examining a civil war of their choice. The course is designed to build students' skills using conceptual frameworks and empirical analyses to inform high-stakes policy debates.

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

GOVT 50.03 - The Rise of China

Instructor: Lind

This course explores the growth of Chinese wealth and power, and implications of that growth for international politics. We begin by studying China's economic and military rise, debating whether China can join the ranks of the world's great powers. Then we discuss how China's growing power will affect its relations with world's current superpower, the United States. Is China catching up to the US? Are the United States and China doomed for superpower confrontation, or can China's rise be accommodated within the US-led international order? In addition, we explore the implications of China's rise for its relations with its neighbors, and for regional stability. Not open to students who have received credit for GOVT 81.10.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 50.04 - War and Peace in the Modern Age

Instructor: Valentino

This course is designed to acquaint students with the fundamentals of war and peace; that is, with the political uses of military power and the respective roles of military and civilian leaders in formulating and implementing foreign policy. We will also investigate how war affects civil society's social movements and how the characteristics of states' domestic politics arrangements affect or constrain the ways that leaders choose to execute their most preferred strategies. Finally, we will also try to come to an understanding of what war is actually like for those, both combatant and non-combatant, that must participate in war on a daily basis.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.06 - Nuclear Weapons: Physical and Strategic Effects

Instructor: Press

This course examines the effects of nuclear weapons on the conduct of international politics. It begins by examining the physical properties of nuclear weapons, and then uses evidence from the Cold War to address the following questions: Why did the United States and Soviet Union build such large nuclear arsenals? What did they plan to do with these weapons? How did nuclear weapons fit into U.S. and Soviet military strategy at various phases of the Cold War? The course uses evidence from the Cold War to evaluate theories of nuclear deterrence and the so-called "nuclear peace." The last section of the course focuses on current issues relating to nuclear weapons: the spread of nuclear weapons in the developing world, the dangers of nuclear terrorism, the potential for effective missile defenses, and the changing strategic nuclear balance of power.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.08 - Psychology and International Politics

Instructor: Powers

What, if anything, can psychology tell us about international security? This seminar looks at the various ways in which IR scholars have drawn upon psychology to enhance existing theories and develop new insights into world politics. Political psychology has been leveraged to make sense of puzzles at the core of IR, from nuclear proliferation to war and institutional cooperation. The course is designed around substantive psychological topics, which will form the basis of our critical discussions each week. Topics include decision-making, risk assessment, trust, reputation, emotions, social identity, nationalism, and leader personality/beliefs. This course does not require a background in psychology.

Prerequisite: GOVT 5

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.16 - The Rise and Fall of Great Powers

Instructor: Lind

Great powers disproportionately affect the stability and character of world politics. In this course we explore the complex and consequential process that is the rise and fall of great powers. We examine the nature of the international system, the nature of power, and how the anarchic world system encourages countries to behave. We then turn to the process of "rising" and study how countries achieve economic growth. We examine what is needed for them to sustain growth over time, as opposed to seeing their growth fizzle, as many fast-growing economies have done. We also look at how countries manage the environmental and human consequences of industrialization. We look at

how great powers succeed or fail at developing and deploying effective military power. Finally we examine the causes and consequences of decline—why great powers fall, and whether the process of decline is expected to be associated with international instability.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.17 - Weapons of Mass Destruction

Instructor: Miller

This course examines the role of weapons of mass destruction (WMD) in international politics: specifically, nuclear, chemical, and biological weapons. Over the course of the quarter, students will explore a range of political questions related to these technologies. Why do states want WMD technology, and have these motivations changed over time? What are the effects of WMD technology on international politics? Do WMD deter conflict or make it more dangerous and frequent? What are the mechanisms for preventing the spread of WMD technology and how effective have they been? How real is the threat of WMD terrorism? In addressing these questions, the course will cover a wide range of historical cases and time periods, encompassing the United States, Europe, the Middle East, Asia, Africa, and examining the use of WMD in World War I, World War II, and more recent conflicts such as the Syrian Civil War.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.18 - Foreign Policies of Middle Eastern States

Instructor: Fishere

This course analyzes the foreign policies of Middle Eastern states. It begins with an examination of the frameworks of foreign policy analysis. Then, it analyzes the foreign policy making of eleven different states; Algeria, Egypt, Iran, Israel, Jordan, Morocco, Qatar, Saudi Arabia, (what used to be known as) Syria, Turkey, United Arab Emirates. In each of these cases, we look into the role of various actors involved in formulating foreign policy as well as the constraints and opportunities they face – internally and externally. We will examine how the interaction between these various actors, the definition they give to their constraining/enabling structures, contribute to defining the foreign policy behavior of the state in reference. We will also see how the combination of these foreign policies, especially their regional dimension, led the Middle East into the chaos it suffers from now. Given the rapid pace of change in the Middle East, we will combine recent texts and older ones, in order to familiarize ourselves with both the "baseline" of foreign policymaking in the Middle East and its most recent manifestations. We will also read shorter updates, mainly from media sources, as we progress in the course.

Degree Requirement Attributes: Dist:INT

GOVT 50.19 - Development Under Fire

Instructor: Lyall

This course examines the recent emergence of foreign assistance as a tool of counterinsurgency and post-conflict reconciliation in countries as diverse as Afghanistan, Iraq, Colombia, Liberia, Pakistan, and the Philippines. The course has three broad purposes: (1) to introduce students to leading research on the motives and dynamics of violence in civil war settings, with a focus especially on the post-1945 era; (2) to develop an understanding of the multiple ways in which different actors - including militaries, rebel organizations (i.e. the Taliban), state agencies (i.e. USAID), non-governmental organizations (i.e. Doctors Without Borders), and international organizations such as the World Bank - have used aid in these environments, and how aid and violence intersect; and (3) to provide students with a grasp of the different approaches that have been used to evaluate aid in these settings, including randomized control trials, quasi-experiments, interviews and focus groups, and survey experiments. ¹

Note that the course does not presume any background in either political science or economics, though introductory courses (especially in microeconomics and development studies) will prove useful. Familiarity with quantitative social science (i.e. regression analysis) will also be helpful but is not essential.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 50.20 - Quantitative Approaches to Peace and Justice

Instructor: Voytas

In this course, you will be introduced to the quantitative study of peace, violence, and justice. We will cover the theories, methods, findings, and shortcomings in cutting-edge analyses of conflict resolution, transitional justice, and reconciliation. Throughout the process, we'll discuss issues of measurement, causal inference, and research ethics. You will also learn and begin to employ foundational skills in data science, R, causal inference, and statistical analysis.

Cross-Listed as: QSS 30.18

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.21 - Conflict Resolution and International Negotiation

Instructor: Becker

Why does the UN intervene in some places, but not others? What are the conflict resolution tools available to the international community? How can we make peacekeeping more effective? In this course, we will explore these questions as we delve into the international politics of

resolving crises. The focus is on the crises that have emerged since the end of the Cold War--particularly in the areas of civil war and state failure. We begin by introducing a framework whereby students can analyze competing theories of why states intervene in international crises and evaluate the conditions for success in different types of intervention, such as peacekeeping. Then, we will consider current issues facing the UN and how they may be addressed via a simulation of the UN Security Council. By the end of the course, students will be able to intelligently evaluate the strengths and weaknesses of various peacebuilding strategies in light of evidence from social science and apply their insights in a foreign policy paper.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

GOVT 50.22 - Civil Wars and Political Rebellion

Instructor: Lyall

This course examines the onset, conduct, and consequences of civil wars. Questions include: why (and how) do armed insurgencies emerge? Why do individuals join insurgent organizations rather than stay safely on the sidelines? Why are civil wars now the most frequent form of war, and why are states increasingly likely to lose these conflicts? How effective is third-party intervention in preventing the recurrence of civil war? And what are the long-term effects of civil wars? Equal weight is given to non-Western and Western examples of civil wars. We also pay particular attention to recent methodological advances in the study of civil war, including the use of (survey) experiments, fine-grained spatial data, and cellphone data to measure wartime dynamics. Students will have the opportunity to explore theoretical debates about civil war but will also draw on existing datasets to undertake their own research on a civil war (or wars) of their choice. The course does not presume any background with either prior Government courses on international security or quantitative methods, though these of course will be helpful.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

GOVT 50.23 - Keeping the Nuclear Peace

Instructor: Miller

In the early years of the nuclear age, analysts anticipated dozens of states would acquire nuclear weapons and worried deeply about the outbreak of nuclear war. Yet we are now almost 80 years into the nuclear age and only nine states have nuclear weapons and nuclear weapons haven't been used in war since 1945. This course will examine a variety of different explanations for these surprising outcomes, including the power of deterrence, normative beliefs, nonproliferation and arms control policies, and luck. It will also explore whether these trends are likely to

continue in the coming decades, as many analysts fear we are entering a new and more dangerous nuclear age.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.24 - International Relations of the Modern Middle East

Instructor: Simon

This course is about the international relations of the Middle East. Because foreign and security policy decisions are influenced and, in some cases, determined by domestic politics, the course will also touch on internal as well as external factors. The course will entail several disciplinary perspectives. The history of the region since World War I and the emergence of the modern Middle East, for example, is essential to an understanding of its international relations. Geography, especially involving the distribution of natural resources – e.g., fossil fuels and water – as well the influence of climatic variations are also key. The insights of political science are essential to a grasp of national decision making regarding the exercise of the instruments of power and the way the effects of these decisions play out in the short and long term. We will therefore be focusing on domestic politics; interstate dynamics; political economy; and the role of outside powers and the geopolitical context. The first half of the course, give or take, covers the period from WW I through the Arab Uprisings of the early 2010s. The second half consists of deep dives in the revolution in Egypt, NATO intervention in Libya, the civil war in Syria, the complex dynamics of US-Iran-Israel relations, and the Gaza War of 2023/4. We will also set aside time to discuss the burgeoning role of the oil exporting states of the Arabian peninsula. By the end of course, students will have a relatively detailed understanding of the chronology of developments in the international relations of the region and be able to explain how and why events and trends transpired in Middle East international relations.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 50.25 - The Global War on Terror

Instructor: Simon

The “Global War on Terror” grinds on after nearly a quarter of a century. It has had a profound effect on American culture and politics, foreign relations, and military and intelligence capacity. It has killed and displaced millions, primarily, but not exclusively, in the Middle East and South Asia. The cost to the treasury has been exceptionally heavy, perhaps as much as 6 trillion dollars.

In this course we will explore this phenomenal war, examining the reasons for its long duration, broad scope and heavy cost for the combatants and noncombatants who bore the brunt of the battle. With the advent of a new

administration and apparent resurgence of the Islamic State in Syria, where the US still deploys two thousand troops, this course is exceptionally timely. There will be guest speakers drawn from the US national security community.

Cross-Listed as: JWST 12.19

Degree Requirement Attributes: Dist:INT or SOC

GOVT 52 - Russian Foreign Policy

Instructor: Wohlforth

The objective of this course is to help you become a more sophisticated analyst of foreign policy in general and Russian foreign policy in particular. The course is part of the international relations (IR) concentration in the Government major and gives students the opportunity to explore IR through the lens of another great power’s interaction with the international system. A background in IR (esp. Gov 5) will enhance your intellectual experience in this course. The larger aim of the course is to help sharpen your analytical skills, something you may carry with you long after you graduate.

Prerequisite: GOVT 4 or GOVT 5; GOVT 42 is recommended. Open only to sophomores, juniors, and seniors.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

GOVT 53 - International Security

Instructor: Miller

This course analyzes pressing international security problems utilizing theories of international politics. The course will examine a wide range of contemporary security threats, as well as how states and other actors seek to respond to or manage such threats. The course draws on empirical cases from around the globe and engages both theoretical and policy issues. Issues covered include the causes of war and peace, nuclear weapons proliferation, terrorism and insurgencies, alliances and collective security, and humanitarian intervention.

Prerequisite: GOVT 5 or permission of instructor.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 54 - United States Foreign Policy

Instructor: Friedman

An inquiry into relationships between the social structure and ideological tradition of the United States and its conduct in world affairs. Attention is given to the substance of American foreign and military policy; to the roles of the White House, State Department, CIA, the military, Congress, private elites, and mass opinion; and to foreign policy impacts on domestic life.

Prerequisite: GOVT 5 or permission of the instructor.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 57 - International Relations of East Asia

Instructor: Lind

East Asian international relations have an important impact on global stability and on the security of the United States. North Korea poses a growing nuclear threat and an ongoing risk of political instability. China's rise is transforming the regional balance of power, and may challenge the post-World War II liberal order created by the United States and its partners. Territorial disputes threaten regional instability and dangerous escalation. This course has three goals: (1) to introduce students to salient issues in East Asian international politics; (2) to situate current events within a historical context, and (3) to provide students with analytic tools to analyze contemporary issues. We begin with an examination of the regional balance of power: what is power, who has it, and how is the balance of power shifting? We then focus on the military relations between key countries, assessing the conventional and nuclear balance of power, and the prospects for stable deterrence. We next move to the realm of ideas, where we explore how history and national identities affect the security strategies of states, and how they affect regional relations. We will then consider the prospects for a "liberal peace" in the region, made possible through increasing economic interdependence and through democratization. The course incorporates a crisis simulation in which students are tasked with representing a country in a significant multinational regional dispute.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 58 - International Political Economy

Instructor: Mastanduno

The political aspects of international and transnational economic relations will be examined. Topics will include economic imperialism, politico-economic dependence and inter-dependence, economic instruments of statecraft, the role of economic factors in foreign policy making, economic causes of international conflict, economic determinants of national power, the politics of international economic organizations, and the role of multi-national corporations in world politics.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 59 - Foreign Policy and Decision Making

Instructor: Friedman

This course examines conceptual, political, psychological, and organizational challenges in foreign policy decision making. Throughout class discussions and course assignments, we will evaluate how well practitioners grapple with these challenges. Case studies include escalation in Vietnam, assessments of Iraq's weapons of

mass destruction programs, and the raid on Osama bin Laden's compound. As we analyze and critique foreign policy, we seek to develop broader intuitions for making better decisions in everyday contexts.

The course spans three units. Unit 1 surveys conceptual lenses in the study of decision making from the standpoints of cost-benefit analysis, organizational behavior, domestic politics, culture, and psychology. Unit 2 surveys tools for foreign policy analysis, including intelligence, threat perception, and political forecasting. Unit 3 examines how that analysis is used and misused when making and executing policy decisions.

Degree Requirement Attributes: Dist:INT or SOC

Political Theory and Public Law

GOVT 60.04 - Ethics and Public Policy

Instructor: Rose

This course examines the nature and validity of arguments about vexing moral issues in public policy. Students examine a number of basic moral controversies in public life, focusing on different frameworks for thinking about justice and the ends of politics. The primary aim of the course is to provide each student with an opportunity to develop his/her ability to think in sophisticated ways about morally difficult policy issues. Amount the questions students address will be the following: Are policies that permit torture justifiable under any circumstances? Do people have basic moral claims to unequal economic holdings and rewards, or should economic distribution be patterned for the sake of social justice? Should people be permitted to move freely between countries? Is abortion wrong, in theory or in practice, and in what ways should it be restricted?

Cross-Listed as: PBPL 42

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 60.17 - Arab Political Thought

Instructor: Fishere

This is a gateway course to Arab political thought. It will introduce students to the main political and intellectual debates in the modern Arab world since its nascent beginnings during the first half of the 19th century to the ideologies that animated the Arab Spring and its aftermath, including:

- Early accounts of political modernity
- Early Islamic revivalism
- Liberal thought
- Nationalism and Pan-Arabism
- Arab socialism, Marxism and the New Left

- Anti-Colonialism and Occidentalism
- Dreams of Domination
- Citizenship, democracy and human rights
- New directions in Arab thought: Liberalism, nationalism and Islamism

We will cover the basic contours and intellectual debates around these issues, analyzing the main texts tracing their development. The aim of this course is not only to familiarize students with the basic political features of the Middle East but also to equip students with the tools necessary to pursue future academic and analytical work on the politics of the region.

Cross-Listed as: MES 12.05

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 60.20 - Introduction to Law, Social Justice, and Trial Practice

Instructor: Fredrickson

This course will provide a broad view of the legal system, and an overview of a civil trial. The students will have the opportunity to experience trying cases in a safe environment.

GOVT 60.25 - Feminist Political Theory

Instructor: Schiller

Of the central debates in contemporary feminist political theory, with a particular emphasis on the legacy and usefulness of liberalism. The course focuses on debates and differences within feminist political theory, rather than justifications for, or defenses of, feminist political theory. Among the problems raised are conceptions of the individual and individual autonomy; the relative invisibility of gender issues in mainstream literature on justice and equality; the tendency to conceive of equality in sex-blind terms; the tendency to presume a universally applicable set of norms. We consider the theoretical debates in relation to a number of contemporary political issues. Topics likely to be addressed include: feminism and contract, individualism and autonomy, equality and the politics of difference, marriage, and feminist perspectives on trans issues.

Degree Requirement Attributes: Dist:SOC

GOVT 60.26 - Democracy after the End of History

Instructor: Muirhead

The scholar Francis Fukuyama suggested in 1989 that the West had arrived at the “end of history” – the telos at which history aims, with a political and economic regime so satisfying to corporal needs and wants that existential yearnings would be suffocated and, lounging in tubs of butter, modern citizens would want no change. And yet:

here we are, when in India, Europe, South America, and the U.S., populist movements – uprisings? – destroy the political and economic consensus that defined the end of history, a consensus instantiated in free markets and representative democracy. Why did Fukuyama (and Hegel) think history might end? Were they wrong? What animates politics *after* the end of history? The class will investigate these questions by engaging the history of political thought, ancient and modern, and the circumstances of contemporary American politics.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 61 - Jurisprudence

Instructor: Murphy

Jurisprudence is the theory of law-not of a particular body of laws but of law in general. In this course, we explore a variety of approaches to some of the fundamental questions in jurisprudence: Are laws rooted in human nature, in social customs, or in the will of the sovereign authority? How are laws made, interpreted, and enforced? Can morality be legislated? Readings and lectures will draw on both philosophical arguments and legal case-studies to explore these and other questions.

Degree Requirement Attributes: TMV

GOVT 63 - Foundations of Political Thought: Athens and Jerusalem

Instructor: Murphy

Modern political philosophy has two ancient foundations: Greek philosophy (Athens) and the Bible (Jerusalem). Each of these two cities offers radically different answers to the perennial questions about politics: what is justice and who shall rule? After contrasting these two ancient perspectives, we shall compare medieval attempts to synthesize Greek philosophy and biblical faith by Augustine and Thomas Aquinas. What do we owe to God and what to Caesar?

Prerequisite: GOVT 6 or knowledge of Plato's "Republic" highly recommended.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 64.01 - Liberalism and Its Critics

Instructor: Swaine

Liberal political theory is renowned for its emphasis on rights, freedoms, and limited government; but critics of liberalism hold that the liberal legacy in free societies is one of misguided energies and broken promises. Students in this course chart the development of liberal thought from the Seventeenth Century to the present, with a view to considering the central values and commitments liberals may share, and examining important contemporary work in liberal theory. The course integrates weighty challenges to the moral and political viability of liberalism, from

communitarian, conservative, libertarian, and postmodern critics. GOVT 6 recommended.

Degree Requirement Attributes: TMV

GOVT 65 - American Political Thought

Instructor: Muirhead

The course focuses on the period from the Revolution to the Civil War. Topics include toleration, constitutionalism, rights, individualism, and slavery. Readings are drawn mainly from primary sources, including Jefferson, Madison, Adams, Hamilton, Jackson, Calhoun, Taylor, Anthony, Thoreau, and Lincoln.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 66.02 - Constitutional Law, Development, and Theory

Instructor: Bedi, Goodlander

This course covers some of the main themes of the American Constitution with a particular emphasis on constitutional history, structure, interpretation, development and theory. Areas covered include: federalism, separation of powers, judicial review, slavery and Reconstruction. Open to sophomores, juniors, and seniors.

Cross-Listed as: PBPL 40.02

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 67 - Civil Liberties Legal and Normative Approaches

Instructor: Bedi

This course examines the normative and constitutional (textual) bases for protecting certain civil liberties or rights in the United States. The aim is not only to learn the constitutional language of civil liberties but also to think critically about it. Areas covered may include: property, race, sex, abortion, religious and cultural rights, gun rights, sexual freedom and "alternative" marriage, and animal rights.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 68 - The Future of Capitalism

Instructor: Irwin, Muirhead, Wheelan

The first wave of capitalism was industrial: it took people off the farm and brought them to the city and the factory. The second wave, post-industrial capitalism, centered productive activities in services rather than manufacturing. Capitalism 3.0 may transcend the need for human labor more than ever imagined: machines and robots will do the work, especially the difficult, dirty, and monotonous work that has given "work" a bad name. What will capitalism of the future need to be if it is to be a prosperous and fair

economic system. Course integrates economics, public policy, and political philosophy.

Degree Requirement Attributes: Dist:TMV

GOVT 69 - Federal Indian Law

Instructor: Duthu

This course will focus on the constitutional, statutory and jurisprudential rules of law that make up the field of Federal Indian Law. Attention will be given to the historical framework from which the rules were derived. After tracing the development of the underlying legal doctrines that are prominent today, the course will turn to a consideration of subject-specified areas of Indian law, including hunting and fishing rights, water rights, and preservation of religious and cultural rights.

Cross-Listed as: NAIS 050

Degree Requirement Attributes: Dist:SOC; WCult:NW

Advanced Courses

GOVT 80 - Readings in Government

Instructor: Swaine

This course is intended for advanced, independent research and study under the direction of a member of the Government Department. Students approved for the course will be expected to complete an equivalent amount of research and writing as a Government seminar. Interested students must receive approval from a faculty advisor, and must submit a plan of study to the department for approval by the chair no later than 14 days before the beginning of the term in which the course will be taken.

GOVT 81.16 - The Rise of Populism in Europe

Instructor: Ferwerda

Populist parties have emerged as a significant force in European politics. Across western and central Europe, anti-immigrant parties have entered governing coalitions and accelerated the decline of mainstream parties. In southern Europe, radical left-wing parties have increasingly challenged the legitimacy of the European Union. This seminar will examine the political, economic, and cultural factors driving the unprecedented success of populist parties. In doing so, we will grapple with a range of significant challenges facing liberal democracies, ranging from the consequences of immigration and diversity to economic stagnation and representational deficits.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

GOVT 81.25 - Defying Convention: Human Rights in the United States and the United Nations

Instructor: Baldez

U.N. human rights treaties enjoy both strong support and strong opposition in the United States. The U.S. is the only country in the world that has not ratified the Convention on the Rights of the Child and is one of six countries that have not ratified the U.N. Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)—putting America in the company of Iran, Palau, Somalia, Sudan and Tonga (as well as the Holy See and the “freely-associated state” of Niue). Nonetheless, the U.S. has ratified three of nine U.N. human rights treaties—the International Covenant on Civil and Political Rights (ICCPR), the Convention against Torture (CAT) and the International Convention on the Elimination of All Forms of Racial Discrimination (CERD)—as well as the Genocide Convention. What explains this variation, and what difference does ratification make? The course will examine broader questions about American politics by looking through the lens of efforts to ratify these treaties and interact with the UN. We will examine the history of human rights within the UN, the development of the treaties, and US efforts to ratify them. We will explore the impact of ratification and the role of human rights in American foreign policy. Our aim will be to produce research that informs public debate and contributes to the scholarly literature.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 81.28 - George Orwell: Political Thought for the 21st Century

Instructor: Mounk

This course will engage George Orwell’s (1903-1959) essays, novels, reviews, and memoirs. Orwell’s writings confront the main political forces of the twentieth century with unrivaled clarity and enduring force. His account of totalitarianism – fascist *and* communist – continues to orient anti-totalitarian resistance in the 21st century. Orwell’s insistence on clarity and truth continue to inspire intellectual and political resistance to the lies, manipulative half-truths and PR propagated by the ruling elite. Orwell’s confrontation with 20th century poverty continues to sustain those who fight against the evils of injustice and deprivation.

We read Orwell to understand Orwell; to understand politics in both the 20th century and its relation to the 21st; to understand the enduring threats to liberal democracy; and to understand ourselves.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 81.29 - Persuasion and Propaganda: Information Control in Autocracies and Democracies

Instructor: Palmer

This comparative politics course looks at government strategies of information control — namely propaganda and censorship. For each of these topics we consider three

main things: the underlying theory of a strategy of information control (when and why to use it), some particular cases and circumstances under which it is used, drawing on global examples, and how effective it actually is at accomplishing a regime’s goals. Though much of the literature focuses on Russia and China as two regimes with large censorship and propaganda arms, the course also draws on cases from around the world, in a mix of democracies and autocracies.

Degree Requirement Attributes: Dist:SOC

GOVT 81.30 - Election Law

Instructor: Raymer

This seminar will provide students with an in-depth understanding of the laws governing American elections and citizen participation in the voting process.

Topics will include, among others, the historical development of – and limits to – the modern “right to vote,” laws affecting political party processes, reapportionment and the “one person, one vote” principle, redistricting/gerrymandering, and the substance and application of laws including the Voting Rights Act and National Voter Registration Act in modern political campaigns. We also will explore the role attorneys across the political spectrum play in ensuring that elections are free and fair.

This course will be useful to any student interested in law and/or politics. It will be taught similar to a law school class, with an emphasis on readings and in-class discussion. Reading materials primarily will consist of court opinions and related case materials to be provided, which students will be expected to analyze and to critique within a respectful class environment.

Cross-Listed as: PBPL 82.11

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.05 - The Media and Advertising in American Politics

Instructor: D. Brooks

This seminar explores the relationships between campaign advertising, the mass media, and political deliberation. We will examine the advertising strategies politicians use to win campaigns, the strategies they use to keep their seats of power once in office, how these efforts are evaluated by the media, and how the entire communication process affects the role of the public in democracy. A course-length political advertising and media simulation in which students will work to successfully communicate campaign messages serves to provide students with a hands-on learning opportunity and a unique culminating experience. Note that there are no prerequisites for this course.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.06 - Political Communication

Instructor: Westwood

The seminar provides an overview of research in political communication with special reference to work on the impact of the mass media on public opinion and voting behavior.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.19 - American Political Behavior

Instructor: Lacy

Do most Americans have real opinions on political issues, or are their opinions transient and heavily influenced by the media and political elites? What are Americans' opinions on important issues? Do the media determine the issues people care about, or does public concern about an issue drive media coverage? How can we measure people's attitudes, preferences, and opinions? How and why are Democrats, Republicans, and Independents different? Why do some people vote while others do not? Do people in "red states" and "blue states" differ in their political attitudes? If so, why? We will explore these questions and others from a social science perspective. We will read answers to these questions from journalists, political practitioners, and academic researchers, formulate our own hypotheses, and test these hypotheses using data that are available or that we will uncover. Completion of Government 10 or its equivalent is highly recommended before taking this course.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.21 - Experiments in Politics

Instructor: Nyhan

This class is a lab-style seminar in which we will design, field, and analyze an experimental study. Our goal is to publish a scholarly article about our findings in a peer-reviewed journal of political science - an ambitious project that will require a substantial commitment from each student. Flexibility will also be essential since the course will evolve during the semester based on the needs of the project.

The subject of the experimental study varies term to term and will be determined prior to the beginning of classes. Although the experimental study will vary each term, students may not repeat this course for credit.

Cross-Listed as: QSS 30.03

Degree Requirement Attributes: Dist:QDS

GOVT 83.22 - Political Representation in the U.S.

Instructor: Costa

Representation is central to most democratic theories of government, but does the U.S. government represent its

citizens? This course introduces students to both classic and contemporary research on this question with a particular emphasis on understanding what constitutes "good" representation. During the first section of the course, we discuss theories of representation and examine the validity of those theories in the context of the political aptitude of citizens and structural dilemmas for representation. The second section of the course will focus on different empirical approaches to studying representation. The third section focuses on the relationship between inequality (along lines of race/ethnicity, gender, and class) and representation. Throughout the course, we address a number of related questions on democratic theory, the relationship between public opinion and legislative behavior, and how elected officials learn about public opinion.

Degree Requirement Attributes: Dist:SOC

GOVT 83.24 - Inequality and American Democracy

Instructor: Nachlis

Inequality – economic, political, and social – is among the most pressing and contentious issues of our time. What forms of inequality should we care about? How much is too much, or too little? What are inequality's causes and consequences, which dimensions should be addressed, and how? We examine inequalities of income and wealth, political representation, education, incarceration, health, race, gender, and the future of work, ranging from philosophical and historical foundations to contemporary politics and policy.

Cross-Listed as: PBPL 84.04

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.25 - Hating the other side: polarization in American Politics

Instructor: Westwood

Modern American politics is defined by strong affection for one's own party and a deep hatred of the opposing party. This seminar explores the nature and evolution of polarization in American politics. We will critically examine how an ideological divide between parties has evolved into a divide defined by hatred and avoidance. Throughout we will compare modern polarization to other periods of heightened antipathy and consider just how much partisanship has developed into tribal conflict. As part of the course, we will consider how partisan animus manifests in vast aspects of American life—personal relationships, the workplace, and professional environments. Ultimately, we will grapple with evidence that suggests partisan bias has grown to replace race as the largest divide in American society.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.27 - Public Policy and Politics

Instructor: Barabas

This course explores political factors that influence the development of public policies as well as possible attitudinal and behavioral policy feedback effects on the population after their implementation. Public opinion will be central to the course with students encouraged to analyze survey data and polls. In most years, the class will have a topical issue focus (e.g., health care, climate change, retirement, immigration) depending upon world events and trends. Although the topical issue focus might vary each term, students may not repeat this course for credit.

Cross-Listed as: PBPL 83.02

Degree Requirement Attributes: WCult:W

GOVT 83.28 - Persuasion and the Policy Process

Instructor: Jerit

This class examines how people form policy preferences and the process by which those preferences do—or do not—get translated into public policies in the United States. The course will examine three aspects of this process: elite rhetorical strategy, the media routines that generate coverage of policy debates, and mass opinion. We will assess the way political elites, the media mass, and ordinary people interact to create policies that can be either intelligent or pathological.

Cross-Listed as: PBPL 83.01

Degree Requirement Attributes: Dist:SOC

GOVT 83.29 - The Political Nature of the American Judicial System

Instructor: Rosenberg

The purpose of this course is to introduce students to the political nature of the American judicial system. In examining foundational parts of the political science literature on courts understood as political institutions, the course will focus on the relationship between courts, other political institutions, and the broader society. The sorts of questions to be asked include: Are there interests that courts are particularly prone to support? What factors influence judicial decision-making? Are judicial decisions influenced by public opinion? What effects do congressional or executive actions have on court decisions? What impact do court decisions have? While the answers will not always be clear, students should complete the course with an awareness of and sensitivity to the political nature of the American judicial system.

Degree Requirement Attributes: Dist:SOC

GOVT 83.30 - Ethnoracial Identities in Politics and Society

This course focuses on understanding ethnoracial identities that may not fit into preexisting ethnoracial categories and the unique quantitative challenges of studying and understanding these groups. The goals of the course are to have a more nuanced understanding of ethnoracial identities beyond existing categories, and how to apply those nuances to quantitative work. The topics we will focus on include: 1) Ambiguities of Whiteness, 2) Ambiguities of Blackness, and 3) Multi-ethnoracial identities. We will study these topics primarily through a quantitative lens. The culminating project will be centered on how to quantitatively study populations when labels do not exist to capture complex identities.

Cross-Listed as: QSS 30.23

Degree Requirement Attributes: Dist:QDS; WCult:CI

GOVT 83.31 - Advanced Policy Research

Instructor: Barabas

Lawmakers often craft public policies to address perceived problems. Determining whether policies or other types of social inventions truly *work* (i.e., cause the intended effects) entails program evaluation and related forms of policy analysis. This applied research seminar focuses on designing and conducting empirical programmatic evaluations with an emphasis on research design principles that make documenting cause and effect relationships more successful.

Cross-Listed as: PBPL 089 QSS 30.24

Degree Requirement Attributes: Dist:QDS; WCult:W

GOVT 83.32 - Evaluating American Democracy

Instructor: Jerit

A representative democracy is one in which citizens elect others (i.e., government officials) to represent their ideas and concerns in the formation of public policy. This class investigates whether democracy is working in contemporary America. We focus on several broad areas of “performance” and will evaluate: (1) the process by which people form their views about candidates and issues; (2) how people engage with the political world and transmit their views to elected representatives; (3) the extent to which the mass media provide information that citizens need to fulfil their duties in a representative government; and (4) whether the public gets what it wants, in the form of specific public policies.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 83.33 - ‘The Woke Mind Virus?’: Conservatism, Liberalism and American Culture Wars

Instructor: Westwood

By design or by default, many universities offer limited exposure to conservative ideas. These ideas are often overshadowed by the progressive perspectives that dominate the academic mainstream. This course aims to guide students through a critical exploration of conservative thought—its philosophical core, real-world policy implications, and cultural reverberations. By examining why these viewpoints exist, how they gather public support, and what criticisms they encounter, students will walk away equipped to engage the full breadth of ideological arguments on a broad set of divides.

We will examine both liberal and conservative viewpoints with a critical eye. The goal is not to attack or persuade but to reveal the ideological disagreements and positions that often go unchallenged on campus. Each weekly unit is intentionally provocative, aimed at pushing the boundaries of your critical thinking. While not all the works we read are considered academically rigorous (or even high quality), they offer valuable insights into arguments that shape public consciousness and the American political system.

Degree Requirement Attributes: Dist:SOC

GOVT 83.34 - Rockefeller Republicans

Instructor: Barabas

Nelson A. Rockefeller '30 was elected as a Republican to be governor of New York four times before ultimately serving as Vice President in the Ford Administration during the mid-1970s. Why are political moderates, including Nelson Rockefeller, not more common in American politics? More specifically, why don't centrists win more often and dominate the political scene? To explore these questions, this class considers the evolution of the Republican party through the experience of Nelson Rockefeller and those who followed him in America.

Cross-Listed as: PBPL 82.41

Degree Requirement Attributes: WCult:W

GOVT 84.01 - Dilemmas of Development: India, China, and Middle East

Instructor: Vandewalle

China and India have witnessed extraordinary economic growth and development during the last three decades, and now rank as two of the world's fastest growing economies. In contrast, countries in the Middle East have economically often stagnated, seemingly incapable to implement economic reforms that could lead to sustained growth and development. What prompted these different outcomes? This seminar investigates the multiple strategies and elements behind the economic success of China and India, and those that explain the lack of economic performance in the Middle East.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 84.06 - Identity and Power in the Americas

Instructor: Baldez

This course examines how different forms of collective identity—including class, race, ethnicity, indigeneity and gender—have shaped Latin American and Latino politics in the 20th and 21st centuries. We will focus on a range of cases in Latin America and the US to address the following questions: In what ways does the state create and sustain certain categories of identity as the basis for political inclusion and exclusion? What explains changes in the political salience of certain categories of collective identity? Why do some identities become politically salient and others do not? How have forms of political representation changed over the past century? How does state policy affect the ability of groups to mobilize and press for demands? How do organized groups affect state policy? What are the possibilities and limitations of identity-based mobilization?

Cross-Listed as: AAAS 90.01; LACS 80.02

Degree Requirement Attributes: Dist:INT; WCult:W

GOVT 84.14 - Foreign Aid

Instructor: Carey

Foreign assistance programs are politically contentious. Advocates defend foreign aid as ethically imperative, effective, and as an essential foreign policy tool. Detractors dismiss foreign aid as wasteful at best, and possibly counterproductive, impoverishing recipient countries, corrupting their governments, and fostering violence. This course examines the cases for and against aid programs and weighs the evidence for their effectiveness. We consider three main forms of government-sponsored assistance — humanitarian aid, development aid, and democracy promotion. Students will assess the arguments and evidence from existing scholarship on aid, and will pursue independent research on foreign aid projects in consultation with Professor Carey.

Degree Requirement Attributes: Dist:INT

GOVT 84.38 - Trading Places: How Chile Passed Argentina on the Road to Development

Instructor: DeShazo

This course will investigate and analyze the factors that led to and inhibited development in Chile and Argentina. It will trace key economic, political and social variables in both countries from the export-led growth period of the Second Industrial Revolution to the present time in an effort to draw conclusions regarding why, when, and how Chile was able to advance at a faster pace than Argentina.

Cross-Listed as: LACS 30.07

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 84.40 - Democratic Erosion

Instructor: Carey, Muirhead

A theoretical, empirical, and historical investigation into the symptoms, causes, and consequences of the erosion of democratic states and the rise of illiberal modes of governance.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 84.41 - China as Economic Superpower: From Mao to Shenzhen

Instructor: Vandewalle

This seminar investigates the rapid economic rise of China since 1978. It focuses on the unorthodox ideas and strategies China's policymakers followed as they embarked upon economic liberalization; on China's foreign economic policies including the Belt and Road Initiative; and on relations with the United States. The seminar finishes with a review of the social, political and economic challenges China faces as it emerges as a powerful middle income country with global ambitions.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

GOVT 84.42 - Identity Politics from a Global Perspective

Instructor: Zhou

This course is designed to provide students with an overview of major theories and empirical approaches to the study of identity politics. Throughout the term we will read a combination of the classics and cutting-edge research in political science as well as sociology, economics, and social psychology to explore a range of topics with implications for politics and societies around the world. These topics include: how identity should be conceptualized and measured; why some forms of identity are activated, mobilized, and contested; how identities are represented politically; how racial and ethnic identities intersect with other salient identities; how social diversity and civil society are interrelated; what factors affect the integration of immigrants; and which varieties of democracy enable the flourishing of plural identities. Readings for these topics will span countries and contexts from around the world. You will have the opportunity to delve in more detail the topics and regions that interest you for the final research paper and present your research to the class. To that end, we will also analyze and practice the elements of conducting effective social science research.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

GOVT 84.43 - Punishment, Inequality and Political Economy

Instructor: Pfeffer

Utilizing a political economy framework, we will explore how and why countries develop and maintain diverse criminal justice systems. Emphasizing cross-national comparison, we will investigate how citizen demands and policy responses depend on existing institutional conditions and impact areas from welfare and employment policy to economic equality and racial justice. By the end of this course, students will be thinking as researchers to evaluate how punishment functions as a deployment of state power.

Cross-Listed as: PBPL 087

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 85.02 - Leadership and Grand Strategy

Instructor: Wohlforth

Is strategic leadership possible in international affairs? If so, how is it achieved? The objectives of this course are to introduce you to the most influential theoretical approaches to the study of strategy in political science and to apply and evaluate these approaches in a series of historical and contemporary case studies of leadership and grand strategy. These immediate objectives serve a larger purpose: to make you a better strategist and more sophisticated analyst of strategic decision-making. Students will be required to craft and defend alternative grand strategies for real leaders in selected cases, including World War I, the transition from apartheid in South Africa, and the war for Kosovo. The empirical focus of the course is on states and their problems, but its basic precepts are applicable to other domains as well. Prerequisite: Government 5.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.08 - US Security Policy in the 21st Century

Instructor: S. Brooks

For the past twenty years, the United States has occupied a unique role in the system as the world's only superpower. Yet many analysts argue that the United States will soon have to adjust to a new global order in which it has a less central role. In light of this argument, we will examine a range of questions and debates pertaining to the current and future course of American security policy.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.12 - Military Statecraft in International Relations

Instructor: Press

Finding answers for many complex foreign policy questions requires weighing a set of political goals against an estimate of the potential military costs and risks. The purpose of this course is to familiarize students with the missions and capabilities of military forces, and to teach them how to estimate the likely costs, risks, and outcomes of military operations. This course will use theoretical works and historical cases to familiarize students with some of the principles of air, ground, and naval operations. Students will use the tools which they learn in class to conduct a detailed military analysis that bears on an important current foreign policy question. No prior knowledge of military forces is needed for this class. Prerequisite: Government 5 or permission of the instructor. The instructor encourages seniors, juniors, as well as sophomores with strong writing and research skills, to enroll in this seminar.

Cross-Listed as: PBPL 82.01

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.15 - Economic Statecraft in International Relations

Instructor: Mastanduno

This course examines the use of economic instruments – trade, investment, and financial sanctions or inducements – by states to achieve foreign policy and national security objectives. We will develop theoretical perspectives and examine classic and contemporary cases to examine whether economic sanctions and inducements are effective; the relationship between economic statecraft, diplomacy, and the use of force; the impact of globalization on economic statecraft; and how domestic politics enable or constrain economic statecraft. Cases will include NATO sanctions against Russia, Chinese economic diplomacy in the South China Sea, multilateral restrictions on Iran and North Korea, and financial sanctions in the war on terrorism.

Degree Requirement Attributes: Dist:INT

GOVT 85.16 - The Causes and Prevention of Genocide and Mass Killing

Instructor: Valentino

This course examines genocide and other kinds of mass killing in historical and theoretical perspective. The course will begin by examining the debate over the concept of genocide. Then the course reviews psychological, sociological, and political perspectives on causes of genocide and mass killing. Next, the course examines a number of historical episodes of genocide and mass killing including the Holocaust, the 1994 genocide in Rwanda,

mass killings by communist states in China, the Soviet Union and Cambodia, and episodes involving the mass killing of civilian populations during war. Finally, the course addresses the question of what measures the United States and the international community should take to limit or prevent genocide and mass killing in the future. For example, should the international community use military force to prevent genocide if necessary? Will institutions like the international criminal court help to deter genocide and mass killing?

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.29 - U.S. Military Interventions Since Vietnam

Instructor: Friedman

This class surveys prominent studies of United States military operations. We examine how scholars have attempted to inform public debates about these conflicts, and how those experiences have shaped broader conceptions of politics and war. How much (or how little) can scholars learn from armed conflict? What aspects of these experiences are academic methods best suited to address, and where have they come up short? We direct these questions towards scholarship on conflicts such as Vietnam, Grenada, Kosovo, Afghanistan, Iraq, and Ukraine. The goal of this class is to deepen students' substantive knowledge of military affairs while engaging broader questions about the possibilities and limits of analyzing controversial events.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.37 - Resistance and Collaboration

Instructor: Miller

This course explores the dynamics of resistance and collaboration in the context of foreign military occupation. Over the course of the quarter, students will delve into a number of complex political questions: Why do some individuals and groups collaborate with foreign occupiers while others risk their lives by joining resistance movements? What explains why resistance is widespread in some historical cases and relatively weak in others? Why do some resistance movements succeed whereas others fail? How should we understand the dynamics of insurgency and counterinsurgency in countries under foreign occupation? Finally, what are the long-term consequences of resistance and collaboration, and how are these phenomena remembered in countries that once suffered under occupation? In interrogating these questions, the course will draw on a wide range of historical cases, including Nazi, Soviet, and Japanese occupations during World War II, post-war U.S. occupations of Germany and Japan, and recent American occupations of Afghanistan and Iraq.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.38 - Gender and War

Instructor: Baldez

Historically, the connection between gender and war was considered to be so obvious that few thought to question it. Men make up the vast majority of political decision makers who prosecute wars, and men constitute the vast majority of soldiers who fight wars. In the last few decades, scholars have asked why this is the case and challenged assumptions about how conceptions of masculinity and femininity matter in global conflict. In this seminar, we will delve into some of the classic studies and most influential research on gender and war in political science in order to understand the ways in which conceptions of gender difference shape the causes and consequences of war.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI**GOVT 85.39 - Public Opinion and American Foreign Policy**

Instructor: Powers

This course investigates public opinion about U.S. foreign policy. We examine prominent scholarly debates about whether foreign policy public opinion is rational, coherent, and a factor in policy outcomes. The course will be structured around several important questions, including: Does the American public have organized views about foreign policy? How do ideology, partisanship, values, and facts shape foreign policy attitudes? To what extent do leaders and the media shape foreign policy public opinion? Does the public affect foreign policy decision-making, either directly or by influencing voting behavior?

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 85.40 - The Cold War

Instructor: Miller

This course explores the international political dynamics of the Cold War, from the origins of the conflict in the late 1940s to the fall of the Berlin Wall and collapse of the Soviet Union four decades later. Drawing on history and international relations theories, the course will address questions related to the causes of the Cold War, the role of nuclear weapons, the ebb and flow of cooperation between the superpowers, and the dynamics of particular conflicts within the Cold War, such as Korea, Vietnam, and the Cuban Missile Crisis. The course will conclude by examining why the Cold War ended and whether a “new Cold War” is likely on the horizon.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.41 - Political Violence

Instructor: Lyall

This seminar surveys the causes, effects, and consequences of political violence across several empirical domains, including civil war, interstate war, insurgency, coups, rebellions, and organized crime. Given the explosion of research on political violence over the past decade, the course is not (and cannot be) a comprehensive review of the literature. In truth, each of the weekly topics could be the subject of its own dedicated course. Instead, the seminar offers a curated view of some of the core works in the field as well as emerging research areas. Particular attention is paid to recent scholarship (mostly within the past five years) to identify conceptual, theoretical, or empirical gaps in existing studies that might inspire your own research efforts. The course is deliberately interdisciplinary: we draw on political science, behavioral economics, social psychology, history, and anthropology, along with some research in natural sciences. It also bridges the disciplinary divide separating comparative politics and international relations by drawing on both civil and interstate wars, as well as violence at lower levels of intensity and scale. Selected readings also span multiple levels of analysis, ranging from sweeping cross-national comparisons across hundreds of years of history to subnational within-country comparisons to organizational and individual-level approaches. Equal weight is given to theory and research design when discussing these readings.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW**GOVT 85.44 - War and Society**

Instructor: Lyall

This seminar examines the relationship between soldiers and societies in the production of violence in war. Adopting a “war and society” perspective, the course offers a curated view of classic and recent research from political scientists and historians on key questions in the conduct and legacies of war around the world. Questions include: Why do soldiers fight, and why do they run? Why do some armies reach the commanding heights of military effectiveness, while others disintegrate under fire? Why do some militaries rebel against their political leaders? What are the effects of battlefield deaths on the home front? How do societies memorialize their war dead? And does the rise of new technologies like robotics and artificial intelligence affect the relationship between soldiers, armies, and the societies that create them? Equal weight is given to non-Western and Western cases, ranging from imperial China and the Comanche Empire to the United States, Soviet Union, and the Islamic State. Similarly, the course takes an expansive look at war across the centuries, drawing on conflicts as distant as the Peloponnesian War to modern conflicts in Iraq, Afghanistan, and Syria. Students will have the opportunity to explore these theoretical debates and will draw on primary documents, including soldiers’ letters to the home front, in their assignments.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.45 - The Psychology of International Security

Instructor: Pomeroy

This course provides an in-depth engagement with the political psychology of international security. The course consists of three parts. We first take up fundamental political questions – like “what is power?” and “what is war?” – and engage the diverse answers that psychological IR scholarship currently provides. Noting that war is the most destructive invention in human history, we then use these lenses to critically engage the value-add of psychological theories for why states fight, which necessarily entails an examination of why states don’t fight. The final third of the course uses all of this theoretical and empirical knowledge to examine security and war in our lifetime, beginning with the emergence of “terrorism” as a security issue in the post-Cold War world and looking forward to questions like China’s reemergence and environmental security. Introductory-level knowledge of international relations (e.g., GOV 5) is recommended but not a required prerequisite.

Degree Requirement Attributes: DIST:INT or SOC

GOVT 85.47 - Russian Influence in Europe

Instructor: Boyer

This course will explore Russian aggression and influence activities in Europe and how they impact U.S. interests. Given the significant impact of the February 2022 Russian invasion of Ukraine and recent Russian influence campaigns throughout the West, this course is particularly relevant for students hoping to understand: 1) past and present Russian goals within Western democracies; 2) the political, economic, and security implications of these Russian activities; and 3) how present challenges in confronting Russian malign influence intersect with global trends in political warfare and disinformation.

The course begins with a brief historical overview of European-Russian relations post-World War II, and how European and Russian threat perceptions evolved both before and after the fall of the Soviet Union. It then explores the range of ways Russia has attempted to influence Europe over the past several decades and why, with particular attention placed on activities since the fall of the Soviet Union and the modern use of territorial aggression and disinformation to further Russian interests.

Cross-Listed as: INTS 80.03

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.48 - Civil War

Instructor: Becker

Although civil war and insurgency have been around for centuries, policymakers and scholars in political science

and related disciplines have only begun paying attention to these types of political violence in earnest since the end of the Cold War. In more recent years, developing effective counterinsurgency strategies have become major policy goals of the U.S. government. Similarly, ending civil wars and smaller domestic disputes have become priorities of the international community, in general, and the United Nations, in particular. At the same time, social scientists working in a range of scholarly traditions have renewed their efforts to provide compelling and useful explanations of many forms of internal political violence, including civil war, revolution, ethnic war, and genocide.

This course introduces students to the core debates in this field of study as well as to cutting-edge research. Topics will include the socio-political contexts, goals, and organizational structures of rebel groups, general theories of political violence, civil war settlement, peacekeeping, and peacebuilding. By the end of the course, students will be able to intelligently evaluate the strengths and weaknesses of various counterinsurgency and peacebuilding strategies in light of evidence from social science and apply their insights in a final paper.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.49 - Applied Foreign Policy Analysis

Instructor: Wolforth

Focusing on the challenges of European security, this seminar will provide students with the opportunity to research and produce policy analysis at a professional level. The seminar will be a setting that mimics the real-world practice of policy analysis, a demanding craft that requires drawing inferences from limited information, under time pressure and data constraints, generating a diagnosis of a policy challenge and recommending a solution. My presumption is that your coursework so far at Dartmouth will have given you formidable analytical skills. Our job will be to put them to work in producing compact, analytically- and data-rich studies that generate concrete policy recommendation and communicating those findings orally. Each student will take on a different challenge in European security policy. Students will seek out relevant expertise and resources in government agencies and think tanks in the USA and Europe. The seminar will involve required attendance at relevant talks, workshops and seminars that are relevant to European security.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.50 - Diplomacy in a Complex World: Meeting Challenges, Creating Opportunity, and Pushing for Peace

Instructor: Barks-Ruggles

This course is a broad view of how states, societies, and institutions manage complex global challenges including

climate change, increasing inequality, emerging technologies, and challenges to the global order that has supported the rapid democratization of over half the world. The course will center on the role of diplomacy in addressing these challenges, creating opportunities, and preserving a rules-based international order that upholds democratic institutions that reinforce human rights and freedoms.

Cross-Listed as: INTS 80.04

Degree Requirement Attributes: Dist:INT or SOC

GOVT 85.51 - US Foreign Policy in Asia

Instructor: Lind

US foreign policy is at a pivotal moment because of dramatic internal and external changes. At home, frustrations have mounted with the costs of the longstanding bipartisan, globalist foreign policy posture. The U.S. financial situation also casts doubt on the US ability to maintain this ambitious foreign policy. The second Trump administration – as well as a new generation of “America First” foreign policy advocates, suggests real potential for a new direction in US foreign policy. Outside the US, other trends are also raising the costs, risks, and viability of America’s post-Cold War strategy. While Europe grows more dangerous due to Russian resurgence, America’s European partners themselves are in the midst of a backlash to a center-left globalist foreign policy posture. And China’s rise – and potential bid for regional hegemony in Asia – will make an expansive U.S. foreign policy posture increasingly expensive and dangerous.

The first part of the course examines different national security policy visions for the future of US foreign policy. Our focus will be on Asia, but – as will soon become apparent – U.S. success in Asia also depends on what happens in other regions. We discuss the current globalist US strategy, and then analyze different possible alternatives: prioritization, restraint, and progressivism. Part II of the course then explores specific topics in East Asia to understand how US policy would differ according to the different grand strategies, what are possible outcomes, and how these would affect US national security. At the end of the course, armed with this understanding of both strategic options and regional issues, students debate what strategy they feel best advances US interests.

Degree Requirement Attributes: Dist:INT; WCult:NW

GOVT 85.52 - The Politics of National Security

Instructor: Friedman

This class examines how domestic politics shape international behavior, particularly in the realm of national security. We ask questions such as: Are democratic checks and balances an asset or a liability in international affairs? How do military and civilian elites compete for influence

over national security decisions? To what extent is political polarization undermining U.S. foreign policy? What role will economic forces play in shaping China’s rise? By engaging cutting-edge scholarship on these topics, students will develop a deeper understanding of how public preferences and political institutions guide foreign policy in ways that sometimes help – and sometimes hinder – the pursuit of national interests.

Degree Requirement Attributes: Dist:INT or SOC

GOVT 86.01 - Multiculturalism

Instructor: Swaine

This course explores the topic of multiculturalism in the context of contemporary debates in political theory. Students will examine the arguments of authors advocating special political and legal treatment for cultural groups, integrated with responses from liberal, conservative, and feminist critics of multiculturalism. The course is designed to provide students with an understanding of central issues in multicultural debates; but its principal aim is to inspire students to think deeply about the principles, values, and institutions that democratic societies might affirm. Among the questions students consider will be the following: Is a multicultural society desirable or workable? Should government provide minority cultures with special recognition, legal exemptions, or group rights? Is multiculturalism bad for women or harmful otherwise? Could any form of multiculturalism adequately emphasize the values of personal autonomy, equality, and fairness? Prerequisite: one course in political theory or political philosophy.

Degree Requirement Attributes: Dist:SOC; WCult:CI

GOVT 86.03 - Contemporary Political Theory

Instructor: Swaine

Students in this course examine important ideas and trends in contemporary political theory. The course focuses on the works of such theorists as Friedrich Nietzsche, Hannah Arendt, Michel Foucault, and recent advocates of related positions. This course has two aims: first, its object is to foster an understanding of the different writers’ conceptions of, *inter alia*, freedom, persons, power, and action. Second, and more importantly, the course invites students to assess the viability and relevance of the various views considered, with regard to contemporary politics, institutions, and society. Prerequisite: one course in political theory or political philosophy.

Degree Requirement Attributes: TMV

GOVT 86.18 - Contemporary Readings on Justice

Instructor: Bedi

This seminar covers some of the main contemporary readings on justice. Justice entails the justification of power. Readings include works from Ackerman, Nozick,

Rawls, Singer, Young, Walzer, and West. Offering varying accounts of justice, each author attempts to justify power in a particular way. These justifications include utilitarianism, liberal egalitarianism, libertarianism, communitarianism, multiculturalism, and feminism. Active, sustained, and insightful participation is required. Background: one course in political theory/philosophy.

Degree Requirement Attributes: TMV

GOVT 86.25 - Adam Smith and Political Economy

Instructor: Clark

The eighteenth-century Scottish philosopher Adam Smith was one of the founders of "political economy," the study of the interrelationship between society, government, and the economy. This course focuses on Smith's major ideas through his two important works, *The Theory of Moral Sentiments* and *The Wealth of Nations*. The course will deal with such topics as the origins and consequences of economic growth, and the role of government in a commercial society.

Cross-Listed as: ECON 5

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 86.26 - Prophets on Trial

Instructor: Murphy

Prophets, whether true or false, are a profound challenge to any society. Why are prophets so dangerous? Why do they inevitably come into conflict with political and religious authorities? Several famous prophets were put on trial, creating the most notorious courtroom dramas in world history: Socrates, Jesus, Joan of Arc, Thomas More, Galileo, Oscar Wilde, and John Scopes. We shall be studying the lives and deaths of these amazing personalities to see what their trials tell us about law and justice. We shall compare historical and literary accounts of these trials to see whether we find the truth better in history or in literature.

Degree Requirement Attributes: Dist:TMV

GOVT 86.27 - Ethics of the Family

Instructor: Rose

The family is a social and political institution profoundly shaped by the law. This course examines the family as a site of justice subject to normative assessment, and asks how the state ought to regulate the family and how citizens ought to act within it. Questions include: Is there a right to procreate? Do parents have rights to determine their children's moral and religious educations? Should marriage be legally recognized or incentivized? How should household labor be shared between partners? Is the gender wage gap unobjectionable if it results from women's choices? Throughout, we consider the practical

implications of these theoretical questions for both public policy and individual ethics.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.31 - The Political Philosophy of Nietzsche

Instructor: Clarke

This course is an intensive study of Friedrich Nietzsche, a giant of the Western political tradition who claimed to break with everything that came before him. We will read a number of his most important works in their entirety with a view to determining whether or not he really did so, and what he proposed to leave in its place.

Degree Requirement Attributes: Dist:TMV; WCult:CI

GOVT 86.34 - Ethics, Economics, and the Environment

Instructor: Rose

This course examines the ethics and economics of our environmental choices and public policies. Throughout, we will examine important and difficult questions of practical relevance, including: Should you be an ethical consumer? What is the value of nature, and can we put a price on it? What's a fair distribution of environmental goods? Who should bear the costs of climate change? Is economic growth the problem or the solution? How should we measure social progress?

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.38 - Justice and Work

Instructor: Rose

This course examines how our societies ought to arrange their political and economic institutions and public policies with respect to work. Students will evaluate the existing world of work and ask whether and in what respects it ought to be transformed. Subjects we will consider include: workplace inequalities; the duty to work and workfare requirements; decent and meaningful work; public support for caregiving; emotional labor and domestic work; workplace democracy and public control over the means of production; shortening work hours and a universal basic income; and technological change and the future of work.

Degree Requirement Attributes: Dist:TMV

GOVT 86.40 - Law and Society

Instructor: Rosenberg

This seminar examines some of the myriad relationships between courts, laws, lawyers and the larger society in the U.S. Issues covered include legal consciousness, judicial biases, the role of rights, access to courts, legal education and the legal profession, and implementation of judicial decisions. It is not a law course. No judicial decisions are assigned.

The substantive goal of the seminar is to help you develop a more sophisticated and deeper understanding of the ways in which laws, lawyers, judges and courts actually interact with people's day-to-day lives. In addition, through class discussion and papers, the seminar aims to sharpen your ability to effectively communicate your ideas. Part of effective communication is improving your ability to disagree with others without being disagreeable, to express your views in ways that respect others and open, rather than, close discussion.

Degree Requirement Attributes: Dist:SOC

GOVT 86.41 - Ethics, Politics, and the Law

Instructor: Muirhead

This interdisciplinary course will examine normative issues about ethics, politics, and the law. Specific questions studied might include the following: When is the state justified in using coercive force to secure compliance with the law? How should we proceed with those who disagree with us about normative questions within a democratic, pluralistic society? Are there correct answers to normative questions at all, and (if so) how might we improve in learning about them?

Cross-Listed as: PHIL 38.02

Degree Requirement Attributes: Dist:TMV

GOVT 86.42 - Work, Leisure, and a Good Life

Instructor: Murphy

In this course, we combine classic and contemporary readings to consider what kinds of work and what kinds of leisure lead to human happiness and well-being. All our readings, discussions, and essays are focused on helping students reflect on the optimal balance of work and leisure in their own lives. This course is open to all students but is especially intended to provide a capstone experience for our PPE modified Government majors, since it combines Politics, Philosophy, and Economics

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.43 - The Intellectual History of Racism: Europe, the Middle East, and the Americas

Instructor: Clarke

When was the concept of race born? Why was it invented, and how did it change the way that we think about politics? This seminar explores the forgotten "ism" of intellectual history — racism. We will survey ideas of racial difference across history and look at how they have been used to justify inequalities of power. Readings will be a mix of primary source materials and scholarly research in classics, history, Middle Eastern studies, religion, and philosophy.

Cross-Listed as: MES 12.14

Degree Requirement Attributes: Dist:TMV; WCult:CI

GOVT 86.44 - The American Public World

Instructor: Schiller

This course explores the role of physical spaces, objects, and landmarks in American public life. We will explore how these places come into existence, shape historical narratives, and reinforce attachment to or alienation from American civil society. Examples will include the Statue of Liberty, the Smithsonian museums and the National Mall, and Monument Avenue in Richmond, VA. This class will combine political theorists like Alexis de Tocqueville, Hannah Arendt, and Jurgen Habermas with modern and contemporary scholarship in history, architecture, and social science. We will devote a portion of class specifically to the question of monuments to the Confederacy and the Civil War and their role in catalyzing mass movements as well as negotiations over physical representations of political history.

Degree Requirement Attributes: Dist:SOC

GOVT 86.45 - Race, Justice, and the Law

Instructor: Muirhead, Plunkett

The last few years has seen increased calls for "racial justice" by a range of actors across the USA. How should we evaluate these calls? For example: what exactly is racial justice? What would it mean for our society to achieve more of it? And what methods for achieving it are (and are not) permissible in a pluralistic, democratic society? We will approach these and related questions by engaging with theories of racial justice, general theories of justice, and theories of race and racism. As part of our discussion, we will also engage with debates about more specific social/political issues tied to debates about racial justice, including such issues as mass incarceration, the foundations of criminal law, affirmative action, antidiscrimination law, propaganda, ideology critique, and political speech.

Cross-Listed as: PHIL 38.03

Degree Requirement Attributes: Dist:TMV

GOVT 86.49 - Indigenous Legal Systems & Legal Pluralism

Instructor: Duthu

This course focuses on Indigenous law and legal systems, primarily from the United States but with some attention to the *jurisgenerative* (or law-creating) roles of Canadian First Nations and Australian Aboriginal Peoples. For Indigenous peoples, the resurgence of traditional Indigenous laws and their accompanying legal structures serves as an important marker of indigenous self-determination and nation (re)building. At the same time,

these developments challenge the long-standing hegemony of the nation-state, particularly the centrality of the state's legal system and the presumption that the state is the sole author and arbiter of law. The resurgence of Indigenous law and legal systems, in short, tests the limits of legal pluralism, the notion that two or more legal systems can co-exist peacefully in shared territories.

Cross-Listed as: NAIS 81.05

Degree Requirement Attributes: Dist:SOC; WCult:NW

GOVT 86.50 - Roman Political Thought: Freedom, Law, and Empire

Instructor: Clarke

This course provides students with a broad overview of Roman political thought, with attention to how it has come to shape our own political landscape. Our central focus will be on how Romans explored, and struggled with, the problem of ambition. Perhaps more than any society, before or since, Romans were preoccupied with ambition, which they understood to be more than just 'desire for power.' Romans understood ambition to be an insatiable appetite for *dominance*, which could drive a person to insanity and precipitate unspeakable horrors, and they dealt with it accordingly – as an exceedingly dangerous passion that cannot be allowed to roam freely, lest it destroy everything in its path. But they also recognized that, when appropriately molded and shaped, ambition could prove to be a source of extraordinary political accomplishment; and furthermore, they believed the genius of their own society was (or had been) its capacity to do just that. Our study of Roman political ideas will aim to recover and explore this perspective, with a view to what it might have to offer us today.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.51 - The Idea of Socialism: Radical Political Theory from the French Revolution to Marx

Instructor: Monahan

In recent years, socialism has been making something of a comeback in contemporary political discourse. Three decades after the collapse of the Soviet Union, and after a long-term decline of once-powerful socialist and social-democratic parties throughout the world, the renewed forms of socialist politics of the 2010s and '20s offer us the occasion to take a fresh look back at a tradition with much deeper roots in the history of the modern world. What exactly *is* the idea of socialism?

This course aims to come at this question by studying the central period of the socialist tradition's initial formation, in the early to mid-nineteenth century. Students will read and analyze original sources—works of Robert Owen, Charles Fourier, Karl Marx, and others—representing some of the key texts of the early socialists. The half-century following the French Revolution is not only the

founding period of the tradition but also contains a large amount of debate over different ideas the socialist movement itself. We will try to understand which commitments defined socialism and the degree to which contemporary politics does or does not answer those concerns.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.52 - The Philosophic Foundations of Politics

Instructor: Muirhead

A careful reading of classic texts in the Western tradition of political thought, representing traditional virtue-based politics (Plato), modern liberal politics (Locke), and the post-modern critique of both traditional and modern politics (Rousseau and Foucault).

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.53 - Reading Marx's Capital

Instructor: Monahan

It's hard to think of many theorists in history whose ideas were as influential as Karl Marx (1818-1883). While not particularly well-known in his own day, Marx's ideas came to define world politics in the twentieth century—from the social-democratic and labor parties of most democratic states to the Communism of the 1917 Russian Revolution and Soviet Union, to national liberation movements throughout the colonized Global South, to the labor and student radicalism of the New Left—and still today Karl Marx remains a household name throughout the world. Yet Marx's ideas are more often referenced than they are understood.

In this course, we will gain a handle on Marx's thought through a deep engagement with his masterwork, *Capital, Volume 1* (1867). The culmination of a decades-long effort beginning with his now well-known 1844 drafts (the "Economic and Philosophical Manuscripts"), *Capital* remained the center of Marx's intellectual efforts throughout his adult life, overseeing new editions and translations of *Volume 1* in his later years, and leaving the planned *Volumes 2* and *3* unfinished at the time of his death (which his collaborator Friedrich Engels edited and published later). Though less-often read today than some of Marx's other (shorter) writings, *Capital* is without doubt the definitive statement of his theoretical contributions.

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.54 - Congressional Investigations, Law, and Democratic Governance

Instructor: Amerling

The course introduces students to the purpose and practice of congressional investigations. Issues covered will include: the role of congressional oversight in our democratic system of governance; the reach and limits of

Congress's constitutional authority to investigate; tools and tactics in congressional investigations; and how citizens and elected officials can best address current challenges to conducting effective congressional inquiries. Class discussion will frame these issues by focusing on the House Select Committee investigation of the January 6th Attack on the U.S. Capitol and other high-profile congressional inquiries, featuring video excerpts and personal perspectives from individuals involved with these efforts. The course emphasizes in-class exercises in which students tackle various oversight challenges in the role of congressional investigators, and ultimately students will stage a mock investigative hearing.

Cross-Listed as: PBPL 82.10

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 86.55 - Building Big Things: The Politics of Infrastructure

Instructor: Sankaran

Modern life requires Big Things: Roads, railways, sewers, housing, power plants, digital platforms, dams, and the like. This course investigates the theory and practice of infrastructure. It takes up questions such as: Are democracies worse than autocracies at building infrastructure? What role should the government have in building infrastructure? What big things do we want built? How do planning, permitting, financing, and building infrastructure relate to democratic values? Readings will be drawn from philosophy, political science, law, economics, and other cognate disciplines.

Degree Requirement Attributes: Dist:SOC

GOVT 86.56 - Ethics of Immigration

Instructor: Altundal

International migration has become a major topic in both domestic and global politics. This seminar addresses key scholarly debates in the political philosophy of migration, and focuses on the normative challenges posed by contemporary politics of immigration.

The course is mainly divided into three parts. The first part examines the open borders debate and asks: Should people, independent of their citizenship, be able move across international borders? Do states have a right to exclude migrants? We will survey the arguments -for and against- open borders stressing the main philosophical approaches and their justifications (e.g., deontological/right-based, consequentialist/utilitarian). In the second part of the course, our focus will be on the integration of immigrants. We will cover topics such as naturalization of immigrants and the rights and obligations of citizenship. In the third part, we will discuss contemporary critical issues in migration such as asylum, refugees, displacement, statelessness, undocumented migration, deportation, externalization of borders, short-term migration, and the

right to travel. In the final class, we devote our discussion to students' research papers.

Degree Requirement Attributes: Dist:TMV

GOVT 86.57 - From Jeff Bezos to LeBron James: The Politics of Philanthropy

Instructor: Schiller

Philanthropy is a political activity. It is shaped by public policies such as tax incentives, it reflects and reinforces norms of wealth accumulation and inequality, it supports social movements, and it funds the infrastructure of public life. This course will cover philanthropy's evolving relationship to democracy, its role in legitimizing capitalism and the privatization of the common good, and possibilities for reconciling the demands of justice with the ideal of pluralism in charitable giving.

This course will provide an in-depth understanding of the nonprofit and philanthropic sector, including its historical development, normative and structural elements, and modern role as a driver of social change, with a focus on sustainable development. By the end of the course, students will have knowledge of the history and structure of philanthropy and the nonprofit sector, the tradition of competing value commitments in civil society, and key issues in the current nonprofit and philanthropic sector. Readings for this class will span across political philosophy, civil society studies, public policy, law reviews, and popular journalism.

Cross-Listed as: PBPL 81.10

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.58 - Black Patriotism in America: Politics, Philosophy, and History

Instructor: Roy

Building on Frederick Douglass's penetrating question—"What to the Slave is the Fourth of July?"—this interdisciplinary course explores American attitudes toward patriotism. What does it mean to be a patriot? How should one's love of country be balanced with critiques of its injustices? What's race got to do with it? We will trace the evolution of black political thought since the Revolutionary War against the backdrop of debates about patriotism in contemporary politics, culture, and philosophy.

By the end of the course, we will have surveyed a wide array of African American thinkers and their various interpretations of patriotism, including the radical thought of Malcolm X; the liberal ideas of Martin Luther King, Jr., Mary McLeod Bethune, Ralph Ellison, and Shirley Chisholm; the conservative convictions of Zora Neale Hurston, Colin Powell, and Condoleezza Rice; the civic optimism of Barack Obama; and the pessimistic proclamations of Ta-Nehisi Coates, whose parents spurned

the Fourth of July as “marketed by the people who wanted to be white.” In so doing, we will recognize how re-examining the history of the United States through the eyes of the African Americans who labored to redefine its founding principles might illuminate new pathways for progress in our present age of polarization and moral relativism. Ultimately, we will consider a variety of answers to questions of how influential African Americans understood patriotism and what their insights might mean for the future of race relations in the United States.

Degree Requirement Attributes: Dist:TMV; WCult:CI

GOVT 86.59 - The Future of Democracy in America

Instructor: Muirhead

Democracy in America has long been thought to be a model of the world, a ‘city on a hill.’ And in the late 20th century, America has been cast – and has seen itself – as the leader of the free world. Today American leaders no longer see the U.S. as a leader. Nor does much of the rest of the world. What is the state of democracy in America, and what do we have to hope for and to fear on its behalf?

Degree Requirement Attributes: Dist:TMV; WCult:W

GOVT 86.60 - Freedom of Speech

Instructor: Bedi

This seminar explores some constitutional and theoretical issues that arise from freedom of speech. Beginning with an introduction to John Stuart Mill’s marketplace of ideas and the harm principle, this seminar explores a set of central issues by reading eight books on freedom of speech, one for each week. The seminar explores the question of the scope of freedom of speech, followed by the substantive areas of hate speech, university speech and private speech. The seminar’s aim is for students to understand the nature of freedom of speech and the scholarly disagreement that accompanies it. Some prior background in law or political theory is recommended.

Degree Requirement Attributes: Dist:TMV

GOVT 90 - London FSP - Mid-level course

Instructor: LSE Instructor

Course taught by a member of the faculty of the Department of International Relations of the London School of Economics and Political Science. Dartmouth students attend class with the LSE faculty member. (This course counts as a mid-level course and not as a seminar for the major or minor).

GOVT 91 - London FSP - Mid-level course

Instructor: LSE Instructor

Course taught by a member of the faculty of the Department of International Relations of the London School of Economics and Political Science. Dartmouth

students attend class with LSE faculty. (This course counts as a mid-level course and not as a seminar for the major or minor).

GOVT 92 - London FSP - Seminar

Instructor: Lind

Seminar taught by the London FSP faculty director. This course counts as a seminar for the Government major or minor.

GOVT 93 - Washington DC - Internship Essays

Instructor: Baldez

An internship with a public or private agency or organization intended to give students practical experience of political life in the nation's capital. Each student will write weekly essays relating his or her work experience to broader issues in political science. (This course counts as a mid-level course and not as a seminar course for the major or minor.)

Degree Requirement Attributes: Dist:SOC

GOVT 94 - Seminar

Instructor: Baldez

Seminar taught by the Washington DC faculty director. This course counts as a seminar for the Government major or minor.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 95 - Seminar

Instructor: Baldez

Seminar taught by the Washington DC faculty director. This course counts as a seminar for the Government major or minor.

Degree Requirement Attributes: Dist:SOC; WCult:W

GOVT 96.04 - Baltic Politics: Democratization, Identity, and Regime Change

The Baltic States - Estonia, Latvia, and Lithuania - are currently undergoing a crucial geopolitical moment that has significant implications for their identity issues and democratic development. These countries are also a unique case study of how states can emerge from autocracy and empire, forging new futures amidst the remnants of their Soviet pasts. This course will explore the complex issues related to identity and democracy in the Baltics through two four-week modules, one based at Vilnius University in Lithuania, and the other at the University of Tartu in Estonia.

The courses will focus on two themes. One is how Baltic identity has been influenced by the region's experiences as part of the Soviet Union, its current proximity to Russia, and its many ties to Europe. You will explore the impact of

the Soviet era on the cultural and political identity of the Baltics, and how this history continues to shape contemporary issues related to national identity, language, and political participation. You will also analyze the current geopolitical climate and how the region's unique position between East and West impacts its identity and its democratic development.

Another theme is related to ethnic and gender discrimination in the Baltics. You will explore the challenges that women and minority groups face in the region, and the progress that has been made towards greater equality and inclusion. You will also consider the intersection of identity and discrimination, and how these issues can impact the development of a cohesive and democratic society.

Throughout the course, you will also examine how the emergent Baltic identity and identity-related issues present both possibilities and challenges to democratic consolidation in Estonia, Latvia, and Lithuania, and in other countries throughout the region. By the end of the course, you will have a deep understanding of the unique challenges and opportunities facing the Baltics and how these issues impact the broader region.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

GOVT 96.05 - Baltic Energy Systems

The Baltic States -- Estonia, Latvia, and Lithuania -- are a cultural and commercial crossroads. They are also a living laboratory for navigating the complex pressures of transitioning to low-carbon, socially innovative energy systems. This course will explore social and technological dimensions of energy transitions in the Baltics via two four-week modules, one based at Vilnius University in Lithuania and the other based at the University of Tartu in Estonia. The course will examine how the histories and futures of Baltic energy systems are shaped by their ties to Europe and their proximity to Russia, as well as how the Baltic states are transforming energy infrastructures and policies in response to urgent energy security and climate change challenges.

Cross-Listed as: EEER 024

GOVT 97 - Honors Research

Instructor: Crabtree, Swaine

Government 97 provides students with the intellectual tools necessary to research and write high quality senior honors theses in the field of government. Among other activities, students will review the strengths and weaknesses of previous government honors theses, examine various political science research methods and receive critical feedback from the program directors and fellow students on written work including research proposals and draft chapters.

GOVT 98 - Honors Research

Instructor: Crabtree, Swaine

Students are awarded one course credit for successful completion of this course upon completion of GOVT-099. Students register for GOVT-098 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for GOVT-099 the subsequent term to complete the coursework. A final grade will replace the "ON" in GOVT-098 upon completion of GOVT-099. Alternatively, students may also take GOVT-098 and GOVT-099 concurrently during the winter term and receive an "ON" for both courses until the completion of the honors program at the end of the spring term.

GOVT 99 - Honors Thesis

Instructor: Crabtree, Swaine

Students are awarded one course credit for successful completion of this course. Students who have registered for GOVT-098 register for GOVT-099 to complete the coursework. A final grade will replace the "ON" for GOVT-098 upon completion of this course for a total of 2 credits for GOVT-098 and GOVT-099. Alternatively, students may take GOVT-098 and GOVT-099 concurrently during the winter term and receive an "ON" for both courses until the completion of the honors program at the end of the spring term.

History

Chair: Darrin M. McMahon

Vice Chair: Leslie A. Butler

Professors R.E. Bonner, L.A. Butler, C.G. Calloway, M.F. Delmont, M.C. Gaposchkin, U. Greenberg, D.M. McMahon, B.E. Moreton, A. Orleck; Associate Professors S.J. Ericson, C.B. Estabrook, S.J. Link, E.G. Miller, J.M. Miller, P.P. Musselwhite, G. Nikpour, J. Rabig, N. Sackeyfio-Lenoch, S. Suh, P. Voekel; Assistant Professors Y. Lu, E. Mercado-Montero, D.C. Petruccielli, T. Suri; Visiting Professor A.V. Koop; Lecturers C. Baldwin, M. Fraser, M. Novak, I. Stone, J. Tran, R. Zeinstra; Research Fellows R. Edsforth, M. Gregory; Postdoctoral Fellow A. Najib

To view History courses, [click here](#) (p. 489).

The Department of History offers a Standard Major, a Modified Major, an Honors Major, and a Minor.

Requirements for the major and minor differ for the classes of 2023 and earlier, and the classes of 2024 and later. Because planning is essential, it is critical that a student establish a relationship with a faculty member who can act as an adviser. Any member of the Department can serve as a major adviser, and it is best to pursue this relationship as early as possible. If you do not know who to approach, the Department Chair or Vice Chair can suggest a possible

adviser to suit your interests. (The Vice Chair approves all modifications, double majors, and transfer credit requests.)

It is normal for scheduling changes to occur, including the adding and dropping of courses. **For the most up-to-date course schedule, visit <https://history.dartmouth.edu/undergraduate/course-schedule>.**

Fulfilling a History Major requires the successful completion of at least ten approved courses. After reviewing the requirements listed below, students should refer to the History Major Worksheet to plan the history courses they will complete to fulfill the major requirements relevant to their class.

Visit <https://history.dartmouth.edu/undergraduate> for complete information.

I. Majors and the Minor open to the Classes of 2023 and earlier

A. Standard Major in History for Class of 2023 and earlier

Requirements:

The Standard Major in History comprises the successful completion of at least ten History courses that meet the following requirements:

1. Geographic Distribution

For the purposes of the major requirements applicable to the class of 2023 and earlier, most courses fall into one of four areas: (1) United States (designated *Major Dist: US* in the course listing below); (2) Europe (designated *Major Dist: EUR* in the course listing below); (3) Africa, Asia, Latin America and the Caribbean (designated *Major Dist: AALAC* in the course listing below); or (4) Interregional and Comparative (designated *Major Dist: INTER* in the course listing below).

Your ten History courses must include, at a minimum:

- a. one course in the history of the United States;
- b. one course in the history of Europe
- c. two courses in the histories of Africa, Asia, Latin America & Caribbean
- d. one Interregional or Comparative history course

2. Chronological Distribution

Your ten History courses must contain, at a minimum, two pre-1700 or three pre-1800 courses. In the course listing below, courses fulfilling the pre-1700 requirement are designated <1700, while <1800 designates those fulfilling the pre-1800 requirement.

3. Seminars or Colloquia

All Standard Majors in the department must complete two courses involving advanced historical practice, one of which will represent the culminating experience. Most students meet this requirement by enrolling in two HIST 96s, which are small courses (normally capped at 12) that allow students to work closely with a faculty member and to produce a final project that represents either original research in primary sources or (with colloquia) a historiographical contribution to the existing scholarly literature. Those who complete the London FSP or the Honors Seminar (HIST 98), need to complete only one 96, which represents the culminating experience for the major. Careful advanced planning regarding enrollment in 96s is necessary for two reasons. First, the capped enrollment means that several 96s will have more students wishing to take the course than available space. In these cases, the department and the instructor will prioritize enrollment. Second, work at the advanced level is most rewarding when it builds upon previous exposure to a field. You should work with your adviser to consider which seminars can best represent this sequencing model that follows exposure to a topic in introductory and upper-level classes.

4. Field of Concentration

All majors are encouraged to identify an area of concentration within the broad field of History. Establishing a critical mass of classes each related to a geographic, chronological or thematic concentration will enhance a student's ability to develop expertise and make connections. (All students in the Class of 2016 and before are required to identify at least five History courses related to a field of concentration. One of these must be a culminating experience in the form of a HIST 96.)

5. Limits and Exclusions

1. At least five History courses must be taken in residence at Dartmouth College, one of them being HIST 96.
2. HIST 7 (First-Year Seminar) and HIST 99 (Honors Thesis) may not be counted toward the Standard Major.
3. Students may not use more than three seminars and colloquia (HIST 96) and two independent study courses (HIST 97) in satisfying the requirements of the Standard Major.
4. Major GPA is figured on *all* History courses taken.
5. The Department will consider approving transfer credits for History majors and non-majors only for History courses taken at institutions with which Dartmouth College has institutional exchange programs (see Regulations section of this Catalog).
6. Only transfer students may receive credit for courses taken at other colleges or universities prior to matriculation at Dartmouth.

B. Modified Major in History for Class of 2023 and earlier

A Modified Major will be approved only if the student provides a convincing written rationale for the intellectual coherence of the proposed program of study. This should be produced at least two terms prior to graduation.

Typically, modifications will not be approved in the last two terms of a student's enrollment.

Requirements:

The Modified Major consists of the successful completion of twelve courses, eight of them in History, and four from one or more modifying departments/programs. If the four modifying courses are in a single department/program, your Modified Major plan and rationale must be approved by the Vice Chair of the History Department and the Chair of the modifying department/program. If the four modifying courses are drawn from more than one department/program, your plan and rationale for a Modified Major needs to be approved only by the Vice Chair of the History Department. The requirements in History need to meet the following requirements:

1. Geographic Distribution

For the purposes of the major requirements applicable to the class of 2023 and earlier, most courses fall into one of four areas: (1) United States (designated *Major Dist: US* in the course listing below); (2) Europe (designated *Major Dist: EUR* in the course listing below); (3) Africa, Asia, Latin America and the Caribbean (designated *Major Dist: AALAC* in the course listing below); or (4) Interregional and Comparative (designated *Major Dist: INTER* in the course listing below).

Your eight History courses must contain at least one course from each of the following areas:

- a. United States
- b. Europe
- c. Africa, Asia, Latin America & Caribbean
- d. Interregional

2. Chronological Distribution

Your eight History courses must contain at least two pre-1800 courses. In the course listing below, courses fulfilling the pre-1800 requirement are designated <1800.

3. Seminars or Colloquia

Modified majors must complete one course involving advanced historical practice which will represent the culminating experience. Most students meet this requirement by enrolling in HIST 96, a small course (normally capped at 12) that allow students to work closely with a faculty member and to produce a final project that represents either original research in primary sources or

(with colloquia) a historiographical contribution to the existing scholarly literature. HIST 98 (Honors Seminar) and the London FSP *may not* count as a culminating experience for Modified Majors.

4. Field of Concentration

All Modified Majors are encouraged to identify an area of concentration within the broad field of History.

Establishing a critical mass of classes each related to a geographic, chronological or thematic concentration will enhance a student's ability to develop expertise and make connections. (All students graduating in or before 2016 are required to identify at least four History courses related to a field of concentration.) One of these must be a culminating experience in the form of a HIST 96.

5. *Limits and Exclusions*, described under the Standard Major (5), also apply to the Modified Major.

C. Honors Major in History for Class of 2023 and earlier

Potentially eligible students should meet with their respective advisers to plan for the History Honors Major. History majors who have achieved an overall College grade point average of 3.0 and one of 3.5 in History (based on a minimum of five graded History courses) may apply for admission to the Honors Program through a written thesis proposal submitted in the spring term of their junior year. Others interested in the program may petition the Department for admission. Please consult the History Department's website at <https://history.dartmouth.edu/undergraduate/honors> for more information.

The Honors Program in History consists of the successful completion of the following requirements:

1. The minimum number of courses as specified in (1), (2), (3), and (4) under the requirements for the Standard or Modified Majors.
2. In addition to, or as part of, the Standard Major or Modified Major, honors majors must complete the Honors Seminar (HIST 98) in the fall term of their senior year. HIST 98 may serve as one of the two required upper level seminars and colloquia for the Standard Major; it *may not* serve as the culminating experience in (3) above.
3. Honors majors submit a thesis written in their senior year (HIST 99.01 in the Winter Term and HIST 99.02 in the Spring Term). HIST 99 may carry up to two credits toward the degree requirement, but receives *no credit* within the Honors Major.
4. *Limits and Exclusions*, described under the Standard Major (5), also apply to the History Honors Program.

D. Minor in History for Class of 2023 and earlier

The Minor in History consists of the successful completion of seven History courses:

1. Geographic Distribution

For the purposes of the major requirements applicable to the class of 2023 and earlier, most courses fall into one of four areas: (1) United States (designated *Major Dist: US* in the course listing below); (2) Europe (designated *Major Dist: EUR* in the course listing below); (3) Africa, Asia, Latin America and the Caribbean (designated *Major Dist: AALAC* in the course listing below); or (4) Interregional and Comparative (designated *Major Dist: INTER* in the course listing below).

Your seven History courses must contain at least one course from each of the following areas:

- a. United States
- b. Europe
- c. Africa, Asia, Latin America & Caribbean
- d. Interregional

2. Chronological Distribution

Your seven courses must contain at least two pre-1800 courses. In the course listing below, courses fulfilling the pre-1800 requirement are designated <1800.

3. Seminar or Colloquia

All Minors must complete one course involving advanced historical practice which will represent the culminating experience. Most students meet this requirement by enrolling in HIST 96, a small course (normally capped at 12) that allows students to work closely with a faculty member and to produce a final project that represents either original research in primary sources or (with colloquia) a historiographical contribution to the existing scholarly literature.

4. Field of Concentration

All Minors are encouraged to identify an area of concentration within the broad field of History. Establishing a critical mass of classes each related to a geographic, chronological or thematic concentration will enhance a student's ability to develop expertise and make connections. One of these must be a culminating

experience in the form of a HIST 96.

5. *Limits and Exclusions*, described under the Standard Major (5), also apply to the Minor.

II. Majors and the Minor open to the Classes of 2024 and after**A. Standard Major in History for the Class of 2024 and after Requirements:**

1. Geographical Distribution

For the purposes of the major requirements applicable to the class of 2024 and later, most courses fall into one of six areas: (1) Africa, (2) Asia, (3) Europe, (4) Latin America & the Caribbean, (5) Middle East, (6) United States. Your ten History courses must include one course from at least four of these six areas.

2. Chronological Distribution

Your ten History courses must include, at a minimum, two pre-modern courses and two modern courses.

3. Seminars and Colloquia

All majors in the department must complete two courses involving advanced historical practice, one of which will represent the culminating experience. Most students meet this requirement by enrolling in two 96s, which are small courses (normally capped at 12) that allow students to work closely with a faculty member and to produce a final project that represents either original research in primary sources or (with colloquia) a historiographical contribution to the existing scholarly literature. Those who complete the London FSP or the Honors' Seminar need to complete only one 96 on campus. For FSP students, their on campus 96 will be the culminating experience. For students in the Honors Program, the honors thesis will be the culminating experience. Careful advanced planning regarding enrollment in 96s is necessary for two reasons. First, the capped enrollment means that several 96s will have more students wishing to take the course than available space. In these cases, the department and the instructor will prioritize enrollment. Second, work at the advanced level is most rewarding when it builds upon previous exposure to a field. Students should work with their advisors to select a number of classes related to a geographic, chronological, or thematic area that will prepare them for their advanced coursework. Students should then consider which seminars can best build on this previous coursework.

4. Limits and Exclusions

- a. At least five History courses must be taken in residence at Dartmouth College, one of them being HIST 96.
- b. HIST 7 (First-Year Seminar) and History 99 (Honors Thesis) may not be counted toward the Standard Major.
- c. Students may not use more than two independent study courses (HIST 97) in satisfying the requirements of the Standard Major.
- d. Only those major courses passed with a letter grade may be counted in satisfaction of the major. Courses taken under the Non-Recording Option (NRO) may not be used toward completion of the major.
- e. Major GPA is figured on all History courses taken.
- f. The Department will consider approving transfer credits for History majors and non-majors only for History courses taken at institutions with which Dartmouth College has institutional exchange programs.
- g. Only transfer students may receive credit for courses taken at other colleges or universities prior to matriculation at Dartmouth.

**B. Modified Major in History for Class of 2024 and after
Requirements:**

1. Geographical Distribution

For the purposes of the major requirements applicable to the class of 2024 and later, most courses fall into one of six areas: (1) Africa, (2) Asia, (3) Europe (4) Latin America & the Caribbean, (5) Middle East, (6) United States. Your eight History courses must include one course from at least three of these six areas.

2. Chronological Distribution

Your eight History courses must include, at a minimum, two pre-modern courses and two modern courses.

3. Seminars or Colloquia

All modified majors in the department must complete at least one course (HIST 96) on campus involving advanced historical practice, which will represent the culminating experience. Careful advanced planning regarding enrollment in 96 is necessary for two reasons. First, the capped enrollment means that several 96s will have more students who wish to take the course than there are available spots. In these cases, the department and the instructor will prioritize enrollment. Second, work at the advanced level is most rewarding when it builds upon previous exposure to a field. Students should work with their advisors to select a number of classes related to a geographic, chronological, or thematic area that will prepare them for their advanced

coursework. Students should then consider which seminars can best build on this previous coursework.

4. Limits and Exclusions

- a. At least five History courses must be taken in residence at Dartmouth College, one of them being HIST 96.
- b. HIST 7 (First-Year Seminar), HIST 98 (Honors Seminar) and History 99 (Honors Thesis) may not be counted toward the modified major.
- c. Students may not use more than two independent study courses (HIST 97) in satisfying the requirements of the modified Major.
- d. Modified major GPA is figured on all History courses taken.
- e. Only those major courses passed with a letter grade may be counted in satisfaction of the major. Courses taken under the Non-Recording Option (NRO) may not be used toward completion of the modified major.
- f. The Department will consider approving transfer credits for History majors and non-majors only for History courses taken at institutions with which Dartmouth College has institutional exchange programs.
- g. Only transfer students may receive credit for courses taken at other colleges or universities prior to matriculation at Dartmouth.

**C. Honors Major in History for Class of 2024 and after
Requirements:**

Potentially eligible students should meet with their respective advisers to plan for the History Honors Major. History majors who have achieved an overall College grade point average of 3.0 and one of 3.5 in History (based on a minimum of five graded History courses) may apply for admission to the Honors Program through a written thesis proposal submitted in the spring term of their junior year. Others interested in the program may petition the Department for admission. Please consult the History Department's website at <https://history.dartmouth.edu/undergraduate/honors> for more information.

The Honors Program in History consists of the successful completion of the following requirements:

1. The minimum number of courses as specified in (1), (2), and (3) under the requirements for the Standard or Modified Majors.
2. In addition to, or as part of, the Standard Major or Modified Major, honors majors must complete the Honors Seminar (HIST 98) in the fall term of their senior year. HIST 98 may serve as one of the two required upper level seminars and colloquia for the Standard Major; it may not serve as the culminating

experience in (3) above.

3. Honors majors submit a thesis written in their senior year (HIST 99.01 in the Winter Term and HIST 99.02 in the Spring Term). HIST 99 may carry up to two credits toward the degree requirement, but receives no credit within the Honors Major.

4. Limits and Exclusions described under the Standard Major, also apply to the History Honors Program.

D. Minor in History for Class of 2024 and after Requirements:

1. Geographical Distribution

For the purposes of the major requirements applicable to the class of 2024 and later, most courses fall into one of six areas: (1) Africa, (2) Asia, (3) Europe (4) Latin America & the Caribbean, (5) Middle East, (6) United States. Your seven History courses must include one course from at least three of the six areas.

2. Chronological Distribution

Your seven History courses must include, at a minimum, two premodern courses and two modern courses.

3. Seminar or Colloquia

All Minors must complete one course involving advanced historical practice. Students meet this requirement by enrolling in HIST 96, a small course (normally capped at 12) that allows students to work closely with a faculty member and to produce a final project that represents either original research in primary sources or (with colloquia) a historiographical contribution to the existing scholarly literature. Work at the advanced level is most rewarding when it builds upon previous exposure to a field. Students should work with their advisors to select a seminar that builds on their previous History coursework.

4. Limits and Exclusions

a. At least four History courses must be taken in residence at Dartmouth College, one of them being HIST 96.

b. [HIST 7](#) (First-Year Seminar) and History 99 (Honors Thesis) may not be counted toward the minor.

c. Students may not use more than two independent study courses ([HIST 97](#)) in satisfying the requirements of the minor.

d. At most one course in the minor may be taken under the NRO.

e. Minor GPA is figured on all History courses taken.

f. The Department will consider approving transfer credits for History majors/minors and non-majors only for History courses taken at institutions with which Dartmouth College has institutional exchange programs.

g. Only transfer students may receive credit for courses taken at other colleges or universities prior to matriculation at Dartmouth.

HIST - History Courses

To view History requirements, [click here](#) (p. 484).

HIST 1 - Turning Points in American History

Students in this course will analyze and evaluate a very select number of "pivotal moments" over the past four centuries of American history. As an introduction to historical thinking and argumentation, the course will combine close scrutiny of documents from the past with an awareness of interpretive issues of contingency, determinism, and historical agency raised by leading contemporary historians.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 2 - #EverythingHasAHistory: Understanding America Today

This introductory course will explore the historical roots of current events in the United States. This course demonstrates how history is woven into the fabric of our everyday lives and why understanding history is important for understanding the present and navigating the future. We will focus on case studies—such as immigration and borders, computers and society, and race and whiteness—and expect the syllabus to evolve in real time depending on what is in the news during the quarter. This class serves as an introductory course for History majors, but is open to all students.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 3.01 - Europe in the Age of Wonder

This course examines Europe from the fall of the Roman Empire in the 5th century through religious warfare in the 17th century, when society, economics, politics, and culture were guided by a sense of wonder, which held people in awe of their rulers and the divine. Wonder did not imply passivity: from the disintegration of the Roman Empire to the emergence of early nation states, through crusades, the expansion of trade, religious reformation, and advances in scientific thinking. Europeans drew on their experiences to develop new concepts of representative government, individual liberty, and religious meaning.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 3.02 - Europe in the Age of Discovery

This course introduces students to an age of discovery during which Europeans encountered worlds, real and imagined, far beyond the realm of the familiar. Between the latter half of the 14th century through the late 18th century European society, economics, politics, ideas, and

culture were altered in ways that increasingly took on aspects of modernity. From the aftermath of a pandemic crisis through a period punctuated by religious reformations, civil wars, and revolutionary regicides, Europeans steadily adopted more modern attitudes to property, authority, community, work, family, the body, nature, and supernatural forces.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 3.03 - Europe in the Age of Violence

The last two centuries were an era of dramatic transformations and contradictions: while Europeans enjoyed unprecedented prosperity, technological advances, and social mobility, they also unleashed and experienced empire, terror, total war, foreign occupations, and mass murder. Throughout these 200 years, contrasting visions of a new society ushered in a range of different regimes—monarchical empires, liberal republics, murderous and racist dictatorships, Communist autocracies, and democratic welfare states—yet these visions also led to the emancipation of women, the development of a new consumer society, the creation of environmentalist movements and new counter-cultures, and the transformation of everyday lives.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 4.01 - The Crusades

The crusades, launched by European Christians who sought to secure military control over the Holy Land, led to a period of sustained and largely inimical contact between Christian and Muslim cultures. Covering the period from 1095-ca.1350, this course explores the cultural, religious, and ideological contexts of crusade history which shaped notions of religious violence, holy war, and ethnic cleansing, along with a long history of distrust between the peoples of Christian Europe (or the Christian West) and the Islamic Middle East.

Degree Requirement Attributes: DIST:INT or SOC;
WCult:CI

HIST 4.02 - Introduction to Early Islamic History

In the sixth and seventh centuries, various territories were brought into the fold of Islam, and in the following period, they experienced dramatic continuities and changes. This course will study these processes. Together, we will chart the late antique pre-Islamic world, the formation of Islam, the rise of centralized empires such as those of the Umayyads and the Abbasids, and the fragmentation of their central authority.

Cross-Listed as: MES 02.02

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 4.03 - Introduction to the Modern Middle East and North Africa

The diverse nations and peoples that make up the Middle East and North Africa are of major significance in our contemporary world, at the same time that they are often misunderstood or given only superficial (albeit spectacular) popular attention. This lecture course is designed to give students a nuanced introductory overview of the modern histories of this region. Students will read a variety of primary and secondary materials designed to familiarize them with the historical, cultural, and social processes that have affected and transformed the region in question, and will learn to put these regional histories in a global framework. The course begins with a brief summary of the early modern Islamicate “Gunpowder” Empires—Mughal, Safavid/Qajar, Ottoman—and then moves through several topics of significance: the era of European colonialism; the establishment of the nation state; competing discourses of nationalism; the emergence of Third Worldist and anti-colonial movements; the Israeli-Palestinian conflict; debates over the politics of gender; the effects of the Cold War; the processes of decolonization and the establishment of post-colonial states; the rise of revolutionary Islamism; oil politics and policies; globalization and neoliberalism; 9/11, terrorism, and wars in Iraq and Afghanistan; the Arab uprisings of 2010-2011; and the region’s uncertain present and future.

Cross-Listed as: MES 02.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 5.01 - Pre-Colonial African History

This course will examine the social and economic history of Africa to 1800. Several interrelated themes of social organization, the expansion of trade, rise of new social classes, the emergence and disintegration of various states and European intervention will be discussed. Through our readings, we will visit every major historical region of Africa (north, east, central, west and south) at least once during the semester to illuminate the various themes.

Cross-Listed as: AAAS 14

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 5.03 - The History of China since 1800

This survey course traces China's social, political, and cultural development from the relative peace and prosperity of the high Qing period, through the devastating wars and imperialist incursions of the nineteenth century, to the efforts, both vain and fruitful, to build an independent and powerful new nation. Open to all classes.

Cross-Listed as: ASCL 64.08

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 5.04 - Introduction to Korean Culture

This course provides an introduction to Korean culture and history, examining Korea's visual and textual expressions from the pre-modern age to the twentieth century. What are the origins of Korean national and cultural identities? How have Korean claims of cultural distinctiveness been manifested and modified over time? Tracing answers to these questions simultaneously helps us to consider how and why Korea has entered America's consciousness. As Korea matters to the US not simply as a fact but as a project, this course avoids portraying Korea through any generalized statements or uncritical categories. Rather, students are encouraged to explore novel perspectives on Korea and thereby unravel their own prejudices and agendas. No prior acquaintance with the Korean language is required.

Cross-Listed as: ASCL 10.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 5.05 - The Emergence of Modern Japan

A survey of Japanese history from the mid-nineteenth century to the present. Topics to be covered include the building of a modern state and the growth of political opposition, industrialization and its social consequences, the rise and fall of the Japanese colonial empire, and the postwar economic 'miracle.'

Cross-Listed as: ASCL 64.11

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 5.08 - Africa and the World

This course focuses on links between Africa and other parts of the world, in particular Europe and Asia. Readings, lectures, and discussions will address travel and migration, economics and trade, identity formation, empire, and cultural production. Rather than viewing Africa as separate from global processes, the course will address historical phenomena across oceans, deserts, cultures, and languages to demonstrate both the diversity of experiences and the long-term global connections among disparate parts of the world.

Cross-Listed as: AAAS 19

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 5.11 - Gandhi, Twentieth Century India and the World

This course explores the history of modern India through the figure of Mahatma Gandhi. After exploring early developments in Gandhi's life and his philosophy of non-violence, we will examine the role of Gandhi and of his image in major political developments in India. We will also take up many key issues relating to Gandhian thought, including Hindu-Muslim relations, caste, gender and

sexuality, and social equality. Finally, we will discuss Gandhi's legacy in India and globally.

Cross-Listed as: ASCL 54.11

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 5.13 - Modern Latin America

This course presents the histories of Latin American and Caribbean societies, peoples, and nations from the onset of the Haitian Revolution in 1791 to the present. By placing Haiti at the center of the Age of Revolutions, this course also locates the Caribbean region within the Latin American context. We will study the region's nation-building processes using an intersectional lens to explore how different people interpreted them through their own gendered, classed, and racialized identities.

Cross-Listed as: LACS 01.10

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 5.14 - Indigeneity and Colonialism in Latin America

Rather than following a narrative across three centuries, this course will use a thematic approach to explore how European empires were conceived, built, and challenged in the Americas. We will discuss how Europeans conceptualized their power, what they hoped they might get out of it, and how they sought to manage people and trade once they had established flourishing businesses and societies. Were their motives economic, religious, or political? Were they responding primarily to events in Europe, or were colonists and officials merely adapting pragmatically to the new environments and people they encountered? Crucially, we will also consider the imposition of empire from the perspectives of the ordinary people who negotiated it on the ground – Native Americans, European colonists, sailors, merchants, and the enslaved. How did they exploit or reject the grander schemes of their aspiring rulers? Finally, we will consider what legacies this complex imperial past has left for contemporary societies across the hemisphere. This course is not open to students who received credit for HIST 9.01 prior to Fall 2021.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 7 - First-Year Seminars in History

Offered: Spring, Winter.

HIST 8 - Body Parts, Body Wholes: An Introduction to the Comparative History of Medicine

This course examines the possibilities and problems of comparing medicine across time and region. We will begin by considering divergent conceptions of the body in Chinese and Greek antiquity before moving on to the

transformation of the healing traditions and the advance of modern biomedicine since 1800. Instead of imposing "holism" or "reductionism" on medical traditions, this course encourages students to view past expressions of medicine as a means of analyzing our own self here and now.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 8.02 - The Making of the Modern World Economy

This course introduces students to major economic developments of the last two centuries in global perspective. It addresses themes such as the Industrial Revolution and the "Great Divergence;" the political economy of imperialism; the economics of war; the transformation of the world financial system; the economics of development; and the roots of the crisis of 2007/8. Students can expect to acquire a historically founded understanding of the global economy of today.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 8.03 - Happiness: A History

Instructor: McMahan

The course aims to introduce students to a range of perspectives on human happiness, individual and collective, past and present. The course will explore happiness in different religious and wisdom traditions, while charting its emergence since the 18th century as a basic human expectation and even entitlement. The course draws on a wide range of disciplines, including history, philosophy, religion, literary studies, contemporary psychology, economics, and social science.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 8.04 - Queer History in America

How have historical processes produced distinct queer sexual practices and identities over time? This course engages 300 years of a history that often evaded the historical record or was deliberately purged from it and asks how more traditional topics of U.S. historical inquiry—immigration, citizenship, economic organization, intellectual and artistic production, racialization, formal politics, law, religious practice—can yield new insights when queer history is included as a legitimate dimension of analysis.

Cross-Listed as: WGSS 26.03

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 8.05 - The International History of Human Rights

In this course, students will study the history of human rights in the modern era, tracing the idea of the "Rights of

Man" from the time of the Enlightenment; the uneasy coexistence of democracy and slavery; 19th century humanitarian movements, including abolitionism; the internationalization of humanitarianism and the Red Cross; the socialist challenge to "liberal" human rights; and the development of the international human rights movement per se since World War II.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 8.06 - Food History

We will look at issues of food production and consumption, and how our relationship to food contributes to the political and social structures that we live with. Our approach will be historical and pay special attention to the ways in which our production and consumption of food has been shaped by the movement of people over the last century. The readings explore how food creates ways for people to form bonds of belonging while also creating bonds of control and regimes of inequality.

Cross-Listed as: LACS 40.01 LATS 008

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 8.07 - The History of Equality

This course will examine key shifts in the understanding and deployment of notions of "equality," including moral, legal, political, social, racial, and gender equality. Primarily a course of intellectual history with a focus on European and American sources and texts, it will nevertheless encourage the consideration of non-western perspectives and will draw on relevant literature in other disciplines, including anthropology, psychology, and economics.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 8.08 - Horse History

The use of the horse in war and transport coincides with the emergence of written history, and the end of the use of the horse in war and transport coincides with the transition to the age of nuclear weapons and electronic communications. In between, the horse has been essential to global processes of agricultural and industrial development, urbanization, exploration and conquest. In many societies horses have also been associated with the fundamentals of social stratification and gender dichotomies. For good reason, the horse as a representation has also taken on profound cultural and religious roles.

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 8.09 - Plague and Plagues in History

As we know from recent years, plague shapes human experience and thus reshapes history. Even before the advent of COVID-19, infectious disease was the number

one cause of death in the world. In the last several years, we have all experienced just *how* epidemics and pandemics are a force in society, religion, politics, the economy, and culture. This course takes as its premise that epidemics and plagues are one of the central forces of human history. With a focus on the Western narrative, but with gestures to global contexts and comparisons, this course will examine the role of plague in shaping cultural, intellectual, religious, political, and public-health history, from biblical times to the present. The outbreak of bubonic plague (“the Black Death”) in the fourteenth century will provide a central anchor to the issues, with comparisons to the Justinianic plague (6th century), tuberculosis, yellow fever, the Spanish-flu, HIV-AIDS (etc.), and of course, COVID-19. In this course, we will read accounts of history (Thucydides on plague in 5th century BC Athens; Daniel Defoe on 1655), accounts of literature (Boccaccio, *Decameron*, Susan Sontag on the language of AIDS), and modern scholarship written in the wake of our own plague experience as part of our effort to understand the human reaction and interpretation to plague.

Degree Requirement Attributes: Dist:INT or SOC

HIST 8.10 - World War II: Ideology, Empire, Race

Instructor: Greenberg

This introductory-level course explores the origins, nature, and legacies of the most dramatic war in modern times. We will focus on how this monumental conflict was shaped by radical and revolutionary ideologies, imperialist visions, and conceptions of race. Drawing on a variety of sources, students will also learn about the war’s impact on policymakers, soldiers, and civilians on the home fronts. Open to all classes. Students who have enrolled in HIST 53 previously are not eligible to take this course.

Degree Requirement Attributes: Dist:INT or SOC

HIST 9 - History Workshop: Histories of Inequalities

This class sequence explores the historical development, consequences, and attempts to redress various forms of inequality, particularly as related to race, ethnicity, gender, and/or sexuality. These classes examine diverse arrays of historical and scholarly voices to rethink existing historical narratives and explore the process of creating historical knowledge. These discussion-based classes emphasize active learning and engagement, student reflection, and the development of critical thinking, reading, and writing skills.

HIST 9.03 - The Global Thirties: Economics and Politics

This course provides an overview of the global history of the Great Depression of the 1930s. The course addresses themes such as the international economic order of the 1920s, the economic causes of the Depression, the political responses to the crisis, the rise of economic planning, and

the legacy of the 1930s in post-war development states and economic thinking. Students will understand why the Depression influences economic theory and policymaking to this day.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 9.04 - The Intellectual History of Capitalism

Since its inception capitalism has not only been an economic endeavor but also an intellectual challenge. Critics and boosters of capitalism have debated questions such as these: Is capitalism natural? Is capitalism equitable, or should it be? Does capitalism require a specific type of society and politics? This reading-intensive course introduces students to key texts about capitalism since the mid-19th century. Authors covered include Marx, Mill, Veblen, Keynes, Hayek, Polyani, Friedman, Foucault, and Piketty.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 9.05 - Crossing the Pacific: Empire, Labor, Migration

Instructor: J. Miller

This course explores how trans-Pacific interactions shaped both the United States and the Pacific region from nineteenth-century gold rushes to the U.S. war in Vietnam. In particular, it examines the relationship between migration, race, and empire, with a focus on how U.S. colonialism and imperialism depended on migration and labor of Asian and Pacific peoples. This discussion-based course uses a wide array of historical sources, including speeches, laws, photographs, oral histories, and maps.

Cross-Listed as: ASCL 70.28

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

HIST 9.06 - Black Ethnicities in the United States

This course examines the historical processes of identity formation among varied groups of African-descended people in the United States, problematizing the concept of “African-American” by interrogating the history of the Gullah-Geechee, the Black Seminoles, the Freedmen (Choctaw, Cherokee, and Chickasaw), and the Creoles of the Gulf Coast (Louisiana, Mississippi, and Alabama). In particular, students will examine the ethnogenesis of these groups and, where appropriate, the phenomenon of emerging linguistic distinctiveness, and the historical relationship between linguistic minority groups and Anglo-American hegemony.

Cross-Listed as: AAAS 21.15

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 9.07 - Sex and Gender in Modern Europe

Sex and gender have been central to the making of modern Europe. Over the last 250 years, Europeans constantly debated fundamental questions such as the “appropriate” roles of men and women; the definition of “healthy” and “deviant” sexualities; and the relationship between biology and social norms. By exploring a wide variety of historical sources, including essays, etiquette books, speeches, and memoirs, we will examine how these discussions profoundly shaped European thinking about politics, economics, imperialism, immigration, and everyday life.

Cross-Listed as: WGSS 66.21

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 9.08 - Settler Colonialism: Theory, History, Present

Instructor: Musselwhite

“Settler Colonialism” is a term coined by scholars to describe a particular form of colonial expansion driven by mass settler migration and predicated upon the elimination and assimilation, rather than the subjugation, of Indigenous peoples. This course is designed to introduce you to the scholarly theory of “settler colonialism” and its critics, and then to consider its applicability to particular historical case studies and the contemporary societies that those cases have birthed.

Cross-Listed as: NAIS 009

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 9.09 - Race, Gender, & Revolution in the Atlantic World

This course examines how the events and intellectual production of the Haitian Revolution and decolonization struggles in the Spanish Empire shook the Atlantic World and forced a reconsideration of political categories such as liberty, tyranny, citizenship, rights, and the relationship of race and gender to all of these concepts. The Enlightenment influenced Latin American and Caribbean revolutionaries, but these rebel intellectuals in turn challenged some of the Enlightenment’s fundamental tenets, ushering in new polities with radical notions of citizenship and belonging. Not open to students who have received credit for HIST 41.02.

Cross-Listed as: AAAS 62.75 LACS 25.05 WGSS 025

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 10.02 - Archival Research and the Production of History

The target constituency of this summer-term course are those students admitted to the history department’s London-based fall-term foreign study program who are engaged in framing archive-based research projects. The course is a mix of theory and practice. It thus combines

instruction in the theory and methods of history with a hands-on practicum revolving around each student’s anticipated research project. Some classes are held in Dartmouth’s Rauner Special Collections Library. The course concludes in a workshop format intended to enhance students’ prospects for executing successful projects in the London-based fall course, HIST 96.34. Students engaged in developing an archive-based historical project for something other than the London FSP who wish to take the course should contact the instructor for permission to enroll.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 10.03 - The Dartmouth Vietnam Project: Learning Oral History in a Digital Age

Instructor: E. Miller

This course explores the theory and practice of oral history. Oral history interviews are collaborations between interviewers and narrators (interviewees). Such interviews are used to explore both the lives of individuals and the histories of communities. In some cases, oral history provides a way to access voices and perspectives that are marginalized or absent from the materials contained in conventional archives. The use of oral history interviews as primary sources raises complex questions about narrative, subjectivity, memory, and historical truth. In this course, students will be trained to conduct an interview for the Dartmouth Vietnam Project, an ongoing oral history project that records testimony from community members about their memories of the Vietnam War and its impact on their lives.

Degree Requirement Attributes: Dist:INT or SOC

HIST 10.04 - Dartmouth Black Lives

Instructor: Rabig

This course equips students with research methods, critical frameworks, and interview skills to document the lives of Black alumni and contribute to an archive of oral sources on Black history at Dartmouth. Students will be immersed in the theory and practice of oral history, a field in which historians conduct collaborative interviews with narrators to create new records of past events.

Cross-Listed as: AAAS 20.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 10.05 - Latin Paleography

Instructor: Gaposchkin

Working with manuscripts is one of the most exciting experiences in research on the Pre-Modern era, a direct link to the past, its people and its ideas. But it can be daunting to approach a material literary artefact. This course is an introduction to the basic methods and skills of Latin paleography, from the Roman scripts of Late

Antiquity to the Humanist scripts of the Renaissance. It is designed to introduce students to the skills and knowledge needed to work with Latin-language manuscript material produced (mainly) before the advent of the printing press. It will also examine how technologies of writing and communication changed as a product of political, religious, and social change. The course will cover paleography, codicology, and diplomatics. The course will meet in Rauner Library (or, occasionally in the Book Arts Studio). Students will work closely with manuscripts in the College collections, supplemented with digital images of manuscripts held in other libraries around the world. As a practicum, the course is a hands-on introduction to the work of the paleographer, and students will learn to assess, transcribe, translate, and interpret manuscripts in their historical context as pieces of historical evidence.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 10.06 - Race and Archival Silences

This course will cover the methods scholars use to uncover narratives that seem to lie outside of the traditional archive, broadly defined. We will look at the history and foundations of archival practice, with a specific focus on the rise of archives in the United States, and the effect that race and this history have had on the ways historical narratives are constructed. Does recent scholarly interest in such silences actually distort the records that do exist for marginalized people? We will analyze strategies for reading "silences" in the archival record, such as critical fabulation, reading "against the grain," and "presencing." We will also analyze the critical debate around the concept of archival "silences."

Cross-Listed as: AAAS 20.02

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 11 - The Age of the American Revolution

Instructor: Musselwhite

This course begins with an examination of relations between England and its American Colonies in the middle of the eighteenth century. It deals with the collapse of British authority in America, emphasizing the social and intellectual sources of rebellion. Treatment of the war years focuses more on the problem of political and economic adjustment than on military history. The final topic covered is the adoption of a federal Constitution.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 12 - The Civil War Era: From Rebellion to Revolution

Instructor: Bonner

History 12 explores the most revolutionary and consequential period of U.S. History. It does so by pairing a close and critical reading of primary texts with a survey of leading scholarly interpretations. Across the term, we

will also consider how the legacy of the American Civil War still looms large in contemporary American life. The 1860s and 1870s provides an indispensable framework for urgent disputes about the authority and role of government and the persistent inequities of anti-Black racism. Students can expect the course to equip them to track such discussions; a term of sustained historical inquiry will, indeed, allow them to make their own meaningful contributions.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 13 - Planters, Pirates, and Puritans: 17th-Century English America

Instructor: Musselwhite

This course explores the many different forms of English colonialism in America. It considers their differences and similarities. It probes the ways they were shaped by shifting ideas back in Europe, the requirements of different American environments, and the influence of indigenous and enslaved people. It grapples with English America not as a precursor to the United States, but as a place where new ideas were tested and traditional hierarchies were broken down and reformed.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 13.02 - Early America and African American History: From the Colonial Era to the Gold Rush

This course examines the history of African Americans in early America, from the colonial period to the Gold Rush. This class will explore the formation of both free and enslaved black communities in the early northeastern states and the expansion of slavery westward in the South and later in the American West. By analyzing primary and secondary sources, students will gain a comprehensive understanding of the historical development of African Americans' ideas and practices around major themes in the field such as labor, economics, politics, and kinship.

Cross-Listed as: AAAS 20.07

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 14 - The Invasion of America: American Indian History Pre-Contact to 1800

Instructor: Calloway

This course surveys Native American history from pre-contact times to 1800. It offers a chronological overview of major trends and developments, supplemented by case studies and readings that illustrate key issues and events. The overall context of the course is the conflict generated by the colonial agendas of various European nations and the early republic, but the primary focus will be the historical experiences of the diverse Indian peoples of North America in the wake of European invasion and their struggles to survive in the new world that invasion and colonialism created.

Cross-Listed as: NAIS 014

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 15 - American Indians and American Expansion: 1800 to 1924

Instructor: Calloway

This course surveys Native American history from c. 1800 to the Indian Citizenship Act in 1924. The overall context of the course is the expansion of the U.S. and the Indian policies adopted by the U.S. government, but the primary focus is the historical experience of Indian peoples and their struggles to retain their cultures and autonomy while adapting to great changes in the conditions of their lives. Open to all classes.

Cross-Listed as: NAIS 015

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 16.02 - Plantations and Slavery in the Americas

Instructor: Musselwhite

The plantation evolved in the Americas as a place for European exploitation of colonial environments and enslaved laborers. It played a foundational role in shaping settler colonialism, racial slavery, and capitalism across the Americas and it has also framed debates around the legacies of slavery and colonial appropriation up to the present. This course explores the evolution of the plantation as an institution and an ideology of racialized exploitation, but also traces enslaved peoples' resistance to the plantation and their construction of rival geographies and institutions.

Cross-Listed as: AAAS 60.01

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 16.03 - Race, Slavery and the Family

Ideas of family and practices of slavery have stood as enduring concepts within human communities across time and geography, shaping every facet of social organization. But to what extent were they intertwined? How do region, gender, religion, race and socioeconomic status affect the ways in which both slavery and family were constructed and understood? Do these conceptions change over time? Together, we will explore various notions of slavery and the family as well as diverse historical disciplines that wrestle with the varied legacies of these ideas. The events, ideas, and themes that shape the study of slavery as it relates to the construction of the family are controversial and challenging. They wrought seismic change in the past and still shape modern-day political, social, and even religious debates. This course is not intended to tell you what to think about the interaction between slavery and the family but equip you with the tools to explore and come to your own informed conclusions.

Cross-Listed as: AAAS 20.06

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 17 - Black America since the Civil War

This course is a continuation of HIST 16. Among the topics to be discussed are Black Reconstruction, segregation and disfranchisement, migration, nationalism, Blacks and the New Deal, the impact of war on Blacks, and the 1960s. Open to all classes.

Cross-Listed as: AAAS 13

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 18 - The History of Voting in America

Instructor: Butler

This course surveys the contested history of the ballot in the United States, from the nation's founding to our own day. Topics will include the multiple struggles for voting rights at the state and federal level; key federal interventions (via amendments and Supreme Court decisions); and the variable ways Americans have "gone to the polls" in different eras and locations. The class will be run as a hybrid lecture/discussion course.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 19 - United States Political History in the Twentieth Century

This course defines politics broadly to include grass roots political activism, and dissident political philosophy, as well as governmental action and change. The course will trace the evolving relationship between the federal government and American citizens from the end of Reconstruction through 1984. Topics will include Black political participation in Reconstruction; immigrant, labor, and woman suffrage activism; the post-World War I Red Scare and the decline of Progressivism; domestic turbulence and the New Deal state; the Cold War and the decline of New Deal liberalism; national security agencies and covert action; the Civil Rights movement and the Great Society; Vietnam and the youth rebellion of the 1960s; Watergate and the unveiling of the imperial presidency; the rise of the New Right, the revival of the national security state, and the dismantling of the social welfare state.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 20 - American Thought and Culture to 1865

Instructor: Butler

This course examines major ideas, figures, and movements from the establishment of the colonies of British America to the nation's fragmentation in the Civil War. There is an emphasis upon Puritanism, Enlightenment, and Romanticism as dominant patterns of thought. The course also explores antebellum reform as a case study. Topics to be considered include the migration of ideas from Europe and their subsequent modification in America; the conflict

between ideals and actualities in social, political, and cultural life; and the conceptual significance of equality and difference in the construction of American subjectivities. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 21 - Modern American Thought and Culture

Instructor: Butler

This course examines leading thinkers, writers, artists, and reformers as a way of understanding American intellectual and cultural history. Some of the issues explored include: the impact of Darwinism; social science and the modern university; responses to industrialization; the tension between self and society; debates over democracy; the challenge of civil rights and feminism; and recent debates over multiculturalism. Almost of all the reading will be drawn from primary sources (including material by Mark Twain, Charlotte Perkins Gilman, William James, Oliver Wendell Holmes, Jr., W.E.B. DuBois, John Dewey; Langston Hughes; Lionel Trilling; Martin Luther King, Jr.; and Malcolm X). Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 22 - Civil Rights in the United States in the 20th Century

This course examines movements for civil rights, broadly defined, in the 20th-century US. Students explore concepts of American citizenship, considering struggles for political inclusion and efforts to participate fully in the nation's social and cultural life. We focus on women's and gay rights and the struggles of African Americans, Latinos, Native Americans and Asians, examining how these and other groups have envisioned and pursued full American citizenship.

Cross-Listed as: AAAS 80.06

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 23 - American History since 1980

Instructor: Rabig

This course examines American history during the era of rapid globalization. It focuses on the continued ideological power of the American Dream and the diminishing opportunity to actually live that Dream; conflicts between groups struggling to achieve genuine equality for all men and women and other groups determined to maintain traditional hierarchies based on class, race, and gender; and the contested meaning of the actions of the world's sole military superpower. Open to sophomores, juniors, and seniors.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 24 - The Cold War and American Life

This course will examine the diverse ways that the Cold War changed how Americans lived, understood, and experienced their lives at home and abroad from 1945 – 1968. It will explore issues like the rise of the national security state; the impact of the Cold War on thinking about race, gender and sexuality; Cold War consumerism; nuclear cultures; the Cold War and higher education; conflicts in Korea, Cuba, and Vietnam; and new concepts of American internationalism. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 25.01 - The United States and the World from the Colonial Era to 1865

Instructor: Bonner

This course examines the colonial origins of the United States and the ways in which Americans perpetuated, challenged and transformed empire in their dealings with non-American nations and peoples between the American Revolution and the Civil War. Key topics include U.S. relations with Indian nations, the Mexican-American War, the pursuit of informal empire in East Asia and the Pacific, and the colonization of Liberia.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 25.02 - The United States and the World, 1865-1945

Instructor: J. Miller

This course explores America's interactions with the world and its emergence as a global imperial power in the decades after the end of the U.S. Civil War. Key topics include the conquest of the Great Plains, the War of 1898, U.S. colonialism in the Philippines, Wilsonianism and the U.S. embrace of "total war" during World War II.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 25.03 - U.S. Empire Since 1945

Instructor: E. Miller and J. Miller

Is the United States an empire? Although most Americans deny that it is, many historians see empire as a defining feature of U.S. interactions with the world. This course explores diverse analyses of U.S. empire in the history of American foreign relations from 1945 to the present. Specific topics include U.S. wars in Korea, Vietnam, Afghanistan, and Iraq; the U.S. global network of military bases; security alliances; and the promotion of "development" around the world.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 26 - The Vietnam War

Instructor: E. Miller

This course examines the conflict which Americans call "The Vietnam War" as a major event in the 20th century histories of both the United States and Vietnam. In addition to exploring the key decisions made by U.S. and Vietnamese leaders, students will also learn about the experiences of ordinary soldiers and civilians. This course incorporates multiple American and Vietnamese sources and perspectives, and also investigates multiple explanations of the war's origins and outcome. Open to all classes.

Cross-Listed as: ASCL 54.09

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

HIST 27 - Gender and Power in American History from the Colonial Period to the Civil War

Instructor: Butler

This course examines the history of men and women from the period of colonial settlement to the achievement of woman's suffrage. We will explore the construction of gender particularly as it relates to social, political, economic, and cultural power. Topics will include: the role of gender in political thought and practice, the intersection of gender with categories of class and race; gender in the debate over slavery and the Civil War; and the rise and evolution of the woman's rights movement. Open to sophomores, juniors and seniors.

Cross-Listed as: WGSS 23.01

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 28 - American Women in the Twentieth Century

Instructor: Orleck

This course is a multi-cultural multi-media history of American women from the Civil War to the present. We will discuss race and class tensions in the woman suffrage movement; women, labor and radicalism from the 1910s through the 1940s; civil rights, welfare rights, the rebirth of feminism in the 1960s and 1970s, and backlash politics from the 1950s to the 1980s. Open to all classes.

Cross-Listed as: WGSS 23.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 29 - Women and American Radicalism Left and Right

Instructor: Orleck

This course will trace the involvement of U.S. women in radical political movements from the mid-nineteenth century to the present including: Abolitionism; Anti-lynching; Socialist Trade Unionism; the Ku Klux Klan; the

Communist Party; the National Welfare Rights Organization; the Civil Rights Movement; the New Left; the New Right; the direct-action wing of the anti-abortion movement; Earth First; and the neo-Nazi American Front. It will also examine the relationship between feminist ideologies and non-gender-specific radical political ideologies centered on race, class, and other social identifiers.

Cross-Listed as: WGSS 26.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 30 - Black Sports: Theorizing Blackness in Contemporary Athletics Culture

This course examines Black athletes' cultural, historical, and political impact on American society. We will pay particular attention to how Black athletes of all genders respond to racial injustice and the call of protest, hyper-sexualization and the politics of desire, exploitation and issues of image likeness, and public scandal and celebrity. Through theories in Black Studies and Gender and Sexuality Studies, we will consider how athletes navigate their Blackness, giftedness, and love of the game.

Cross-Listed as: AAAS 023

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 31.01 - Latina/o Social Movements

People of Latin American descent (aka "Latina/os," or the gender neutral, more inclusive "Latinx") have been at the forefront of a variety of social movements over the last century. In some cases, they have insinuated themselves into existing movements, while in others, they have built movements that uniquely speak to their concerns as soldiers and anti-war activists, undocumented residents, racial minorities, farm workers and/or perceived impediments to economic progress. Always, they have asserted their rights to protest. Frequently, they have taken these actions regardless of their citizenship status. This class charts the growth of these movements and anticipates the future of social protest and Latinx politics in the United States.

Cross-Listed as: LACS 20.01 LATS 020

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 31.02 - Migrant Nation: Immigration and Racialization in the Making of the United States

Current public discussions of immigration are deeply rooted in centuries-long conversations about who is allowed into the country and what it means to be an American. Drawing explicitly on the collective work of the "hashtag syllabus" movement, this course seeks to contextualize current debates over immigration reform, integration, and citizenship by considering migration from multiple perspectives—not just Ellis Island, but the Rio

Bravo, Angel Island, Congo Square, and the Spirit Lake Dakota Indian Reservation.

Cross-Listed as: LACS 25.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 31.03 - Migrant Los Angeles

This course will focus on the history, culture and literature of Los Angeles, California, the second largest city in the United States. We will briefly examine its founding in the eighteenth century as a Northwest outpost of the Spanish empire in the Americas, and its origins and evolution as a Mexican pueblo and U.S. city in the nineteenth century. The majority of our attention will be on the historical and contemporary struggles of people who have migrated to greater Los Angeles to create the unique, multiethnic, multiracial metropolis.

Cross-Listed as: LACS 20.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 31.04 - Histories of Mexican America

From the northern borderlands of colonial New Spain to present-day rural Vermont, this course charts the long, intertwined histories of Mexican Americans and Mexican immigrants in the United States. We will pay specific attention to various peoples who have historically – whether proudly, ambiguously, or reluctantly – been part of Mexican American and Mexican immigrant communities. An emphasis will be placed on interdisciplinary historical approaches that foreground the experiences of everyday people.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 32 - The Life, Death and Rebirth of Great American Cities

Instructor: Orleck

This course examines key moments in the histories of four diverse American cities: New York, New Orleans, Las Vegas and Los Angeles: two old and two new cities, two cities that grew organically over centuries, with deep resources and deep problems, and two glitzy cities that grew too rapidly, booming and crashing over the half century after World War II. Students will research, write and present urban history projects on a city of their choosing.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 33 - Asian American History

This course provides an introductory overview of Asian immigration to the United States from the 18th to 21st centuries. We address the following questions: Why did Asians move to the United States? How did they change American history and culture? And how has the United States responded to their presence? Topics include the

formation of early ethnic enclaves; anti-Asian immigration legislature; Western imperialism in Asia; national identity, incarceration, surveillance, and religion; and Asian American activism.

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 33.01 - Walmart to Wall Street: Excavating American Capitalism since 1970

This course takes on fundamental transformations in economic life from the end of the Bretton Woods system to the crisis of 2008. Rather than a chronological survey, it is an historical excavation of three key trends in the period: technological innovation; globalization; and financialization. Readings and lectures will contextualize each of these developments in the specific history of the post-Bretton Woods United States, and then trace their longer intellectual, political, and social origins.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 33.02 - American Anthropocene: Climate and Power in U.S. History

Instructor: Moreton

The climate crisis is no longer a prediction about the future, but an experience of the present. It also has a past, and in order to imagine what will come next we need to understand how we got here. While primarily concerned with the U.S. in the twentieth and twenty-first centuries—the era of petro-intensive growth in the country that consumes 30% of the earth's resources for 5% of its population—our inquiry will require explicit reflection on the longer historical roots of energy use and the global framework of resource extraction.

Cross-Listed as: GEOG 40.05

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 34 - Building America: An Architectural and Social History

This course draws upon recent scholarship in anthropology, archaeology, material culture, social history and architectural history in its review of five centuries of American architecture. Course lectures not only emphasize America's principal architects and their designs, but also summarize the social and cultural forces that shaped the country's built landscape.

Cross-Listed as: ARTH 47.01

Degree Requirement Attributes: Dist:ART; WCult:W

HIST 36 - Health Care in American Society: History and Current Issues

Instructor: Koop

This course is designed to provide students with a basic understanding of critical issues in health care through the

study of the historical development of the United States health care system. The course illuminates the influence of historical forces and cultural factors on the delivery of health care and on the discourse about health care reform in American history. By studying the components and relationships within the American health care system, students are enabled to acquire an understanding of the relationship between American history and the health care system, and also enabled to obtain a working contextual knowledge of the current problems of the American health care system and their proposed solutions. Each topic is presented from an historical perspective. Through an historical investigation of health, disease, and medicine students should be able to understand and discuss the changing organization of health care delivery in American history, the changing methods of financing of health care, the distinctive role of technology in health care, primary ethical issues in health care, comparative features of health care systems of other cultures, the historical changes in public health precepts, images of health care in popular culture, and the process of health care reform in American history. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 36.03 - Histories of the Carceral State

This course examines the construction of and resistance to the carceral state across United States history. How race and the law have shaped each other over time is the central question of the course, one we will parse alongside a focus on gender, sexuality, immigration, disability, and political economy. We will approach criminalization as a political, economic, and cultural process that reflects and reproduces dominant ideologies for those behind bars and those on the outside.

Cross-Listed as: GEOG 70.02 WGSS 66.36

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 37 - The Black Radical Tradition in America

This course introduces major currents in the history of black radical thought, with a particular focus on the U.S. after emancipation. This class encourages students to define and evaluate radicalism in the shifting contexts of various liberation struggles. By exploring dissenting visions of social organization and alternative definitions of citizenship and freedom as expressed through nonviolence, armed rebellion, black nationalism, Pan Africanism, socialism, communism, anticolonialism, feminism, queer theory and integrationism, students will confront the meaning of the intersection of race, gender, class and sexuality in social movements.

Cross-Listed as: AAAS 024

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 38.01 - First Americans and the First President: The Indian World of George Washington

George Washington's life intersected constantly with Native America. He surveyed and speculated in Indian lands. He fought Indians in three wars, made Indian treaties, and built a nation on Indian land. His conduct of Indian affairs shaped the authority of the president in war and diplomacy. By restoring Indians to the life of the first president, this class will restore their role in shaping the new nation and counter their erasure from America's historical memory.

Cross-Listed as: NAIS 55

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 38.02 - Lewis and Clark in Indian Country

In 1804-06, Meriwether Lewis and William Clark completed a remarkable odyssey, from St. Louis to the Pacific, and back. They wrote more than one million words, describing the country, and paid particular attention to the Indian nations they met. This class will use the abridged edition of the journals to examine the context, experiences, and repercussions of an expedition that initiated journeys of discovery for both the young United States and the Native peoples of the American West.

Cross-Listed as: NAIS 038

Degree Requirement Attributes: Dist:SOC

HIST 38.03 - Pan-Indianism in American History

This course provides the history of pan-Indian movements in Indigenous North America from 1680 to the present. In the current era of self-determination, tribal sovereignty, and Indigenous nationhood, we perhaps sometimes forget that pan-Indian movements have played a significant part in the history and experiences of Native peoples of North America. We will explore the many ways in which Native peoples have aligned themselves with other tribal nations religious, military, educational, economic, and environmental movements, in the process cutting across linguistic, cultural, religious, and national lines. Indigenous North Americans have deployed pan-Indianism as a strategy to confront both international such as colonialism and the struggles for control of contested Borderlands, and more regional and localized forces. Taken in its entirety, understanding pan-Indianism is essential to understanding the history of Native North America.

Cross-Listed as: NAIS 051

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 38.04 - Indigenous North American Borderlands

This course focuses on the histories of Indigenous peoples in the borderlands of North America across time in both geographic and thematic contexts. Viewing Native America as an incredibly complex series of borderlands is

a useful interpretive model for better understanding the history of Native peoples. Lectures, readings, and class discussion will focus on elements such as cultural contact, conquest and colonialism, missionization, citizenship, gender, and nation. While exploring these various themes, we will touch on some familiar territory such as frontiers and middle grounds, but we will also question our own personal, and often, region-based expertise in order to unpack a more nuanced view of Indigenous borderlands and their significance.

Cross-Listed as: NAIS 56

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 39 - Twentieth Century Native American History

Serving as the final course in a three-quarter survey of Native American history, this class reviews Native history from the late 19th century to the present, focusing on the interplay between large institutions and structures – such as federal and state governments, or the US legal system – and the lived, local experience of tribal communities. The major themes followed throughout the course of the term include: historical narrative (and what it justifies or explains), place and space (how local and national entities define territories), and indigeneity (indigenous identity).

Cross-Listed as: NAIS 016

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 40.01 - The Global Thirties: Economics and Politics

This course provides an overview of the global history of the Great Depression of the 1930s. The course addresses themes such as the international economic order of the 1920s, the economic causes of the Depression, the political responses to the crisis, the rise of economic planning, and the legacy of the 1930s in post-war development states and economic thinking. Students will understand why the Depression influences economic theory and policymaking to this day.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 40.02 - The Intellectual History of Capitalism

Since its inception capitalism has not only been an economic endeavor but also an intellectual challenge. Critics and boosters of capitalism have debated questions such as these: Is capitalism natural? Is capitalism equitable, or should it be? Does capitalism require a specific type of society and politics? This reading-intensive course introduces students to key texts about capitalism since the mid-19th century. Authors covered include Marx, Mill, Veblen, Keynes, Hayek, Polyani, Friedman, Foucault, and Piketty.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 41.01 - Empires and Nations in Modern European History

The history of Europe has generally been told through the stories of its constituent nations. Yet most Europeans over the past three centuries lived in empires. This course will place empire at the center of the history of modern Europe, focusing both on land empires within Europe and the overseas empire, and view the nation as a challenger whose ultimate victory was – and is – far from certain. Beginning with the emergence of modern national ideas in the late 18th century, we will trace the complex relationship between European nation-states and empires until the present day. Topics covered will include the consolidation of European nation-states in the 19th century, overseas imperial expansion, multinational land empires, the two world wars, decolonization, and the question of American and Soviet empire in the 20th century.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 41.02 - Race, Gender, & Revolution in the Atlantic World

This course examines how the events and intellectual production of the Haitian Revolution and decolonization struggles in the Spanish Empire shook the Atlantic World and forced a reconsideration of political categories such as liberty, tyranny, citizenship, rights, and the relationship of race and gender to all of these concepts. The Enlightenment influenced Latin American and Caribbean revolutionaries, but these rebel intellectuals in turn challenged some of the Enlightenment's fundamental tenets, ushering in new polities with radical notions of citizenship and belonging.

Cross-Listed as: AAAS 62.75 WGSS 025

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 42.01 - Gender and European Society from Antiquity to the Reformation

This course examines the roles of women and men in Western Europe from late Antiquity to the Reformation period. Emphasis will be placed on the intellectual and social strictures that had a long-term effect on the concept and role of gender in European society. Topics included are biological and mythological foundations of gender concepts; attitudes toward the body and sex in pre-Christian and Christian culture; sin and ecclesiastical legislation on sex and marriage; family life and education; the individual and kinship; heresy and charismatic religious movements; and the impact of social-economic development on gender in professional life. We will discuss the textual and visual sources for our inquiry, as well as the changing contemporary views on gender roles in pre-industrial Europe. Open to all classes. Not open to students who have previously taken HIST 42.

Cross-Listed as: WGSS 22.01

Degree Requirement Attributes: Dist:TMV; WCult:CI

HIST 42.02 - Sex and Gender in Modern Europe

Sex and gender have been central to the making of modern Europe. Over the last 250 years, Europeans constantly debated fundamental questions such as the “appropriate” roles of men and women; the definition of “healthy” and “deviant” sexualities; and the relationship between biology and social norms. By exploring a wide variety of historical sources, including essays, etiquette books, speeches, and memoirs, we will examine how these discussions profoundly shaped European thinking about politics, economics, imperialism, immigration, and everyday life. Open to all classes. Not open to students who have received credit for HIST 9.07.

Cross-Listed as: WGSS 66.21

Degree Requirement Attributes: Dist:TMV; WCult:CI

HIST 43.01 - European Intellectual and Cultural History, 400-1300

A course on the intellectual and cultural origins of European civilization, from the fall of Rome to the advent of the Renaissance. After a review of the Judeo-Christian, Greco-Roman, Celtic, and Germanic components of medieval culture, we will examine the rise of the Christian Church and its impact on values and behavior of Europeans during the middle ages. Of special interest will be the relationship between medieval thinkers and the society in which they lived, the role of ritual, ceremony, and magic, and the persistence of heresy. Along with the products of high culture associated with such intellectuals as Augustine, Peter Abelard, Hildegard of Bingen, and Thomas Aquinas, we will thus review the fundamental values of medieval society at large and explore ways in which popular and elite culture converged or contrasted. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 43.02 - European Intellectual and Cultural History, 1400-1800

This course will introduce students to major developments in European culture and thought from the 14th-18th centuries, paying particular attention to the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. Substantial class time will be devoted to group discussion of primary texts with the aim of fostering each student’s ability to analyze and contextualize works in the Western intellectual tradition. Key authors include Machiavelli, Erasmus, Calvin, Luther, Galileo, Hobbes, Locke, and Rousseau.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 43.03 - European Intellectual and Cultural History, 1800-present

Through a close reading and discussion of Europe's most influential thinkers from the Enlightenment to the end of the twentieth century, this course will explore the key concepts that shaped and reflected modern European experiences. We will discuss how European intellectuals of diverse background—social scientists and philosophers, theologians and political theorists—fiercely debated the causes and solutions to major European phenomena, including technological revolution, total war, social upheaval, secularization, and terrorism.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 44 - Medieval France, 400-1494

The course traces the medieval foundations of the French nation, from the Roman Era to the end of the fifteenth century, with emphasis on institutional, social, and cultural development. Topics include: the Merovingian origins of 'France,' the construction and impact of feudal relationships, the emergence of French vernacular culture, regional diversity within centralized rule, and the formation of a French national identity. In addition we will examine how French medieval history became a testing-ground for innovative research on the Middle Ages, and to what extent these views have changed our concept of medieval France in the last decades. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 44.02 - Arts of Power, from Augustus to the Sun King

This course explores the political systems and ideologies of the West through art, architecture, ceremony, patronage, and representation. Political systems and ideologies always find their form in visual and ceremonial representation as mechanisms of the legitimization of power. This course will follow the Western tradition, starting with the formation of the Roman Empire under Augustus Caesar and ending with the rise of Absolutism under Louis XIV and the building of the palace of Versailles. It will explore the development of political and religious institutions through the representation of their ideologies. The course will be structured according to the following units: Empire, Monarchy, The church and the papacy, the Italian Republics and City States, Reform, Absolutism and Divine Kingship.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 45 - Early Modern Europe (1300-1650)

A study of Western Europe's transition from medieval to modern times, tracing the impact of new forces on traditional structures. Among the topics covered are Italian culture and society in the 14th-15th centuries; the concept of the Renaissance; intellectual and religious themes of the Reformation; the emergence of the basic forms of the

modern state; developments in warfare and international relations; the political and ideological polarization of Europe after Luther; the 'general crisis' of the mid-17th century. Open to sophomores, juniors, and seniors.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 46 - Spain in the Golden Age

The course deals with the unification of Spain under Ferdinand and Isabella, its rise to world primacy in the sixteenth century, and its decline in the seventeenth. Among topics examined are the development of a system of imperial government, the impact on Spain of colonial empire, the problems of multi-cultural society within the Iberian peninsula, the struggle against heresy, and the political challenges of the great European powers. Open to sophomores, juniors, and seniors.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 47.01 - The French Revolution and Napoleon

The course studies the French Revolution and its implications for Europe and the world. It considers the social, political and ideological causes of the Revolution in 1789 and then pays close attention to the successive stages of revolution from the experiment with constitutional monarchy to the radical republic and the Terror to Napoleon's popular dictatorship. The revolutionary wars, the development of democratic and nationalist ideology and their spread beyond France and beyond Europe, and also beyond elite men to peasants, city workers, Blacks, and women are important themes. Open to sophomores, juniors, and seniors. Not open to students who have received credit for HIST 047.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 47.02 - Propaganda and Public Opinion from Napoleon to World War II

This course studies the political tools used by Napoleon to control public opinion as he enacted his vision of the French nation after the Revolution. We will trace back some of his major philosophical Enlightenment influences in order to consider the legitimacy of his claim of being an heir of the Revolution and will examine the means by which Napoleon controlled public opinion. Finally, we will examine the failure of Napoleon's propaganda system throughout Europe using the German states as a case study.

Cross-Listed as: FREN 55.07

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 49 - Early Modern England, 1485-1780

This course explores the relationships among economic, social, cultural and political developments in England during the Tudor, Stuart, and Hanoverian periods. Topics for discussion include: family and gender; village and city life; religious reformation and the reformation of

government; the Elizabethan renaissance; responses to poverty, crime, and nonconformity; the development of political parties; the British enlightenment; commercialization and consumerism; the interaction of 'plebeians' and 'patricians'; rebellions and civil wars; and radicalism, conservatism, and imperialism. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 50 - Modern Britain, 1780 to Present

This course explores the dynamics and paradoxes of modern Britain as a divided – but highly influential and remarkably stable – society. In modern times, during a dramatic rise in Britain's prosperity and world prominence, forces behind that ascendancy made Britain a divided society. Divisions formed along lines of class, gender, sexuality, race, ethnicity, generation, and other bases of identity, including notions of Britishness itself. And yet, while violent upheaval characterized the period worldwide, Britain avoided revolution. Topics include: industrial poverty, disease, and crime; Liberal, Conservative, and Labour politics; British socialism, suffragism, and fascism; new imperialism; the Irish Question; world wars; post-colonial multiculturalism; Thatcherism, New Labour, and Brexit.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 52 - Modern Germany 1871-Today

This course will explore the dramatic transformations that permeated German culture, politics, and society from 1871 to today. We will discuss the diverse trends, visions and anxieties that shaped German life through the birth of the German state, industrialization and colonialism, World War I, the creation of the Weimar Republic, the rise of Nazism, total War and genocide, the country's division during the Cold War, and contemporary crises. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 53 - World War II: Ideology, Experience, Legacy

This course will explore the origins, nature, and legacies of the most dramatic war in modern times. Rather than focusing only on the military aspect, we will discuss the different ideological, cultural, political, and social factors that intersected in this monumental conflict. Students will learn about the worldviews that led to the war; the experiences of soldiers, policymakers, and ordinary people at the home fronts; and the institutions and cultures that emerged at the war's aftermath. Open to all classes.

Degree Requirement Attributes: Dist:INT or SOC

HIST 54 - The Russian Empire

After a review of Kievan and Muscovite antecedents, the course surveys the history of Russia from the Time of Troubles to the beginning of the twentieth century. Special

emphasis will be placed on the role of the Russian autocrat, on the institution of serfdom, and the development of the 19th century intelligentsia. Intended to precede, but not prerequisite to, HIST 55. Open to sophomores, juniors, and seniors.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 55 - The Russian Revolution

The Russian Revolution of 1917 and the Bolshevik seizure of power proved to be among the most important events of the 20th century, and they had profound implications for world history up until the current day. In this course, students will examine the causes and consequences of these momentous occurrences and grapple with a set of complex and intricate historical questions that still divide historians. We will begin by examining how in the late 19th century far-reaching social changes & external challenges confronted the 300 year-old Romanov dynasty, and how, ultimately, this dynasty was unable to adapt to the modern era. Students will learn about the multifarious political movements that emerged in opposition to the old regime, and about the so-called Revolution of 1905, which shook but did not overthrow the tsar.

Cross-Listed as: EEER 50.02

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 56 - Twentieth-Century Russia

An examination of major developments and problems in twentieth-century Russian history with particular attention to the consequences of the October Revolution, Leninism, civil war and its impact, politics and society during the New Economic Policy of the 1920s, the formation of the Stalinist system and its historical legacy, the Krushchev era, the Brezhnev years of “stagnation,” Gorbachev’s perestroika and the problems of transition to a law based on democratic and open market system of the Russian Federation, the successor state to the Soviet Union. Open to all classes.

Cross-Listed as: EEER 50.03

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 57.01 - Behind the Iron Curtain: The Cold War From the Other Side

This course explores the Cold War from “Behind the Iron Curtain,” including both the global political struggle for ideological and strategic primacy and the reflection of this struggle in domestic cultural and material developments from the end of World War Two until the Soviet collapse in 1991. We will examine how “Cold War competition” played out in a variety of interlocking spheres, from expansionist foreign policies that first divided Europe and gradually extended to the entire global south, to urgent economic competition in both military technology and

domestic consumer products, to ideological and cultural competition.

Cross-Listed as: EEER 50.04

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 58 - Eastern Europe in the Modern World

This course covers the history of Eastern Europe from the end of the 18th century until the present day with an emphasis on the region’s connections to its broader European and global contexts. Major themes include the shifting definitions of “Eastern Europe,” imperialism and nationalism, theories and politics of modernization, changing views of gender and sexuality, and competing visions of utopia and the violence they have engendered.

Cross-Listed as: RUSS 051

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 61 - Britain and the Sea: A Global History

This course features the vital role of the sea in the history of the British Isles and its colonies, peoples, and diaspora from the earliest days of British seafaring exploration until our own time. It assesses the extent to which the sea served as an extensive nexus among various places and peoples rather than a vast barrier or boundary. With this in mind, it traces the dramatic arc of history during which Britain was transformed from a small cluster of insignificant islands on the margins of Europe into an important hub of global networks with profound social, economic, political and cultural influence. At the same time, the course considers the importance of the sea in bringing British subjects into closer contact with a wide variety of environments and peoples whose influences transformed British attitudes, aspirations, and practices at home and abroad. The course also explores how a dynamic relationship with the sea itself, as experienced by ordinary people of Britain and its global contacts, shaped how these people viewed themselves, their history, their surroundings, and the wider world.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

HIST 62 - The First World War

The First World War was fought in Europe for the most part but it involved belligerents from every continent and had global effects, many of which bedevil our world today. This course introduces you to the vast subject of what the British still call The Great War, its causes, combat, homefronts and far-reaching consequences as well as to some of the unresolved questions that continue to propel our research. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 63.02 - Reading Artifacts: The Material Culture of Science

Emphasizing hands-on examination of artifacts in Dartmouth's Collection of Historic Scientific Instruments, this class seeks to study history using 3-d rather than the usual 2-d textual sources. Topics include the rise of American science, science at Dartmouth, the role of experiment and demonstration in science, aesthetics and design of objects, and international trade in instruments. Students will create and curate an exhibition of artifacts from Dartmouth's Collection. Open to all classes.

Degree Requirement Attributes: Dist:TAS; WCult:W

HIST 63.03 - Scientific Revolutions and Modern Society

An introduction to major revolutions in Western science since 1700, focusing on changing definitions of science; on political and religious implications of scientific theories; and on the effect of national contexts on scientific practice. Topics include Newton and Newtonianism in the 18th century, the Darwinian Revolution, Einstein and the birth of modern physics, and science under 'banners' in revolutionary France, Nazi Germany, and Soviet Russia. Students who took HIST 57 prior to Winter 2025 are not eligible to take this course. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 63.04 - The Means of Reproduction: Health, Bodies, Technologies

How does our understanding of the past change when we center the politics of reproduction? This course invites students to approach global history through the history of reproductive technology. Tracing an arc from the late-eighteenth to the twenty-first century, we will consider the role of reproductive politics and technologies in relation to histories of slavery, colonialism, feminist and environmental movements, Cold War conflicts, postcolonial state-making, and contemporary religious nationalisms.

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 64 - The Great War and the Transformation of Europe

The Great War and the Transformation of Europe explores how the First World War redefined warfare, destroyed empires, and profoundly altered the political, social, and cultural landscape of Europe. The course will analyze this crucial period in the development of Europe by examining political re-alignments, innovations in warfare, shifts in gender norms, developments in propaganda, and the birth of the Soviet Union and fascism.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 66 - History of Africa since 1800

This course explores some of the major historical processes unfolding in Africa since 1800. Our analysis will focus on social and economic history as we examine Africa's integration into the international economy during the nineteenth century, the rise of new social classes, and the creation of the colonial and post-colonial state. Our primary case studies will be drawn from east, west and southern Africa to highlight both the similarities and differences of their historical development. Open to all classes.

Cross-Listed as: AAAS 15

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 67 - History of Modern South Africa

After an initial overview of colonialism in Africa, this course will concentrate on Southern Africa, with special emphasis on the historical development, effects, and implications of the racial situation in the Republic of South Africa. Readings will be drawn from primary and secondary materials and from works of fiction. Illustrative films will be shown, and some opportunity offered to compare the history of race relations in South Africa with that in other African countries and in the United States. Open to all classes.

Cross-Listed as: AAAS 046

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 69 - Islam in Africa

This course aims to introduce students to the formation of Islam in the Maghrib, Saharan Africa, and Africa south of the desert. Assignments will address continuities with and differences from the practices of Muslims in other parts of the world while emphasizing the central role the religion has played in the unfolding of history in various parts of Africa. Topics covered will include conversion, popular religion and mysticism, cultural formations, and social organization. Open to all classes.

Cross-Listed as: REL 74.17 AAAS 53

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 70 - Gender and The Modern Middle East and North Africa

In this course, we will study histories of the modern Middle East and North Africa and examine the ways that issues relating to gender and sexuality have affected the politics and social worlds of the region over the course of the past several centuries. This course begins with the medieval Islamicate Empires — Mughal, Safavid, and Ottoman — and then moves through the end of empire, the colonial era, the establishment of the nation state, and the emergence of modern cultural, political, and religious movements. In doing so, we will situate the histories and

social worlds of the region in a global frame, asking how global political and economic transformations have affected the region. At the same time that we attend closely to these histories, we will also examine the ways in which the category of “woman” has been mobilized in popular and political discourses in the 18th-21st centuries, paying particular attention to how Muslim and Middle Eastern women have been represented in various political discourses, as well as how they have represented themselves. Through close readings of both primary sources (in translation) and secondary literature — including historiographical, theoretical, and literary texts as well as film and music— we will also tackle the questions, controversies, and stereotypes that have animated debates in both scholarly and popular literature on such topics as the veil, feminism, revolution, human rights, LGBT issues, masculinity, and war.

Cross-Listed as: MES 19.04; WGSS 24.02

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 70.02 - Modern Iran

This course examines the history of Iran from the early modern to the contemporary period. We will start in the era of the Islamic empires then move through European imperialism, the rise of modern nationalism, the Constitutional Revolution (1905-1911), the formation of Pahlavi state institutions, the 1953 coup, the 1979 revolutionary movement, the establishment of the Islamic Republic, the Iran-Iraq War, and more. Students will learn to think through Iranian history in domestic and global contexts.

Cross-Listed as: MES 12.13

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 71 - Conflict and Violence in the Middle East

This course will explore the major episodes that have transformed the Middle East since World War I through the prisms of conflict and violence. Challenging the discourses that characterize Middle Eastern societies as essentially stagnant, authoritarian and violent, this course will look critically at the complexities and dynamism of the conflicts with respect to their origins, the actors involved, and the key historical and political factors that have shaped them. Open to all classes.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 72 - Late Imperial China in Global Context

China's history, from the 3rd century BCE to the twentieth century, examined in the context of global developments in demography, economy, urbanization, technology, trade, and the arts. Open to sophomores, juniors, and seniors.

Cross-Listed as: ASCL 64.09

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 72.02 - Nomad Rulers and Origins of the Modern World

Between the twelfth and sixteenth centuries, government by rulers of nomadic origin produced similar changes in China, the Middle East, and Russia, and were later diffused by various means to Europe, South Asia and Southeast Asia. These changes included the promotion of vernacular languages, increasing influence of folk and dissident religions, and the rise of self-legitimizing rulership. These influences later challenged cultural and political authorities across Eurasia, laying the foundation for the modern world.

Degree Requirement Attributes: Dist:INT; WCult:CI

HIST 72.03 - Nationalism and Revolution in China, 1890-Present

This course examines the dynamics of China's revolutionary ideology in the context of the modern world through the lens of nationalism. By employing a range of discussions of China's nationalist discourse, we will encounter and construe the voices of various groups of people for whom the rhetoric and ideology of nationalism emerged as a question or dilemma, developed as a motivating force, and fermented as a problem. The course proceeds chronologically, beginning in the late nineteenth century and moving to the present. Each week's readings, including primary and secondary texts, also discuss particular aspects of nationalism and its connection to China's revolutionary agenda. Focusing on China and its Asian surroundings, this course will explore major historical themes, including reform versus revolution, intellectuals and society, center and locality, ethnicity and identity, violence and confrontation, foreign relations and national strategies, charisma and mass movements, and nation-building and propaganda. Not open to students who have received credit for HIST 90.16.

Cross-Listed as: ASCL 64.15

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 72.04 - China to 1800

This course explores China's history from its ancient origins to the end of the 18th century. It examines the profound economic, social, and cultural changes that have shaped China over time, including geography, dynastic rise and fall, relationships with nomadic societies, political philosophy, gender and family dynamics, and global interactions. The course also investigates the contemporary use of China's pre-modern history in politics and popular culture. Through primary sources, field trips, and digital activities, students will develop historical analysis and argumentation skills. No prior knowledge of Chinese culture, history, or language is necessary.

Cross-Listed as: ASCL 64.16

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 72.06 - Business History of Modern China

This course explores China's transformation through business history, examining how enterprises have navigated the nation's blend of capitalism and single-party rule. It delves into cycles of prosperity and decline, from the Qing Dynasty to its current status as a global economic power. Using case studies, the course analyzes diverse actors — from family firms to foreign traders, ordinary workers to tech giants — to understand China's model of capitalism and socialism and its global impact.

Cross-Listed as: ASCL 67.11

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 75 - Colonialism, Development, and the Environment in Africa and Asia

This course examines the environmental history of Africa and Asia, focusing on the period of European colonialism and its aftermath. Topics include deforestation and desertification under colonial rule; imperialism and conservation; the consequences of environmental change for rural Africans and Asians; irrigation, big dams and transformations in water landscapes; the development of national parks and their impact on wildlife and humans; the environmentalism of the poor; urbanization and pollution; and global climate change in Africa and Asia. Open to all classes.

Cross-Listed as: AAAS 50; ENVS 45; ASCL 54.07

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 76 - From Colonial India to Post-Independence South Asia

This course examines the history of modern South Asia (focusing on the nations of India, Pakistan and Bangladesh) from the eighteenth century to the present. Key themes include: the character of British colonialism and its impact on Indian society; cultural change and the “invention” of new religious and caste identities; the Indian middle class; the emergence of the Indian national movement under Mahatma Gandhi; Partition in 1947 and Partition violence; and post-independence South Asian politics and economy.

Cross-Listed as: ASCL 54.08

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 77 - Imperialism in Modern East Asia

An examination of Western and Japanese imperialism in East Asia from the Opium War to the Pacific War. Subjects to be treated include the imposition of unequal

treaties, the "scramble for concessions" in China, the creation of Japan's formal and informal empires, and the rise and fall of the Greater East Asia Co-Prosperty Sphere. Open to all classes.

Cross-Listed as: ASCL 80.08

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 78 - Christianity in Korea

This course examines Korean Christians' beliefs and practices, which have shaped and brought tensions to current socio-religious phenomena. Topics include the Korean origins of Christianity, the encounter between Catholicism and Neo-Confucianism in the eighteenth century. Protestant missionaries' role in medicine and education, the rise of nationalism and Christianity under Japanese colonialism, churches in North Korea, Pentacostalism under South Korea's rapid industrialization and democratization, Korean missionaries around the world, and Christian missions and entertainers in Korea, as well as the interface between gender and Korean Christian culture.

Cross-Listed as: ASCL 64.04 REL 32.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

HIST 78.02 - North Korea: Origins and Transitions

This course explores the history of the Democratic People's Republic of Korea (North Korea) from a global perspective. Topics include the Japanese colonial legacies; liberation, division, and foreign occupation between 1945 and 1950; the meanings of the Korean War; comparing Kim Il-Sung's North Korean revolution with Park Chung-hee's state building in the South; the reality of "Self-Reliance"; social control and everyday life; and issues around human rights.

Cross-Listed as: ASCL 64.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 78.03 - The Two Koreas, 1948-Present

This course explores the emergence of the two Koreas, from a global perspective. Beginning with the legacies of the Chosŏn Dynasty, we will examine the impact of Japanese colonialism on the divergence of the two nation-states: the Republic of Korea (South Korea) and the Democratic People's Republic of Korea (North Korea). Analyzing scholarly writings and primary sources, the course will focus on the domestic and international processes through which the two regimes clashed and competed in the context of the Cold War. We will primarily focus on drastic differences manifested between the two countries' ideologies, cultures, and political economies, but also pay attention to unexpected parallels experienced by Koreans across the hostile division. Students will pursue a final research project, in

consultation with the instructor, on a comparison of their choice related to the themes of this course. No prior knowledge of the Koreans or the Korean language is expected.

Cross-Listed as: ASCL 64.05

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 78.04 - Slaves and Rebels in Korea, 1392-1910

This course explores the history of Choson Korea (1392-1910) through the experiences of outcasts and commoners. By examining the desires and despair of peasants, slaves, rebels, entertainers, and religious minorities, this course assesses the foundation of the state and the operation of society as manifested at the margins of society. How did the religious and intellectual heritage of Korea legitimize hereditary status, slave ownership, gender division, and regional discrimination? In what ways did ordinary people conform to or struggle against elite governing? Does the longevity of the Choson dynasty testify to the successful control of the status system by those at the top? Or does the stability elucidate social mobility and dynamic interactions across the status divisions? Focusing on various status groups illuminates the mechanisms of domination, compliance, and resistance carried out at the micro level. The experiences of the underrepresented shed light on the transition to modern Korea and present the complicated process of constructing Korean identity over time. A background in Korean history is not required.

Cross-Listed as: ASCL 64.14

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 79 - Postwar Japan: From Occupied Nation to Economic Superpower

This course examines the internal and external forces that have shaped Japan's government, economy, and society since 1945. Topics to be treated include American Occupation reforms, the conservative hegemony in politics, rapid economic growth and its costs, the mass middle-class society, and Japan's changing world role. Open to all classes.

Cross-Listed as: ASCL 64.12

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 80 - The History of Capitalism in Latin America

This course will ask what five centuries of Latin American history can tell us about the origins and consequences of global capitalism. We will listen to capitalism's champions and critics, including state actors, the Church, non-governmental organizations, and organized social movements, and ask how the interplay between them has influenced economies, politics, and culture. Capitalist development and transformation involved elaborate cultural campaigns to win hearts, minds, and bodies to the project, and we will focus on how and why, for example, at

its most extreme some people equated capitalism with sin while others found spiritual succor within its logics.

Cross-Listed as: LACS 35.11

Degree Requirement Attributes: Dist:SOC

HIST 82.04 - Transnational Utopias: Latin American Anarchisms

This course focuses on how anarchism developed in Latin America and the Caribbean at the turn of the twentieth century. It offers a brief historical and historiographical introduction to the idea of anarchism and its first adherents in the region. It also explores the materiality of anarchist transnational networks and the creation of working-class intellectual communities. The class ends by critically examining the legacies of anarchism in contemporary Latin America and the Caribbean.

Cross-Listed as: LACS 35.09

Degree Requirement Attributes: Dist:TMV; WCult:NW

HIST 83 - Twentieth-Century Latin America

This course seeks to address major issues in twentieth-century Latin America through the history of three or four countries. Topics discussed will include development, imperialism, nationalism, revolution, state formation and violence. Open to all classes.

Cross-Listed as: LACS 35.10

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 84 - History of Brazil

This course covers the history of Brazil from Portuguese contact with the indigenous populations in 1500 until the present. Following a general chronological sequence, the lectures, readings, and discussion treat various selected topics of importance in the political, economic, social, intellectual, and cultural development of Brazil. The principal objective is to chart conflict, change, and continuity within Brazilian society and to come to understandings of their causes, interactions, and consequences.

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 85.01 - The Black Atlantic: Africans and African Descendants in the Colonial Era

This course examines the history of the Black diaspora in the Atlantic World during the early modern/colonial era (c. 1400s-1700s). It will follow a flexible chronological pathway and a thematic methodology to analyze the Atlantic slave trade, in addition to how people of African descent navigated racial ideologies, colonial violence, and imperial expansion. Students will develop a notion of the Black Atlantic that includes Africa, Europe, the Caribbean, North America, and South America.

Cross-Listed as: AAAS 88.23

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 85.02 - Black and Indigenous Slavery

This course explores how slavery in the New World emerged out of multiple traditions, such as Roman, Mediterranean, African, and Amerindian bondage, as well as diverse forms of captivity and forced labor. Primarily, we will focus on the expansion, overlaps, and variations between Indigenous and African slavery; the legalities justifying these institutions; and varying forms of emancipation in areas such as West and West Central Africa, Europe, Mesoamerica, North and South America, and the Greater Caribbean.

Cross-Listed as: AAAS 60.02 NAIS 054

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 87 - Culture and Identity in Modern Mexico

From the Porfiriato and the Revolution to the present, a survey of Mexican society and politics, with emphasis on the connections between economic developments, social justice, and political organization. Topics include fin de siècle modernization and the agrarian problem; causes and consequences of the Revolution of 1910; the making of the modern Mexican State; relations with the United States; industrialism and land reform; urbanization and migration; ethnicity, culture, and nationalism; neoliberalism and social inequality; the problems of political reform; and the zapatista rebellion in Chiapas. Open to all classes.

Cross-Listed as: LACS 20.15

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 90.04 - The Making of the Modern Middle East

This panoramic course surveys major developments in Middle East history, politics, and society. Covering more than a two hundred year stretch, we will move across an expansive geography encompassing North Africa, the Levant, the Arabian Peninsula, and parts of Central Asia. Throughout this journey, particular attention will be paid to five important themes: imperialism, modernization, nationalism, Islam, and revolution. In the process of navigating these seminal topics, we will develop a more nuanced understanding of the modern Middle East and a greater appreciation for the insights offered by primary sources, from poems and national speeches to songs and motion-pictures, into the region's dynamic past. We will begin with a basic question – what and where is the Middle East? – prior to exploring the impact, importance, and mechanics of empires (Ottoman, French, British). Once elucidating this imperial backdrop, we will study sweeping reforms, struggles for independence, and the fashioning of nation-states, before examining a series of revolutionary moments, America's presence in the Middle East, and the “Arab Spring” and its aftermath. Whenever possible, we will strive to illuminate ordinary people, as opposed to

only elite actors, who contributed to the making of the modern Middle East.

Cross-Listed as: MES 2.01 JWST 044

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 90.05 - The Jewish Atlantic

This course will examine the contribution of Jews, crypto-Jews, and Conversos to colonial enterprises in the transatlantic sphere, 15th-19th centuries. Focusing on the Iberian peninsula, we will examine Jewish settlements in North America, Latin America and the Caribbean, including Jewish owned plantations in Suriname, Jewish involvement in the triangulated slave trade, and the impact of the Inquisition, the Age of Emancipation, and the Atlantic revolutions.

Cross-Listed as: JWST 014 LACS 50.16

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 90.07 - Great Migrations: The Making of the Modern US, 1910-1970

In the decades between the 1910s and the 1970s, millions of southerners left the rural South for the booming cities of the North and West, in what was inarguably one of the most significant demographic events of the 20th century. From the Chicago blues to the Bakersfield Sound; *The Grapes of Wrath* to *Black Boy*; the Black Panthers to the Southern Baptist Convention—the influence of the southern migrations can be seen everywhere in American society during these years. Rather than treating the experiences of black and white migrants separately, this course takes a comparative approach to these simultaneous and parallel migrations, focusing on the political and economic factors that drove out-migration from the South; the impact that southern migration had on race relations and labor markets in northern and western cities; the diasporic communities formed by southern migrants in their new homes; and the impact of the migrations on American culture and politics over the course of the 20th century.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 90.08 - Democracy: Ancient to Modern

This course comprises four parts. In the first, we will familiarize ourselves with the concept of democracy, as well as the historical context in which democracy first emerged. In part two, we will explore the history of democracy at ancient Athens, with an emphasis on the development and functioning of democratic institutions, democratic ideology, and the exploitation by democracies of women, slaves, and foreigners. In part three, we will consider democracies outside Athens, as well as non-democratic regime types, such as oligarchy, tyranny, and the “Lycurgan” constitution at Sparta. In part four, we will

turn our attention to the modern era. More specifically, we will compare Greek democracies to subsequent institutions that have been described as democratic (e.g., New England town hall meetings, the United States of America, and the Democratic Republic of the Congo); examine the impact of Greek democracy on the development of modern political thought.

Cross-Listed as: CLST 11.13

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 90.09 - Global South Asia

Home to some of the world's richest people and biggest companies, South Asia has been the source of countless stories of success. Yet there's more to these stories than meets the eye. What makes South Asia important globally and what is the history behind South Asia's recent rise? Global South Asia answers these questions by looking at the ways the region has been connected to other parts of the world throughout history.

Cross-Listed as: ASCL 54.10

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 90.10 - Liberalism and Its History: World War II to the Present

The 2016 election of Donald Trump, Brexit, and what appears to be a global turn to nationalism, have led to the publication of endless columns and myriad books proclaiming liberalism to be in a state of international crisis. Liberalism is not in its death throes, but what talk over a crisis of liberalism has initiated is a discussion about its historical origins, and how liberalism has evolved over time given new political contexts and challenges. The purpose of this course is to help you come to terms with today's political crisis by looking at challenges to liberalism—as an idea, sensibility and political program—from the Cold War until the present. Topics to be discussed include: Cold War Liberalism, Neoliberalism, the liberalism of John Rawls and his critics, Neoconservatism, Globalization, Liberalism and Religion, and the contemporary crisis of liberalism.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 90.11 - Law and Empire

How did law justify European imperialism? What did law look like in different imperial contexts? How do the histories of empire and imperialism help us understand the history of law? Looking across regions and contexts, from early modern Iberian empires, to early colonial North America, to Africa and Asia, this course examines the relationship between law, empire, expansion, and colonialism from the 17th to 21st centuries. With a few exceptions, our readings and discussions will follow chronological order, veering off course occasionally to

look at issues comparatively. Throughout, we'll be working to uncover how imperial approaches to law changed over time and how laws and legal institutions with imperial origins have shaped expectations and experiences into the present.

Cross-Listed as: GOVT 60.23

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 90.13 - Placing History: A Exploration of Local History through Archives, Fieldwork, & Digital Maps

This course will explore two related questions: how can spatial and place-based thinking benefit historical scholarship? More specifically, how can we combine fieldwork, archival research, and the use of digital tools to help us recover hidden aspects of local history? To answer these questions, this course will include three parts. First, a seminar component will allow students to think global and act local. Students will analyze and discuss spatial history and place-based history projects from around the globe while also evaluating primary historical sources on local and regional history. Second, a fieldwork component will allow students to visit local archives and the places they are studying and examine the way history has alternatively been inscribed in or erased from the landscape. Third, a lab component will offer students the chance to learn new skills using Geographic Information Systems (GIS) software to map local history over space and time.

Cross-Listed as: NAIS 30.22

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 90.14 - The Global British Empire, 1600 – The Present

This course charts the long history and continuing legacies of the British Empire, an entity that has transformed every single continent over the last four centuries and is widely associated with the makings of the modern world. We examine how and why a powerful and expansive British Empire emerged and sustained itself. Equally, we zoom in on the regular contestation and even outright rebellion that this transcontinental polity inspired. This course is an opportunity to think connectively and comparatively about historical experiences in America, India, the Caribbean and Africa among multiple other British imperial spaces. Through the prism of a changing British Empire, we trace the rise and evolution of global trade, slavery, the consumption of commodities such as sugar, tea, opium, and cotton; and new ideas about governance, sovereignty, race and identity. We conclude with a discussion of the persistence of imperial institutions, laws and power relations in shaping the world we inhabit. Students will be introduced to major debates about imperialism and colonialism and the political, economic, environmental, legal and racial underpinnings of the British Empire. Students will read a combination of primary and secondary

sources every week and will develop a research paper drawn from original sources over the course of the term.

Degree Requirement Attributes: Dist:INT; WCult:W

HIST 90.15 - State and Society in Early Modern India, 1500-1800

This course surveys historical developments in what are now the modern nation states of India, Pakistan, and Bangladesh between the sixteenth and eighteenth centuries. Students will explore South Asian society, culture, and religion in the broader context of state-formation and empire-building. We will examine the makings of the Mughal Empire, one of the most influential states in the subcontinent's history, its predecessors, successors, and rivals, as well as its complex and contested legacy. The Taj Mahal stands as a powerful example of both Mughal imperial achievement and continuing controversy about early modern pasts. Moreover, this course will emphasize the makings of Islam in India, Persianate political and literary culture, as well as early modern commerce and politics.

Cross-Listed as: ASCL 54.12

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 90.17 - Templars, Teutonic Knights, and the Medieval Military Crusading Orders

This course explores one of the most radical experiments of the European Middle Ages: the military crusading orders. The members of these organizations were imagined to constitute a "new knighthood" of monkish warriors, theoretically living according to a strict monastic rule and dedicated to the protection and expansion of Christian society as the military branch of the church. These institutions—and the Middle Ages more broadly—have resurfaced as one contested site in a raging culture war over race, power, and identity in the United States and abroad. This course takes this recent trend as a prompt for placing the military orders within their medieval context, beginning with their emergence from a longer history of Judeo-Christian holy war. More broadly, we will also take the military orders as a case study for historical questions about the intersection of religious belief, group identity, and acts of violence in human societies. Given the place of the military orders in the modern imagination, from conspiracy theories to far-right ideologies, a central goal of this course is to equip students with the skills to evaluate historical sources first-hand and also to engage critically with a wide range of historical arguments.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 90.18 - Reproductive Health in U.S. History

This lecture course surveys the history of reproductive medicine and health in the United States from the nineteenth century to the present. It focuses on histories of childbearing, pregnancy, fertility, contraception,

reproductive biotechnology, and reproductive healthcare, centering their significance within overlapping political, social, cultural, medical, and scientific contexts. Topics include the management of reproduction within U.S. slavery and empire, reproductive medicine and concepts of race, competing assertions of professional authority over pregnancy and childbearing, eugenics and sterilization, movements for reproductive rights and community healthcare, technologies of reproductive medicine (including prenatal screening and assisted reproductive technology), and present-day disparities in access to and quality of reproductive care. Throughout the term, we will pay particular attention to intersections with historical and present-day formations of race, gender, disability, citizenship, and kinship.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 90.19 - Climate, Natural Disasters, and Environmental History

This course explores the politics of natural disaster in a global historical perspective. We will begin by studying different logics under which humans have worried that 'natural' disasters might be manmade, focusing on recent scholarship that argues that social inequalities shape the impacts of disaster. We will then consider the political processes by which events have come to be recognized as environmental disasters. Finally, we will analyze the politics of disaster in our changing climate.

Cross-Listed as: GEOG 80.12

Degree Requirement Attributes: Dist:SOC

HIST 90.20 - The Golden Age of Piracy, 1660-1730

In this course, we will examine the myths and realities of the 'Golden Age of Piracy' between 1660 and 1730. Pirates have always been around, but popular views are shaped almost entirely by this period and its publications, especially *The General History of the Pyrates*, first published in 1724. We will use the *General History* and a range of other sources to examine the realities behind the representations, working as historians to interrogate complex and frequently conflicting sources to test and understand the arguments of other historians, from a variety of perspectives. We will also explore how various historians of empire, law, exploration, society, gender, sexuality, culture, literature, and media have responded to pirates and helped to shape, and sometimes misshape, contemporary perceptions.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

HIST 91.01 - Christians, Jews, and Muslims in the Age of the Crusades

This course will focus on the interactions of the three major religious communities of the medieval Mediterranean—Christians, Jewish, and Muslim—

beginning with the First Crusade in 1096 and ending with the arrival of the Black Death in 1347. By examining topics such as pilgrimage, crusade, and jihad, the status of minority communities, and intellectual life, we will explore how Christians, Jews, and Muslims clashed, cooperated, influenced, and misunderstood each other. Open to all classes.

Cross-Listed as: JWST 36.01; REL 33

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 91.02 - Vikings, Celts, and Saxons: Medieval Christian Imagination of the Pagan Past

This course explores the transformation of Christianity in the early medieval period. The conversion of 'barbarian' peoples in northwest Europe between the years 400 and 1000 meant Christianity had to adapt to a different environment than the Roman and Mediterranean one in which the religion developed. The northern world was without the Roman Empire, without cities, with different languages, cultures and notions of relations between the human and divine worlds. This course explores the impact the conversion of Germanic, early English, Celtic, and Nordic communities had on Christianity, as well as why communities of the northern world voluntarily chose to adopt this new religion. Open to all classes.

Cross-Listed as: REL 034

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 92.01 - Caribbean History: 1898 to the present

This course surveys the major issues that have shaped Caribbean society from the late 19th-century to the present, including: imperialism, urbanization, migration and globalization, struggles for national independence, the transition from plantation to tourism-based economies, and the global spread of Caribbean popular culture. Our readings and discussions will focus on the historical trajectories of Cuba, Haiti, Jamaica, Puerto Rico, Trinidad, and the Dominican Republic using historical scholarship, music, literature, film, and personal narratives.

Cross-Listed as: AAAS 061 LACS 25.10

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

HIST 92.02 - Nationalism and Revolution in the Caribbean

The islands of the Caribbean have served as the site for two of the most significant revolutionary upheavals of the modern era—the Haitian Revolution and the Cuban Revolution and have produced anti-colonial luminaries such as José Martí, Frantz Fanon, Marcus Garvey, and Claudia Jones. This course will explore the origin, trajectory, and outcome of nationalist struggles in the Caribbean from the eighteenth-century to the present

through primary and secondary materials, memoirs, fiction, and film.

Cross-Listed as: AAAS 062 LACS 25.11

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

HIST 92.03 - Slavery and Emancipation in Latin America and the Caribbean

For over 300 years, Africans were transported to Latin America and the Caribbean to work as enslaved laborers. This course will examine the history of African slavery in the region from the beginning of the Atlantic slave trade to the abolition of slavery in Brazil in 1888. For each class session, students will review primary source documents such as autobiographies, slave codes, plantation journals, visual images, and anti-slavery tracts as well as historical scholarship.

Cross-Listed as: AAAS 060 LACS 25.07

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

HIST 92.04 - Partition in South Asia

In the years leading to 1947, nationalist activism against the British and tensions between Hindus and Muslims escalated in the Indian subcontinent. This culminated in Partition and the emergence of the nations of India and Pakistan. Independence was marred, however, by the bloodshed accompanying the mass movements of Muslims into Pakistan and Hindus into India. What were the factors leading to this juxtaposition of triumphal Independence with shameful Partition? What were the implications of Partition for ordinary people? How have memories of Partition continued to affect powerfully politics and culture in the subcontinent? This seminar investigates such questions using a wide variety of materials including films, memoir, fiction, and scholarly works. This course follows recent scholarship in focusing on the long-term implications of Partition for the subcontinent. Hence, while we certainly will investigate the events leading up to Partition, our emphasis will be on understanding the effects of Partition on the lives of ordinary people during and after.

Cross-Listed as: ASCL 54.04

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

HIST 92.05 - The City in Modern South Asia

South Asian cities are currently undergoing massive demographic and spatial transformations. These cannot be understood without a consideration of both the specific history of South Asia and a broader account of urban change. This course examines these changes in historical perspective and situates urban South Asia within a global context. How did colonial rule transform cities such as

Delhi, Lahore, and Bombay? How were the differing ideologies of India and Pakistan mapped onto new capitals such as Chandigarh and Islamabad? How are ethnic pasts and techno futures reconciled in booming cities such as Bangalore and Mumbai? How are slums produced and what are the experiences of people living in them? What are the connections between the urban environment and political mobilization? We consider a range of sources, including scholarly literature, films, and short stories.

Cross-Listed as: ASCL 54.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 92.06 - Russia and the West: From Early Times to Present Day

In its thousand-year history, Russia has occupied a unique place between Europe and Asia, and both Russian and foreign observers have wrestled with defining its place vis-à-vis western (European) civilization. This course will explore Russia's place in world history, examining the complex and evolving relationship of Russia and Europe, and the Soviet Union and the West, from the middle ages to the present. Particular emphasis will be given to the complex relationship of Putin's Russia with the United States today.

Cross-Listed as: EEER 015 RUSS 50.01

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 92.07 - Black Agrarian Democracy: Haitian History from Revolution to the Fall of the Duvalier Dictatorship

The course explores the historical struggle between democracy and authoritarianism in Haiti throughout its two hundred seventeen years of independence as a free black nation, which also makes the island one of the oldest sovereign countries in the Western Hemisphere. To understand the island's history, students are expected to read what historians and writers have written about Haiti; and to read the primary letters of frantic French planters, rebellious African slaves, egalitarian peasants, entrepreneurial market women, conscientious revolutionaries, exuberant military generals, loquacious politicians, feared dictators, and dreaded militias through time. The course will, indeed, move through four important, though overlapping, historical moments. First, we begin with an examination of the 1791-1804 Haitian Revolution when enslaved Africans revolted against the French colonial planters to successfully abolish slavery and to achieve national independence. Second, we read through the formation of grassroots and institutional democratic traditions in the nineteenth century and how they were undone during the 1915-1934 US Occupation of Haiti, where US President Woodrow Wilson ordered the American military to invade Haiti and control the island for almost two decades. Third, we will explore how the

undoing of democracy led to the rise of the Francois and Jean-Claude Duvalier dictatorship (1957-1971) and its dreaded militia called the *tonton makout* militia (often spelled in the following French orthography: *tonton macoutes*). Finally, we will conclude the class by looking at how and why the Haitian peasantry overthrew the dictatorship to replace it with the democratically elected President Jean-Bertrand Aristide (1991).

Cross-Listed as: AAAS 61.05 LACS 039

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 94.03 - Greek History: Archaic and Classical Greece

This course is designed to survey the major events in the history of ancient Greece from c.1600 B.C. (the emergence of palatial culture in the Mycenaean World) to 404 B.C. (the end of the Peloponnesian War). During this period, the Greeks formed individual communities and developed unique political structures, spread their culture, language, and religion throughout the Mediterranean, invented democracy (at Athens) and enshrined these values in their art and literature. This course will cover the physical setting of and the archaic legacy to the classical city-state, its economy, its civic and religious institutions, the waging of war between cities, the occurrence and ancient analysis of conflict within the city, and the public and private lives of its citizens and less well-known classes, such as women, children, slaves, etc.

Cross-Listed as: CLST 014

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.04 - Alexander the Great and the Macedonian Kings

This course has two aims: (1) to establish a basic understanding of the history of Alexander the Great and of Greek-speaking peoples in the eastern Mediterranean during the fourth through first centuries BCE and (2) to explore the cultural, military, political, and economic innovations of what was a singular age of experimentation.

Cross-Listed as: CLST 015

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 94.05 - Roman History: The Republic

This course surveys the history of the Roman people from 753 (traditional date of the founding of Rome) to 44 B.C. (the assassination of Julius Caesar). Topics include the development of Roman law, the conquest of all lands bordering on the Mediterranean, and the civil wars that destroyed Republican government. Particular emphasis is placed on the Roman political community: the political, religious and social factors that influenced the definition of the Roman aristocracy in the fourth century, the institutions that maintained the ascendancy of the elite, the

military and political values inherent in the citizenship, the social and political mechanisms that militated against civil dissent, and the role of political values in the eventual destruction of Republican government from within.

Cross-Listed as: CLST 017

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.06 - History of the Roman Empire: Roman Principate to Christian Empire

This course is designed to survey the major events in the history of Rome from 31 B.C. (Octavian/Augustus' success at the battle of Actium) through the accession and rule of Septimius Severus. During this period, the Roman empire (signifying the territorial extent conquered by Roman armies and administered by Roman officials) became a political community extending throughout the Mediterranean and northwards into Europe as far as Scotland. This course considers the logic of the Roman system: the mechanisms promoting the political identity of diverse peoples as Roman, and the endurance of local traditions within the Roman world; the reasoning whereby the overarching leadership of a single individual was conceived as necessary and good, and the evolving relationship between the princeps and the Roman senatorial aristocracy with a tradition of competitive participation and self identity in politics at Rome; the definition of the Roman frontiers and the role of the army in the assimilation of non-Roman peoples.

Cross-Listed as: CLST 018

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

HIST 94.07 - Methods and Theory in Ancient History: Roman Britain

This course is designed to introduce the student to the various types of documentary evidence available to the ancient historian and to the various perspectives for framing and answering historical questions. We consider the interpretive methodologies for each type of document (coin, inscription, papyrus) as well as the particular historical context in which these documents were produced. Topics include the function of coinage and economic thinking in the ancient world and the political significance of the publication of law. The final weeks of the term allow for in-depth consideration of a specific problem in ancient history.

Cross-Listed as: CLST 019

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.08 - History and Culture of the Jews I: The Classical Period

A survey of the history and culture of the Jews from the post-Biblical period to the Middle Ages.

Cross-Listed as: JWST 010 MES 16.15

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.09 - History and Culture of the Jews II: The Modern Period

A continuation of JWST 10, but may be taken independently. This course provides a survey of Jewish history and culture from the European enlightenment to the establishment of the State of Israel.

Cross-Listed as: JWST 011

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 94.10 - Jews and Arabs in Israel-Palestine: Past and Present

The course will cover more than hundred years of struggle between the Jewish national movement, aka the Zionist movement, and the Arab-Palestinian national movement, through exploration of the belief systems, political and military practices, perceptions of justice, and narratives of both movements and of political and religious factions within each of them.

Cross-Listed as: GOVT 40.18 JWST 40.04 MES 17.14

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 94.11 - Jewish Views of Christianity

What do Jews think of Christianity? The two religions took shape under each other's influence as well as in repudiation of one another's claims, but while we often hear about Christian anti-Judaism, we rarely learn about the other side of the story. This course will examine an ancient Jewish version of the Gospels, medieval Jewish polemics regarding Christian dogma, Christian influences on Jewish mysticism, modern Jewish scholarship on Christian origins, Jewish artistic representations of Christian symbols, and post-WWII Jewish efforts to create new and positive relations with Christians.

Cross-Listed as: JWST 36.02 REL 32.06

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

HIST 94.12 - History of Jews in Germany

This course is designed as an introductory survey of the history, culture, and identity of the Jews in Germany from the 18th century to the present. Our interest will be in examining the unique Jewish identities, male and female, religious and secular, that were shaped as Jews gradually emerged from a state of internal colonization and began their struggle for political emancipation and social integration during the era marked by the rise of anti-Semitism, liberalism, socialism, Christian tolerance, Nazism, two world wars, and, eventually, the emergence of the two Germanys and their unification after 1989.

Cross-Listed as: GERM 44.02 JWST 34.02

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 94.13 - Slaves, Wives, and Concubines: Did Roman Women Have a History?

This course is about the heterogeneous lived experience of women (slaves, freed slaves, lawful wives, daughters, prostitutes) during the Roman Republic and Empire. Roman women built and immortalized themselves and their families in funerary and civil monuments, endowing institutions like schools, and sometimes had coins bearing their portraits. We explore the larger institutional frameworks that gave meaning to their lives, and within this framework we investigate their life choices over time.

Cross-Listed as: CLST 11.12, WGSS 21.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 94.14 - Jews and Cities: Urban Encounter and Cultural Transformations

The Jewish diasporic encounter in Europe took place almost entirely in an urban context. The legal, political and cultural framework of the European city shaped the trajectory of the Jews in a profound and lasting way, and cities and metropolises continue to shape Jewish civilization in many ways. From the Venetian ghetto to the Lower East Side, from the *pletzl* in Paris to the vast neighborhoods in the first Jewish metropolises in Eastern Europe, the different settings shaped Jewish civilization.

This class will use a broad range of materials: literary texts, the press, scholarly analysis (historical, sociological, anthropological), film, art and art history.

Cross-Listed as: GEOG 040 JWST 12.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 94.15 - History of the Holocaust

The focus of this course will be on the history of the murder of European Jews and the destruction of European Judaism at the hands of the Nazis. After surveying the history of racism in European society from the 18th to 20th century, the course investigates, from perspectives of history, psychology, literature, philosophy, and religion, how bureaucracy could exterminate six million Jews.

Cross-Listed as: JWST 37.01

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.16 - Before Billboards and Twitter: Ancient Coins as Text

This hands-on course focuses on ancient coinage, the development and use of money in the ancient Mediterranean, the logistics of coin production, and the methods for studying coinage to write Roman history. Students learn numismatic methodology by handling and studying coins from the collection in Dartmouth's Hood Museum of Art and prepare material

for an installation focusing on the Roman war against Cleopatra and Mark Antony. A final unit treats the ethics of coin-collecting and the role of the modern museum.

Cross-Listed as: CLST 11.19

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 94.17 - Slaves' History of Rome

This course examines the slave system of ancient Rome from the slaves' perspective. Topics include the historiography of slavery; the economic roles of slaves and their structural relation to other classes of free and unfree labor; the historical context and political motives for the development of slave societies; slaves' evolving political, social, and legal roles; the cultural processes that made and un-made the legal definition of the slave as a thing without status or identity.

Cross-Listed as: CLST 11.20

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 95.01 - Foreign Study Program: London in History

Through lectures, readings, discussions, and fieldwork this course explores aspects of London's history from medieval to modern times. Using the city itself as a living laboratory for historical thinking, the course relates the development of London and its neighborhoods to the larger concentric histories of nation, region, empire, and world.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 95.02 - Foreign Study Program: History Study Abroad

Graded credit for this course is awarded to students who have successfully completed an approved course offered by the History faculty of University College London while a member of the Dartmouth Foreign Study Program in History. Topics and themes of approved UCL courses cover time periods from the ancient to the modern and all regions of the world. This course may meet History major or minor distributive requirements by student petition to the History Department's Curriculum Committee.

Offered: Fall.

Degree Requirement Attributes: WCult:W

HIST 96.01 - Seminar: Colonialism and Culture in Asia and Africa

This course examines the ideologies and cultural practices associated with European colonialism and with opposition to European colonialism in Asia and Africa, focusing on the period of "high imperialism" between 1870 and 1930. After exploring the major forms of imperial ideology, the course then looks at various manifestations of colonial culture, including science and technology, medicine,

anthropology, photography, art, sport and gender practices. Finally, the course treats bourgeois nationalism and the cultures/ideologies of anti-colonialism.

Degree Requirement Attributes: Dist:SOC; WCult:NW

HIST 96.03 - Seminar: Topics in British History

In this seminar, each student produces an article-length paper, based on period sources from the British Isles or its colonies, on a topic of particular interest to that student under the organizing principle of a broader unifying theme. That theme also provides the basis of group discussions and individual presentations around a set of common readings. Examples of unifying themes include: culture and power; cities and villages; supernatural and society; civil war and rebellion.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.04 - Ethnic Los Angeles

This course will focus on the history, culture and literature of Los Angeles, California, the second largest city in the United States. We will briefly examine its founding in the eighteenth century as a Northwest outpost of the Spanish empire in the Americas, and its origins and evolution as a Mexican pueblo and U.S. city in the nineteenth century. The majority of our attention will be on the historical and contemporary struggles of people of color in metro-Los Angeles throughout the twentieth and into the twenty-first centuries.

Cross-Listed as: LACS 80.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 96.07 - Seminar: Topics in Modern Japanese History

The postwar U. S. occupation of Japan has generated intense scholarly interest and debate. The debate has centered on the effects of the American-directed reform program and the so-called "reverse course" in Occupation policy. Just how significant was the Occupation for the postwar development of Japan? Did it cause a sharp break in modern Japanese history? And to what extent did the United States remake Japan in its own image?

HIST 96.08 - Seminar: Pen and Ink Witchcraft: Native American History Through Treaties

Treaties were instrument of dispossession in North America and Indian people referred to treaty making as "pen and ink witch-craft." But the hundreds of Indian treaties also generated unique records of cultural encounter. Working with the records of key treaties, this seminar will examine the protocols of Indian diplomacy, the agendas of the participants, the outcomes of the treaties.

Cross-Listed as: NAIS 81.03

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

HIST 96.12 - Seminar: Race, Ethnicity and Immigration in U.S. History

This seminar examines the evolving meaning of the U.S. border, the history of whiteness as a spoken and unspoken requirement for full American citizenship and the ways that stereotyping has been used to enforce race, gender, ethnic labor hierarchies from the first European/First Peoples contacts, through the era of slavery and early nineteenth century immigration. The second half of the course examines how race, ethnicity, class and gender have shaped the self-identification of many different kinds of immigrant groups from the mid-nineteenth century through the late twentieth century with a continued focus on evolving meanings of whiteness. In the course's final unit, we examine racial and ethnic tensions in U.S. cities that have been the destination for large waves of immigrants through the 1990s.

Degree Requirement Attributes: Dist:SOC; WCult:CI

HIST 96.21 - Politics and Society in Colonial America

This seminar investigates the ideas and practices that constructed and deconstructed empire in North Americas during the seventeenth and eighteenth centuries. It explores the perspectives of those involved in advancing and resisting European colonialism as they debated how to manage political, economic, and religious structures that bridged the Atlantic. The course traces evolving scholarly approaches to analyzing political culture and equips students to undertake research in early American political history with published and archival records.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 96.22 - Nazism: Culture, Society, War

This seminar will explore the origins, nature, and consequences of Nazism. Drawing on a wide variety of sources, we will discuss: what were the ideological, social, and political origins of the Nazi movement? How did it succeed in mobilizing so many Germans, and what were the characteristics of the regime it created? How and why did it unleash war and genocide? Alongside reading and discussions, students will also conduct independent research on a related topic.

HIST 96.23 - West Africa and the Cold War

This advanced seminar deals with the history of West Africa and its relationships with global powers in the decades following WWII. This course will trace the socio-cultural, political and economic struggles, aspirations and livelihoods of West African nations, their leaders and citizens, as they negotiated global Cold War dynamics during the postwar-era through the contemporary period. We will also consider the legacies of the global Cold War in West Africa.

Degree Requirement Attributes: Dist:INT; WCult:NW

HIST 96.25 - World War II in the Pacific, 1931-1945

This course explores the origins, nature, and consequences of World War II in the Pacific. Moving beyond the common U.S. focus on the war as a U.S.-Japanese conflict, it examines the different nations, political movements, ideologies, and empires that clashed between 1931 and 1945. The course culminates in a 20 – 25 page research paper that uses primary and secondary sources; students will develop their topic in consultation with the instructor.

Degree Requirement Attributes: Dist:INT; WCult:W

HIST 96.26 - Ritual and Violence in Crusader Jerusalem

Open with written permission of the instructor to juniors and seniors. For details concerning individual seminars consult the Department. Section numbers follow the decimals.

HIST 96.27 - Great Historians: Classic Works from Herodotus to Du Bois

This course aims to introduce students to the craft of history via an exploration of the writings of some of the most celebrated historians in the Western tradition. The readings, which range from the 6th century BCE through the 19th century, are all canonical and though none is without its shortcomings, each has endured for good reason. We will spend the course reading these works closely and critically, cultivating both an appreciative sense of what they do well and a critical sense of where they fall short. In the process, we will consider the methods, aims, purposes, and value of history itself.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.28 - America in the 1970s

Formerly dismissed as the decade when “it seemed like nothing happened,” the seventies are increasingly understood as a decisive period when a new political economy took shape, new forms of citizenship competed for influence, and new cultural forms emerged. Even disco has gotten a second look. By shedding light on a significant incident, movement, art form, cultural phenomenon, debate, organization, or development of the era, you will contribute to this ongoing project of historical reassessment.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.29 - Seminar: Debating Democracy in Nineteenth-Century America

This seminar examines the ideas and practices of American democracy at the moment of its emergence. After an initial couple weeks of defining terms and orienting ourselves in the larger context of modern democracy, our readings and discussions will consider such key issues as: expansions

and contractions in voting rights; the role of public opinion; the place of minorities in majoritarian government; the tensions between American democracy and American slavery; and the contested debates over the citizenship of women and African Americans.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 96.30 - American Empire and Development

This seminar examines the phenomenon of empire in the history of the United States’ relations with the world. It focuses specifically on the ways in which American empire has intersected with the ideas and practices associated with the concept of *development*. While we will spend a little bit of time on the outset of the term on definitions of key concepts (What is empire? What is development?), the bulk of the course readings and discussions will focus on how U.S. empire and development were intertwined in particular places and times during the twentieth century.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.32 - American Characters: Biography and the Historians' Craft

This seminar follows what has been a recent “biographical turn” among academic historians. Besides introducing students to the theoretical and conceptual questions involved in the narration of individual lives, it will survey some of the most inventive historical biographies of the past quarter century. Each student will execute a multi-step exploration of the lived experience, significance, and, if applicable, impact of a single individual from any period of US history.

Degree Requirement Attributes: WCult:W

HIST 96.33 - Global History of Human Rights

This course aims to complicate histories of human rights that imagine that such rights only or primarily exist in Euro-American contexts and have to be exported — either through humanitarian or military intervention — to the Global South. To this end, we will look at rights movements in Middle East, Latin America, and Asian contexts, and attend to the often-complicated history of such movements in the context of imperialism and war. In this course, we will ask: What are human rights, and what is their history? What is the relationship between human rights and earlier languages of rights? What counts as a human right? Can there be a universal standard for human rights despite social difference? What political and ethical possibilities have been opened for marginalized communities by the language of human rights, and what possibilities have been foreclosed by the often-singular focus on human rights as a panacea against all social ills? And finally: do our demands for human rights work to make the world a more just place, and are these demands enough?

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

HIST 96.34 - London-Based Archival Research and Historical Writing

This seminar is for students admitted to the History Department's Foreign Study Program in London and will serve as one of their three FSP courses. In consultation with the course instructors and the London FSP director, students will conceive, research, and execute a research project based on primary material from archives in and around London.

Offered: Fall.

HIST 96.37 - Topics in Economic History

This senior seminar addresses major debates and problems in economic history from a global perspective. The class is designed for students with previous course experience (within HIST, GEOG, GOV, ECON, or another program) in economic history, international political economy, and/or the history of capitalism. Writing a substantial research paper, based on primary sources and using historical methodology, is a core component.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

HIST 96.38 - Crisis and Continuity in Twentieth-Century US Social Movements

This course invites students to study the history of twentieth-century social movements through close primary source analysis and historiographic debate. We'll identify the precipitating events or crises that cultivate particular social movements, but we'll also examine their quieter dimensions, including their aftermaths, "half-lives," and influence on subsequent movements. Coursework will immerse students in historiographic debates and extend those conversations through assignments in which students identify and present primary sources to the class. We'll continue our collective preparation for primary source analysis through visits to Rauner Archive and Special Collections. The course will culminate with a 20-25 page research paper on a social movement of your choosing.

Degree Requirement Attributes: Dist:TMV; WCult:W

HIST 96.39 - Saints and Relics in the Middle Ages

This course surveys the critical role and importance of saints – and their remains (relics) – in medieval European history, from the rise of Christianity to the eve of the Reformation. The saints were the link between the human and the divine, and after their death they continued to play an active role in the affairs of the world. Their remains (relics) were powerful, valuable commodities that were revered, bought, and traded; for which the great cathedrals were built; and to which the faithful travelled for thousands of miles, on pilgrimage. Study of saints and their relics

permits evaluation of faith, belief, narrative, ritual, art and aesthetics, materiality, gender, ideology, power, and politics throughout the Middle Ages.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.40 - War and Peace in Korea, 1231-1876

This seminar examines Korea's responses to the three foreign intrusions: The Mongol Invasions of 1231–1271, the East Asian War of (or the Japanese Invasions of) 1592–1598, and the Manchu Invasions of 1627–1636. When compared, the three moments of national crises elucidate interregional forces that shaped political, diplomatic, and cultural changes in the Korean peninsula. Korea's experiences of conflicts, negotiation, and endurance shed light on the meaning of being a neighbor to the rising and declining empires in East Asia.

Cross-Listed as: ASCL 80.09

Degree Requirement Attributes: DIST:SOC; WCult:NW

HIST 96.41 - Afterlives of Empire – Migration, Race, and Decolonization in Postwar Europe

This seminar explores the profound impact decolonization had on modern Europe. We will explore how the collapse of European colonialism from the 1940s onward, particularly subsequent migrations from Asia, Africa, and the Caribbean, influenced European approaches to welfare, policing, gender and sexuality, and international politics. Students will write a 25-page research paper on a topic of their choice.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 96.42 - War and Social Change in American Life, 1898 – Today

Since 1898, the United States has consistently engaged in wars overseas, a commitment that some describe as "forever war." How has this changed life at home? Through topics such as race-making, gender norms, policing, internment, citizenship and civil rights, and anti and prowar activism, this class examines how the production of military violence has transformed American life. Students will produce a 25-page paper based on original research in primary and secondary sources on a topic of their choice.

Degree Requirement Attributes: Dist:SOC; WCult:W

HIST 97 - Independent Study

This course allows students to pursue a subject of special interest under the direction of a member of the History Department through a specially designed program of readings, reports, and/or research.

Offered: Fall, Spring, Summer, Winter.

HIST 98 - Honors Seminar

This seminar is for students who are researching and writing a senior thesis in the History Department's Honors Program. It focuses on the practice of reading, researching, and writing history as support and preparation for a student's individual thesis research. Only students enrolled in the Honors Program may take HIST 98. This course does not fulfill the requirement of a culminating experience in the Major and it may be taken only once.

Offered: Fall.

HIST 99.01 - Honors Thesis I

This course involves an extensive investigation of some topic. Only students enrolled in the History Honors Program may take HIST 99.01; permission of the thesis advisor and the Chair.

Students are awarded one course credit for successful completion of this course at the end of the second term of study. Students subsequently register for HIST 99.02, and continue with their coursework into a second term. A final grade will replace the "ON" for HIST 99.01 at the end of the second term of coursework.

Offered: Winter.

HIST 99.02 - Honors Thesis II

This course involves the continuation and finalizing of some topic and submission of a bound undergraduate thesis by the designated deadline. Only students enrolled in the History Honors Program may take HIST 99.02; permission of the thesis advisor and the Chair.

Students are awarded one course credit for successful completion of this course. Students who have registered for HIST 99.01 register for this course and continue with their coursework into a second term. A final grade will replace the "ON" for both HIST 99.01 and this course at the end of the second term of coursework.

Offered: Spring.

Humanities

Directors: Steven Swayne, Andrea Tarnowski

To view Humanities courses, click here (p. 519).

HUM - Humanities Courses

To view Humanities requirements, click here (p. 519).

HUM 1 - Global Humanities 1

Instructor: 25F: Min Young Godley; Lucas Hollister; Paul Carranza; Analola Santana; Devin Singh; Kenny Walden; Rebecca Biron

This team-taught course introduces first-year students to the interdisciplinary richness of the humanities through an exploration of impactful works across the literary, visual, and performing arts. Works are selected based on themes such as "What is the good life?" or "Body & Spirit." Weekly lectures are paired with small, lively discussion sections in which students work with professors and peers to hone their analytical and writing skills. Humanities 1 satisfies the Writing 5 requirement.

Offered: Fall.

HUM 2 - Global Humanities 2

Instructor: Petra McGillen; Jessica Beckman, Paul Young; Rebecca Biron

A continuation of Humanities 1. This team-taught course introduces first-year students to the interdisciplinary richness of the humanities through an exploration of impactful works across the literary, visual, and performing arts. Weekly lectures are paired with small, lively discussion sections in which students work with professors and peers to hone their analytical and writing skills. Humanities 2 satisfies the First Year Seminar requirement.

Prerequisite: HUM 1, or the permission of the course director.

Offered: Winter.

HUM 3.01 - Humanity by Design: City, Cinema, Self

Instructor: Williams Levey

In the *Republic*, Plato sees the city and the self as intertwined, and theater and art as providing special access to the human mind that can bypass reason to shape the soul. Two millennia later, artists of the 'modernist' movement in architecture and the revolutionary art form of motion pictures had similar visions: in shaping our spaces and images we shape ourselves; humanity is designed. What ideas of art and architecture, of humanity and human nature are at stake? We'll study this theme as it arises in key episodes in the history of cinema and architecture, and in today's transmedia environment.

Degree Requirement Attributes: Dist:ART

HUM 3.02 - Two Empires under the Sun: Han China and the Roman Empire

Two modern superpowers, China and the United States, trace their origins back to ancient China and Rome. The empires of Han China and the Roman Republic/early Principate (3rd century BCE to 3rd century CE) inhabited opposite edges of the Eurasian land mass and shared no common roots. Yet they make for compelling case studies; key documents from written texts to artifacts such as coins,

tombs, murals and inscriptions will help us explore these civilizations' ideas about the universe, empire, family, and the human body. Students will compare the societies, politics, and cultural frameworks of Han China and Rome to see the value of deep historical perspective for understanding the modern world and cultural difference.

Degree Requirement Attributes: Dist:INT or TMV

HUM 3.03 - Fascinating Fascisms of Germany and Japan

In her 1974 essay entitled “Fascinating Fascism,” Susan Sontag argues that the fascism that plunged the world into war in the 1930s and 1940s was in essence an aesthetic mode distinguished by its horrifying blend of sublime beauty with apocalyptic violence. This class will investigate the similarities and differences of two particular brands of fascism (the German and the Japanese) in hopes of identifying and understanding the cultural and ideological dynamic that makes this worldview possible. Wartime Germany and Japan represent two distinct cultural, linguistic and historical constellations and yet in the period in question they shared a surprising number of commonalities: resuscitations of ancient mythologies, discourses of ethnic purity and racial superiority, and confluences of medieval narratives and modernist sensibilities. The instructors hope that the comparison of the disparate contexts that gave rise to such similar wartime cultures will reveal something essential to the fascist condition. Course materials will include fiction, autobiographical writing, film, cultural criticism, anthropological studies, and musical compositions. The class will include Canvas on-line discussions, collaborative learning activities, and a final research paper.

Degree Requirement Attributes: Dist:INT or LIT; WCult:CI

HUM 3.04 - Through Others' Eyes: Muslims and Christians after Charlemagne

This course will examine the dynamic history of the Muslim-Christian encounter. It will focus on pre-modern representations of both the Muslim ‘other’ in Europe and Europeans in the Muslim Mediterranean world. Three texts from different periods – the anonymous *Song of Roland* (1129-65); Amin Maalouf, *The Crusades Through Arab Eyes* (1983); and Ludovico Ariosto, *Mad Orlando* (1532) – in dialogue with historical documents, visual materials and performative elements, will allow cross-disciplinary exploration over a wide temporal arc of the ways Muslims and Christians have creatively processed their complex interdependence. The Mediterranean basin has been a space less of boundaries than of mutual influence, as the many aspects of the sustained Muslim-Christian encounter attest.

Degree Requirement Attributes: Dist:INT or LIT

HUM 3.05 - The Invention of News

Instructor: McGillen, P Ostrau, N

News does not “happen,” it gets made—by human agents, cultural practices, material media, and networks of communication. This course charts the history of the making of news in Europe (with side glances at South America for contrastive focus), spanning from the exchange of rumors in the medieval period to the establishment of national daily papers in the late eighteenth and nineteenth century. At once a media history and a survey of key medieval and early modern textual genres, it explores the rich international media environment in which spoken, sung, handwritten, and printed news interacted and shaped the core features of the newspaper as we know it today. Analyzing genres such as chronicles, sermons, Khipu messages, letters, broadsides, travel writings, and ballads, the course investigates the relationship of news to historiography, theology, administrative practices, political activism, and entertainment. Topics will include news as a prerogative of elites vs. news as a medium of the masses; questions of veracity, manipulation, and trust; the production of news and colonialism; the relationship of news to time; and the emergence and managing of public opinion.

Degree Requirement Attributes: Dist:SOC; WCult:W

HUM 3.06 - The Arab, the Jew, and the Construction of Modernity

Instructor: El-Ariss, Heschel

This course uncovers a lost chapter in the history of modernity, engaging the Middle East in a global context both as object of representation and experimentation but also as incubator of new models of community, literary genres, and historical narratives. From Zionism to Baathism, the 20th century has witnessed the implementation of national projects that can be traced to revivalist movements in the 18th and 19th centuries in Europe and the Ottoman Empire, intellectual and poets writing in Paris, Vienna, Alexandria, and Beirut, imagining new national identities and literary canons. These essays, novels, manifestos, films, paintings, and poems had transformative effects on the Middle East, redrawing its political and cultural map, and redefining what it means to be a Jew or an Arab in the modern age. Examining this map requires a historical and literary inquiry based in comparative models of analysis and case studies.

Cross-Listed as: COLT 53.07 JWST 42.11 MES 17.19

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

HUM 3.07 - Mobs, Crowds, and the People: Activism in Populist Times (in English)

Instructor: Mladek, Gomez

It is no accident that we find ourselves today in the midst of populist unrest. Our course *Mobs, Crowds, and the People: Activism in Populist Times* explores the longstanding history of popular unrest and mobilization, fear of the people in literature, philosophy, theology and film from across three continents. Populism is central to current debates about politics and the future of democracy, from radical right organizations in Europe to left-wing parties and presidents in Southern Europe and Latin America to the Occupy Wall Street Movement, Bernie Sanders, Donald Trump and the “Capitol Riot” in the United States. But populism is also one of the most contested concepts in the humanities and political theory. Is populism an ideology or a revolutionary strategy? A style of politics? And, crucially, who are “the people” in populism?

Cross-Listed as: COLT 63.03 GERM 46.04

Degree Requirement Attributes: Dist:TMV; WCult:W

HUM 3.08 - Friends, Enemies, Lovers: Civil War and Revolution (in English)

Equality, freedom, justice—we tend to think of these values as bringing about reconciliation and unity, as foundational to political communities. But surprisingly, the most canonical thinkers in political theory have favored a different set of concepts: strife and civil war. For Plato, Hobbes, Marx, Arendt, Freud, Lenin, Schmitt, and many others, it is not the social contracts of government and laws that hold people together, but *love* and *hate*, the most intense passions of our closest human relationships. Of course, these passions are highly unstable, which leads us to many of the most profound paradoxes of philosophy and art: Why are tragedies dangerous to public morale and yet indispensable for public education? What do we do when families are torn apart by unreconcilable beliefs? How can a foe be a better friend than your friends? Similarly, the idea of “fraternity,” so central for modern revolutions and the birth of the nation, is fraught with enmity and quarrel. This course will pursue these problematics in key texts of philosophy, literature, and contemporary critical theory, and bring the philosophical paradigm of civil war to bear in relation to US and German culture.

Cross-Listed as: COLT 08.01 ENGL 55.25 GERM 46.05

Degree Requirement Attributes: Dist:TMV; WCult:W

HUM 3.09 - Stolen Histories

Instructor: Julie Hruby; Alexandra Schultz

The course offers a model for ethically engaged inquiry in the humanities. Guided by a working archaeologist (Julie Hruby) and by a literary historian (Alexandra Schultz), you

will take up a series of highly specific cases in which typical methods of investigation and analysis raise questions of proprietary interests, cultural bias, or personal autonomy. At what point do considerations of justice require us to forgo study and analysis? Are there approaches to scholarship that work to counteract the wrongs done by earlier generations of scholars? How can empathy, creativity, and passion give voice to silences in the record and bridge gaps of understanding between communities?

Cross-Listed as: CLST 10.17

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

HUM 4.01 - From Modernism to Postmodernism

Instructor: Milich

Fredric Jameson once described postmodernity as “the effort to take the temperature of the age without instruments and in a situation in which we are not even sure there is so coherent a thing as an ‘age,’ or ‘zeitgeist’ any longer.” Taking the temperature of the age through a comparative reading of modern and postmodern texts, we will try to seize the change from one era and movement to the other by way of elucidating a number of modern and postmodern concepts such as “representation” or “literary self-reflexivity,” “the world as text,” “the death of the author” or “the end of meta-narratives.” Movies, art works, essays and some theoretical texts will enhance the literary readings, which include texts by modern and postmodern writers such as Abish, Fowles, James, Stein, and Woolf. The feature that characterizes and associates the two movements best is their awareness for how form impacts content, or, as Gertrude Stein said, “how writing is written.” The world comes into being and takes shape in the words we use, the texts we write, the images we produce, the movies we shoot, or the maps we draw to name only some of the signifying systems that give the universe a form.

Degree Requirement Attributes: Dist:LIT; WCult:W

HUM 4.02 - The Sixties

Instructor: Balmer

With the possible exception of the Civil War, no period of American history was more transformative than the era from 1963 to 1974, commonly referred to as “The Sixties.” As the nation mourned its slain president, John F. Kennedy, American society was convulsed with social revolutions ranging from the civil rights movement and the assertion of women’s equality and gay rights to the emergence of a counterculture and its assault on traditional institutions. The era witnessed both Freedom Summer and the murders of Medgar Evers, Malcolm X, and Martin Luther King Jr., the assassinations of two Kennedy

brothers, the shootings at Kent State and the emergence of Richard Nixon's Southern Strategy and his Silent Majority.

This course will be organized chronologically, with approximately one week devoted to each of the years of "The Sixties." Each week, lectures will provide the historical context, supplemented by a sampling of the music, art, and literature characteristic of the era.

Degree Requirement Attributes: WCult:W

Jewish Studies

Chair: S. Heschel

S. Heschel (JWST), S. Kan (ANTH), L. D. Kritzman (FRIT), T. El-Ariss (MES); Associate Professors, R. Feldman (REL), V. Fuechtner (GERM), Y. Komska (GERM), A. Simon, (MES), J. Smolin (MES), M. F. Zeiger (ENGL); E. Fishere (MES), S. E. Kangas (ARTH), B. S. Kreiger (ENGL), K. F. Milich (COLT); Lecturers, B. Avishai (GOVT), A. Ben-Tov (JWST), A. Ludewig (JWST), R. Greenblatt, (JWST)

The Jewish Studies Program serves to provide a multi-disciplinary focal point for the various courses in Jewish history, religion, literature, and culture that are offered at Dartmouth as well as to sponsor special course offerings (including those by the annual Brownstone Visiting Professor) and a variety of academic activities related to the discipline. The program currently offers a major and a minor.

To view Jewish Studies courses, click here (p. 522).

Jewish Studies Major

Students will take ten courses for the major in JWST. We urge students to complete a range of courses, including literature, history, politics and religion, and ancient, medieval and modern Jewish history, culture and thought. We require majors to write a senior thesis over the course of two terms (JWST 86 and 87) or take a one-term independent study (JWST 85) as a culminating experience. This would include writing a major research paper, preferably making use of a foreign language.

All majors are encouraged to participate in the joint JWST/GERM three-week Winterim FSP in Berlin, which offers one course credit towards the major. There is no specific language requirement for the major, though students are encouraged to obtain reading proficiency in Hebrew texts, classical and modern.

All of our courses are cross-listed, and we welcome students modifying the JWST major with appropriate courses from other departments and programs.

Majors should complete at least **one course on the pre-modern era, one course on the modern era, and one specialized seminar**, selecting at least one course from each of the following three categories:

Pre-Modern Era

JWST 6 (Introduction to Judaism) or JWST 10 (History and Culture of the Jews: Antiquity and Medieval) or JWST 4 (Hebrew Bible);

Modern Era

JWST 11 (History and Culture of the Jews: Modern) or JWST 61 (Modern Judaism); or the FSP in Berlin;

Seminar

JWST 44 (Making of the Modern Middle East); JWST 51 (Freud, Jews and Gender); JWST 74 (The Jewish Jesus); JWST 53 (Gender and Judaism); JWST 40 (Politics of Israel/Palestine); JWST 37 (Nazis, Neo-Nazis and Antifa); JWST 13 (Jews and Race); JWST 42 (Arabs, Jews and Constructions of Modernity)

These seminars are regularly offered, once or twice each year. In addition, visiting faculty may offer a seminar on a different topic on a one-time basis that may count toward fulfilling the seminar requirement.

The thesis proposal should be submitted to the JWST chair for approval by the faculty by the Spring of the student's third year. Once approved, the student should enroll in JWST 86 and 87 in two terms of the senior year. The thesis should be submitted by week four of the Spring term. At least three faculty in JWST will read the thesis. The student will present the thesis to JWST faculty and interested students; the thesis grade will be recommended by the student's advisor and approved by JWST faculty.

Jewish Studies Minor

The minor is designed to offer a general introduction to the historical and cultural experience of Jews throughout the world, and to Jewish thought, literature, and contemporary political and social issues.

Requirements: A total of six courses, including one from the pre-modern era and one from the modern era

JWST - Jewish Studies Courses

To view Jewish Studies requirements, click here (p. 522).

JWST 4 - Religion of Israel: The Hebrew Bible (Old Testament)

Instructor: Lanfer

An introduction to the religion of ancient Israel through an examination of a number of the books of the Old Testament (Hebrew Bible), including Genesis, Exodus, Joshua, Samuel, the Psalms, Job, and the prophets. Attention will also be given to the religion of Israel's Phoenician and Mesopotamian neighbors. Open to all classes.

Cross-Listed as: REL 004

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 5.01 - Homelands and Diasporas: Russian Jews on Three Continents

Instructor: Kan

Drawing on a variety of disciplines, such as anthropology, history, sociology, political science, and cultural studies, and sources ranging from academic works to works of fiction and films, the course first explores the history and culture of Russian (pre-1917) and especially Soviet Jews (1917-1991)—a major and significant segment of the world Jewry—prior to the massive immigration of the 1970s-1990s. The rest of the course involves a comparison of the experience of Russian-speaking Jews in the three major countries they have immigrated to—Israel, US, and Germany—as well as those remaining in Russia today.

Cross-Listed as: ANTH 50.41 COCO 033 EEER 38.15

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

JWST 6 - Judaism: Sacred Texts and Ritual Life in Diaspora

Instructor: Feldman

This course introduces students to the study of Jewish scripture, mystical, philosophical, and legal texts while also providing opportunities to observe Jewish ritual life in-person. The dynamic interaction between sacred text and ritual expression will be examined as students encounter Jewish themes of exile, diaspora, peoplehood, holiness, and 'tikkun olam' (world-fixing) across historical time periods and in a variety of Jewish cultural contexts (Middle East, North Africa, and Europe).

Cross-Listed as: REL 006

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 10 - History and Culture of the Jews I: The Classical Period

Instructor: Greenblatt

A survey of the history and culture of the Jews from the post-Biblical period to the Middle Ages.

Cross-Listed as: HIST 94.08 MES 16.15

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

JWST 11 - History and Culture of the Jews II: The Modern Period

Instructor: Markowski, Ludewig, Caplan

A continuation of JWST 10, but may be taken independently. This course provides a survey of Jewish history and culture from the European enlightenment to the establishment of the State of Israel.

Cross-Listed as: HIST 94.09

Offered: Fall, Summer, Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

JWST 11.02 - History and Culture of the Arab-Jews

This course examines the history, social characteristics, and cultural identity of the Arab Jews. One of the goals of the course is to examine the question "who is an Arab Jew?" What perceptions and definitions relate to the differences between Sephardi, Mizrahi, and Arab Jews? What is Arab Jewish history and what is its place in Jewish, Middle Eastern, and Israeli historiography? An examination of these questions requires an understanding of the history of the Arab Jews in different periods and different geographical and cultural spaces, against the background of transitions in imperial, colonial, and national rule.

Cross-Listed as: MES 12.15

Degree Requirement Attributes: Dist:INT or SOC

JWST 12.02 - Jewish Literatures in Latin America: Belonging Beyond Borders

Instructor: Zepp-Zwirner

This course presents a fresh and historically grounded exploration of the concept of belonging in Latin America, with a focus on the rich and varied body of the continent's Jewish literatures. Rather than relying on essentialist or strictly national definitions and perspectives, we will delve into the diverse ways Jewish experiences have been creatively represented in literary works across the continent.

Cross-Listed as: COLT 52.10 SPAN 60.06

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:W

JWST 12.19 - The Global War on Terror

Instructor: S.Simon

In this course we will explore this phenomenal war, examining the reasons for its long duration, broad scope and heavy cost for the combatants and noncombatants who bore the brunt of the battle. With the advent of a new administration and apparent resurgence of the Islamic State in Syria, where the US still deploys two thousand troops, this course is exceptionally timely. There will be guest speakers drawn from the US national security community.

Cross-Listed as: GOVT 50.25

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC

JWST 13 - Jews and Race

The question of Jewish difference has been foundational in the formation of both Christendom and Islam. Of course, the question of race, and the racialization of the Jews, is often thought to be modern phenomenon when Race Science became prominent in the nineteenth century. But lately scholars have begun to re-think the category of race in connection with modernity and to reconsider race as a construct that extends back at least into the Middle Ages.

This course will look at the long historical trajectory of Jews and race, beginning in the Middle Ages and focusing primarily on European modernity, America, including the complex alliance of Jews and Blacks from slavery to BLM, the role of race in the Israeli/Palestinian conflict and the rise of Islamophobia. The goal of this course is to better understand the nature of Jews as a *genos/race/ethos/people* as they are labeled by others as well as how they self-identify. Jews identified as a “race,” and were identified as such by others, until the 1930s, after which *ethnos* served as a substitute. The question of “whiteness” loomed large for Jews in America; are Jews white, and if so, what are the implications of their “whiteness”? Finally, we will explore more recent iterations of this vexing issue in contemporary politics that includes “Jews of Color,” Zionism, Israel/Palestine, conversion to Judaism, and progressive politics in America.

Cross-Listed as: AAAS 65.06 SOCY 49.25

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

JWST 20.01 - German-Jewish Exile Literature (in English)

Instructor: McGillen

The rise of fascism in Europe resulted in the displacement of countless Central-European Jews, who sought refuge in France, Switzerland, Sweden, Istanbul, Palestine, and above all in the United States. This course explores how German-Jewish writers, artists, and intellectuals responded to the condition of exile during the period of National Socialism and its aftermath. These writers constituted what

Erika and Klaus Mann called “The Other Germany” by carrying forward the avant-garde possibilities of Weimar culture and offering political resistance to the Nazi regime from outside of Germany. Yet they were also confronted with the challenges of exile, including homelessness, alienation, and the struggle to form communities, along with painful questions about their own German identity and their relationship to the German language.

Examining works by Arendt, Mann, Brecht, Benjamin, Auerbach, Kracauer, Lasker-Schüler, Seghers, Sachs, Celan, Adorno, Werfel, Zinnemann, Lorre, and Schoenberg, the course will address key topics raised by the German-Jewish experience of exile, including nostalgia, loss, antisemitism, the corruption of the German language by National Socialism, bilingualism, the political significance of the refugee experience and resistance to fascism, the complex image of America in the works of German-Jewish refugees, and the religious meanings of exile.

Cross-Listed as: GERM 42.14

Offered: Summer.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:CI

JWST 21.02 - Modern Jewish American Women Writers

Instructor: Zeiger

This course will explore the literature of Jewish American women from the late nineteenth century to the present; topics for discussion will include feminism, sexuality, identity politics, activism, and literary transmission. Among the readings will be poetry, fiction, memoir, and essays by such writers as Lazarus, Antin, Yeziarska, Stock, Stein, Olsen, Rukeyser, Paley, Ozick, Rich, Piercy, Levertov, Gluck, Goldstein, Wasserstein, Goodman, Klepfisz, Feinberg, Chernin. *Enrollment limited to 20.*

Degree Requirement Attributes: Dist:LIT; WCult:CI

JWST 25.03 - Curious George: A Secret History (in English)

Instructor: Komska

Where do children’s book characters come from? The answer seems obvious: from their creators’ imaginations! This was certainly how the German-Brazilian-American-Jewish serial migrants Margret and H. A. Rey liked to describe their creation, the “monkey” (rather, a correctly drawn young chimpanzee) Curious George. However, Curious George’s origin is anything but clear. In this course, we will trace the figure’s history, some of it completely unknown or misunderstood. In lectures, field trips, and lab-style archival forays, we will learn about the facts and fictions of colonial animal trade in Germany’s north, where the authors were born; about the upkeep of

apes in public and private zoos on three continents; about ape taming and circus spectacles; about press coverage of ape escapes; about the reception of Darwinism in Germany and about the Reys' interest in primatology; about the authors' own flight from Nazi-occupied Europe and their attention to war-displaced animals; and about simians as metaphors for human otherness and marginality. This course is delivered in English in a lecture/discussion format. Open to all classes.

Cross-Listed as: GERM 016

Degree Requirement Attributes: Dist:LIT; WCult:W

JWST 26 - European Jewish Intellectuals

Instructor: Kritzman

The course will examine the role of the Jewish intellectual in twentieth central Europe. We shall focus on several paradigmatic figures (Arendt-, Benjamin, Adorno, Levinas, Derrida) who confront the redefinition of politics and civil society in modern times. Some attempt to deal with these changes through a critical reflection on the concepts of democracy and ethics and on how justice can be practiced either within or outside of the geographical and spiritual boundaries of the modern nation state. We shall examine how Jewish self-consciousness and a deep attachment to biblical tradition enables these intellectuals to reconcile ethical imperative with political realities. Particular attention will be paid to topics such as the challenges of Eurocentric Christian humanism and universalism to Jewish assimilation; the promises of totalitarianism, Marxism and messianism; the politics of biblical exegesis; history and Jewish mysticism; Zionism, anti-Zionism and the Arab-Israeli conflict.

Cross-Listed as: COLT 70.03 INTS 17.14

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 26.01 - Heidegger and Jewish Thought

The German philosopher Martin Heidegger is a paradoxical figure that embodies the ambivalence of modern Western philosophy. *On the one hand*, Heidegger is one of the most influential philosophers of the 20th century, who already during his lifetime inspired generations of students and many other great philosophers worldwide, in the fields of ontology, phenomenology, existentialism, hermeneutics and inter-cultural philosophy. He has more specifically been a key inspiration for many authors to explore ways of thinking beyond Western philosophy, in other traditions of thought, such as the Japanese, Chinese, Indian, Islamic and Jewish. On the other hand, Heidegger was involved in the early movement of National Socialism and held anti-Semitic positions, as recently published in the last decade. This seminar will explore the riddle of Martin Heidegger, first by exploring

his basic ideas, as formulated in his most important work, *Being and Time* from 1927; and then by exploring ways in which these ideas influenced Jewish thinkers, who received and adopted them, but also problematized, criticized and adjusted them. We will see how the work of Martin Heidegger functioned – and functions still – as a source for a renewal of contemporary Jewish thought beyond Western philosophy.

Cross-Listed as: REL 19.40

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 27.01 - The Jewish Family

Instructor: Kritzman

This course will explore the various narrative forms - novel, short story, essay, self-portraiture, drama, film, television (situation comedy) - in which the Jewish family is represented. In an attempt to transcend cultural stereotypes, we will examine how the rhetorical configurations of texts describe the varieties of Jewishness and the significance of Jewish cultural identity as embodied in the family. Special attention will be paid to the rewriting of biblical texts in twentieth century literature and the ethical issues they dramatize (particularly the keeping of the covenant). Examples will be drawn from a variety of literary traditions: American, Brazilian, French, German, Hebrew, South African, and Yiddish.

Cross-Listed as: COLT 46.01

Degree Requirement Attributes: Dist:LIT

JWST 34.03 - German-Jewish History (in English. Fall)

Instructor: Caplan and Komska

This course is an immersion in the interdisciplinary approach to the history, culture, religion, and philosophy of Jews in Berlin, Prussia, Germany, and Central Europe from the late 18th century to the present day that will include reading primary and secondary sources and visiting the actual sites where the historical events occurred. Students participate in this course on-campus and then engage with the course during a three-week immersion off campus after the end of the exam period.

Cross-Listed as: GERM 44.06

Offered: Fall.

Degree Requirement Attributes: Dist:INT; WCult:CI

JWST 34.04 - Ukraine, Jews, and the Literature of War

Instructor: Kolomiyets

This course explores the Jewish contribution to, and integration with, Ukrainian culture. It focuses on the writers and poets of Jewish descent whose literary activities span from the early 20th century to the 2020s. We'll develop a consistent vision of Jewish encounter and

participation in Ukrainian modernity, literary and cultural life. The course also embraces and contextualizes Jewish writers who were born in Ukraine and Ukrainian authors of Jewish origin as important participants in the oikumene that shaped them as writers.

Cross-Listed as: COLT 54.01 EEER 38.29

Degree Requirement Attributes: Dist:INT; WCult:W

JWST 34.05 - Jewish Folklore

Instructor: Gronas and Lion

What makes stories and songs necessary to our identity, dignity, and spirituality? This course attempts to answer these questions through the study of Jewish folklore. We'll focus mostly on stories and songs, but also address bordering genres (riddles, proverbs, folk drama). Along with studying Jewish folklore, we will *experience* it by singing songs and enacting a folk-play. This dual approach stems from the backgrounds of the co-teachers, one a scholar, the other a Grammy-nominated songwriter.

Cross-Listed as: EEER 38.24

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

JWST 36.01 - Christians, Jews, and Muslims in the Age of the Crusades

Instructor: MacEvitt

This course will focus on the interactions of the three major religious communities of the medieval Mediterranean—Christians, Jewish, and Muslim—beginning with the First Crusade in 1096 and ending with the arrival of the Black Death in 1347. By examining topics such as pilgrimage, crusade, and jihad, the status of minority communities, and intellectual life, we will explore how Christians, Jews, and Muslims clashed, cooperated, influenced, and misunderstood each other. Open to all classes.

Cross-Listed as: HIST 91.01 REL 033

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 36.04 - The Qur'an in Europe from the Middle Ages to the Twentieth Century

Instructor: Ben-Tov

Since the dramatic emergence of the Arab Empire in the seventh century, Byzantium and the emerging Europe were engaged in warfare, polemics, trade and a fruitful cultural exchange with Muslim polities and societies. This course is dedicated to Christian Europeans' engagement with the Qur'an from the twelfth century to the twentieth. The reasons Europeans read the "Alcoran" or "Turkish Bible" and the consequences of this perusal were as varied as their political, commercial, military and cultural encounters with

the Muslim world. From the despised object of heated polemics, to a storehouse of philosophical and religious wisdom and a masterpiece of world literature, Europe's centuries-long engagement with and re-assessment of the Qur'an is a fascinating chapter in the history of Western thought. In addition to its pivotal importance for understanding the history of Christian-Muslim relations, it offers us a unique vantage-point to study several developments in the religious and intellectual history of Christian Europe and both its pre-modern and modern approaches to religion, culture and non-Christians in Europe and beyond.

Cross-Listed as: MES 17.22 REL 28.08

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

JWST 37.02 - Nazis, Neonazis, Antifa and the Others: Exploring Responses to the Nazi Past (in English)

Instructor: McGillen

Why do the Nazis remain the world's epitome of evil? What did they actually do? And how specifically are they remembered, depicted, emulated, despised or ignored since the catastrophes of the mid-twentieth Century? In this course we will examine the main events connected with the Second World War, the genocide of European Jewry and Roma-Sinti, forced resettlements of various populations, and the Allied attacks on the German civilian population. We will analyze the different stages of coming to grips with that past on the part of German and some other postwar societies, by examining together a number of controversies like those surrounding the Nuremberg, Frankfurt, Eichmann and Barbie trials, the campaign to build a Holocaust memorial in Berlin, Neonazism, the Wehrmacht photo exhibition, and the current campaign to remember German civilian casualties and losses. Approaching our topic with interdisciplinary and comparative methodology, that is, by utilizing history, journalism, video testimony, music, literature, and art, including film, photography and architecture, students will develop their own perspectives on the formation of postwar German identity and why Nazis remain the epitome of evil. An individual midterm project will allow students to practice the skill of summarizing different sides of a debate, and a final group project will invite students to solidify what they have learned in the course about the formation of national identity by creatively staging a contemporary debate about the Nazi past. This course is delivered in English in a lecture/discussion format. Open to all classes.

Cross-Listed as: COLT 64.01 GERM 015

Degree Requirement Attributes: Dist:LIT; WCult:CI

JWST 40.01 - Politics of Israel and Palestine

Instructor: Avishai, Fishere,

This course explores the century-old conflict as seen from the political structures and changing narratives of Israelis and Palestinians, including the Zionist movement and the responses of the Palestinian Arab community to it; the formation of the Arab national movement as a whole—and within this, the claims of Palestinians before and after the British Mandate; the founding of the state of Israel and the formation of the post-1948 Palestinian national movement; the aftermath of the 1967 war; the start of the Israeli occupation and the latter's impact on Israeli institutions, economy, and political parties; and the Palestine Liberation Organization and the founding of Hamas. We will explore contemporary political and economic developments in light of the global forces operating on the region, and consider the plausibility of a two-state solution.

Cross-Listed as: GOVT 40.09 MES 12.09

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

JWST 40.08 - America and the Middle East

Instructor: Ghattas

The United States has played a major role in shaping the political, economic and cultural development of the Middle East. Oil, global security, Israel's survival, and promotion of democracy, all have drawn the US into the complex politics of the Middle East since the 1920s. This course introduces students to various aspects of this role and the reactions it triggered. It covers the role played by American missionaries and travelers/immigrants around the turn of the 20th century. It analyzes the transformative impact of the discovery of Oil, the establishment of the state of Israel, the Cold War, Turkey's integration into NATO and the US attempts to establish a security regime for the Middle East. It also examines how Americans viewed the Middle East and their role in its life. In addition, the course then takes the students in a *tour d'horizon* of US role in Middle East politics: its involvement in the Arab-Israeli Peace Process, its responses to Radical Islamism and 9/11, the invasion of Iraq and its consequences, the uneasy relationship with a changing Turkey, and its policy of "democracy promotion". It discusses the doctrines defining US role in the region since Truman until Obama's "disengagement". Combining academic books with novels and movies, this course should give students a rounded view of the role and lasting impact of the United States in one of the world's most turbulent regions.

Cross-Listed as: GOVT 20.08 MES 12.04

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

JWST 42.11 - The Arab, the Jew, and the Construction of Modernity

Instructor: El-Ariss and Heschel

This course uncovers a lost chapter in the history of modernity, engaging the Middle East in a global context both as object of representation and experimentation but also as incubator of new models of community, literary genres, and historical narratives. From Zionism to Baathism, the 20th century has witnessed the implementation of national projects that can be traced to revivalist movements in the 18th and 19th centuries in Europe and the Ottoman Empire, intellectual and poets writing in Paris, Vienna, Alexandria, and Beirut, imagining new national identities and literary canons. These essays, novels, manifestos, films, paintings, and poems had transformative effects on the Middle East, redrawing its political and cultural map, and redefining what it means to be a Jew or an Arab in the modern age. Examining this map requires a historical and literary inquiry based in comparative models of analysis and case studies.

Cross-Listed as: COLT 53.07 HUM 03.06 MES 17.19

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

JWST 42.12 - Difficult Conversations on the Middle East

Instructor: Fishere and Smolin

This seminar is designed to equip students with essential skills for engaging in meaningful dialogue across differences. By exploring some of the most controversial topics in the Middle East today, students will learn how to navigate complex, often emotionally charged conversations with empathy and intellectual rigor. The course provides a framework for understanding diverse perspectives, fostering a respectful exchange of ideas, and developing the ability to engage constructively in difficult discussions. Through a combination of case studies, guest speakers, and guided debates, students will enhance their ability to communicate effectively on issues that are both globally significant and deeply personal. Participants will also develop active listening skills and learn how to identify shared values even in polarized contexts, making them more capable of contributing to constructive solutions. By the end of the course, students will have gained valuable insights into the dynamics of conflict and dialogue, skills that are applicable across various fields and contexts.

Cross-Listed as: MES 12.18

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:NW

JWST 44 - The Making of the Modern Middle East

This panoramic course surveys major developments in Middle East history, politics, and society. Covering more than a two hundred year stretch, we will move across an expansive geography encompassing North Africa, the Levant, the Arabian Peninsula, and parts of Central Asia. Throughout this journey, particular attention will be paid to five important themes: imperialism, modernization, nationalism, Islam, and revolution. In the process of navigating these seminal topics, we will develop a more nuanced understanding of the modern Middle East and a greater appreciation for the insights offered by primary sources, from poems and national speeches to songs and motion-pictures, into the region's dynamic past. We will begin with a basic question – what and where is the Middle East? – prior to exploring the impact, importance, and mechanics of empires (Ottoman, French, British). Once elucidating this imperial backdrop, we will study sweeping reforms, struggles for independence, and the fashioning of nation-states, before examining a series of revolutionary moments, America's presence in the Middle East, and the "Arab Spring" and its aftermath. Whenever possible, we will strive to illuminate ordinary people, as opposed to only elite actors, who contributed to the making of the modern Middle East.

Cross-Listed as: MES 2.01 HIST 90.04

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

JWST 44.01 - The Middle East in Film: Picturing the Past and Present

Instructor: Simon

How may films serve as a starting point for revisiting the past and rethinking the present? In what ways may representations of the Middle East differ over time and across places? And why do the stories told by filmmakers in documentaries, historical dramas, and other cinematic productions matter? Movies depicting the Middle East routinely draw mass audiences and consequently shape popular perceptions of the region the world over. The very same films, however, are all too often understood by many people as mere entertainment. In this class, we will consider what movies, if treated critically, may teach us about Middle East history. Beginning with a brief introduction to film and media studies, we will contemplate where the Middle East fits into this field of inquiry. Once establishing how we will approach movies and the Middle East throughout the term, we will navigate a number of key themes together, from war, memory, and migration to (mis)information, revolution, and representation. Along the way, we will watch everything from indie films to big budget blockbusters. Regardless of the exact form these projects assume, all of the pictures we explore will generate debate and discussion around the past

and present. Among the topics we will cover are the Israeli-Palestinian conflict, European colonialism, and America's legacy in the Arab world. To assist us on this journey across the Middle East and well beyond its boundaries, we will engage several primary sources, with motion pictures at the forefront. These thought-provoking items will empower us to partake in conversations that traverse languages, national borders, historical eras, and artistic genres, enabling us to view the Middle East in an entirely new way.

Cross-Listed as: FILM 42.19 MES 15.11

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

JWST 45 - Soundscapes of the Middle East

Instructor: Simon

In recent years, scholars have started to question the conspicuous "silence" pervading many academic works that privilege one sense – sight – to the detriment of all others. This seminar builds upon these long overdue efforts by critically engaging the writings of historians, anthropologists, ethnomusicologists, and media experts with the aim of uncovering how the study of sound may radically enrich our understanding of the modern Middle East. Beginning with an overview of sound studies, we will consider where multi-sensory scholarship on North Africa, the Levant, and the Gulf fits into this burgeoning field of inquiry. After situating the Middle East within a body of literature that is at once innovative and highly interdisciplinary, we will then shift to exploring several key themes, including religion, popular culture, mass media, gender, space, and the environment, in relation to the region's soundscapes. We will listen to audiocassette sermons in Egypt, jazz in Istanbul, and the din of warfare in Iraq, among many other acoustic items, to gain a greater appreciation for the centrality of sound in people's everyday lives and its significance in the domain of Middle Eastern studies.

Cross-Listed as: MES 10.10

Offered: Winter.

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

JWST 51 - Freud: Psychoanalysis, Jews, and Gender (in English)

Instructor: Fuechtner

This course will examine how Freud's own writings, his biography, and his biographers have shaped the perceptions of psychoanalysis as a specifically Jewish theory and practice. Through a reading of Freud's texts on gender, sexuality, and religion, we will trace the connects between psychoanalysis, Jewishness, and gender that have impacted theoretical discussion. We will explore

critique, including Horney, Reich, and Marcuse, and recent debate on the status of Freud in the U.S.

Cross-Listed as: COLT 66.03 GERM 42.06 WGSS 67.01

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:CI

JWST 53 - Gender and Judaism

Instructor: Greenblatt, Feldman

Examining the intersections between gender, religious practice, cultural identity, and personal belief, this class will draw upon contemporary gender theory, religious texts and contemporary interpretations of Jewish thought and culture to examine the construction of Jewish identity through a feminist lens. Authors will include Alder, Boyarin, Heschel, Gilman, Peskowitz, Levitt and Biale. The class will also investigate questions of race, ethnicity, assimilation and Jewish gender issues in popular culture, including films and the work of performers Cantor, Benny, Berg, Midler, and Sandler.

Cross-Listed as: REL 19.22 WGSS 33.03

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:CI

JWST 60.02 - Modern Sex: Weimar Republic Germany 1918-1933 (in English)

Instructor: Fuechtner

This course explores conceptions of gender and sexuality in Weimar Republic Germany – up until today considered the “laboratory of modernity.” After a general introduction into Weimar Republic history and culture through the eyes of the American graphic novel Berlin: City of Stones, we will examine a variety of historical practices, theoretical reflections and artistic representations. We will read pioneering theoretical texts from the fields of psychoanalysis and sexuality (e.g., by Magnus Hirschfeld and Wilhelm Reich) as well as literary texts (e.g., by the poet Else Lasker-Schuler). We will also analyze feature films (e.g., the silent film “Different from the Others”) and artwork (e.g., by George Grosz and Hannah Hoch) and discuss the status of the women’s and gay rights movements, and legislation concerning gender and sexuality. The class will focus on the close connections between political and cultural movements and also relate our readings to discussions of modernity and urbanity in general. Throughout this course we will investigate different perceptions and representations of sexuality, homosexuality, transvestitism, sexual reproduction, prostitution, marriage and love. These theoretical discussions and artistic representations still continue to impact our discussions today, e.g., in political controversies about abortion or gay marriage.

Cross-Listed as: GERM 42.15 WGSS 67.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

JWST 61 - Modern Judaism

Instructor: Heschel

This course will trace the ways Jews in modernity made sense, challenged, adopted, and adapted modern thought, culture, and politics in their recalibration of Judaism. The role Jews played in modernity is well-known. But how did Jews re-think Judaism in ways that enabled it and them both to survive the challenges of modernity and also retain a sense of difference enough to enable Jews to assimilate yet not disappear. In this course we will look at some of the major trends and thinkers from the 17th through the 21st centuries as they struggled to reinterpret Judaism for the modern age. Open to all classes.

Cross-Listed as: REL 22

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 62 - Jewish Mysticism

The course examines the nature of claims to mystical experience or knowledge that appear in various aspects of the Jewish tradition, with primary focus on the enchanted and demonic worlds of the Kabbala. Forms of ecstasy and magic will be studied, along with their theoretical and social backgrounds and their impact on elitist and popular Jewish practice. Open to all classes. Not open to students who have received credit for JWST 07.08.

Cross-Listed as: REL 023

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 67.03 - 1967: The War That Never Ended

Instructor: Smolin and Heschel

The June 1967 War was perhaps the single most important event in the history of the modern Middle East, fundamentally altering not only the geo-politics and ideologies of the region but also the lives of its peoples and their religious convictions. This interdisciplinary course will examine the war and its aftermath from the perspectives of Israelis, Palestinians, and Arabs with attention to the ways in which the war altered the Cold War and the self-understanding of Jews outside the State of Israel. How did post-World War II politics produce the march to war? How was the war experienced by the various actors? Why was it such a euphoric victory for the Israelis and a shattering defeat for the Arabs? How has its legacy haunted the politics, history, and culture of the region in the decades since? This course will examine a wide variety of source material, including films, fiction, memoirs, and historical accounts, to seek to answer some of these questions. Some background in the history of the modern Middle East and in modern Jewish history and religion would be helpful but is not required for this course.

Cross-Listed as: MES 12.17

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

JWST 72 - History of Heaven

Instructor: Wright

This course presents an examination of the origins and early evolution of images of the afterlife among the ancient peoples of the Mediterranean basin and Near East. The course will focus on ancient Israelite, biblical, and early Jewish and Christian images. Later developments of these images within Western religions will also be discussed.

Cross-Listed as: REL 57.06

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

JWST 74.01 - The Jewish Jesus

It is certain that Jesus of Nazareth lived in the first century C.E. and that his followers interpreted his life and death as harbingers of a new age. However, recent scholarship has made clear that Jesus was fully embedded in the Judaism of his time: the Jewish diversity of the period and Jewish resistance to the Roman Empire. This course examines the life of Jesus the Jew prior to the early Church's interpretation of Jesus as Christ; modern Jewish and Islamic views of Jesus, as well as his portrayal in contemporary film and art, will also be explored.

Cross-Listed as: MES 17.08 REL 57.02

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:W

JWST 85 - Independent Study and Research

Instructor: individual faculty

This course offers qualified students of Jewish Studies the opportunity to pursue work on a topic of special interest through an individually designed program. Requires permission of the instructor and the Chair.

Offered: Fall, Spring, Summer, Winter.

JWST 86 - Senior Thesis Part 1

Instructor: Heschel

Students are awarded one course credit for successful completion of JWST 87. Students register for JWST 86 and receive a grade on "ON" (ongoing) at the end of the term. Students then register for JWST 87 the subsequent term to complete their coursework. A final grade will replace the "on" upon completion of JWST 87.

Offered: Winter.

JWST 87 - Senior Thesis Part 2

Instructor: Heschel

Students are awarded one course credit for successful completion of this course. Students who have registered for JWST 86 register for JWST 87 to complete the coursework. A final grade will replace the "on" for JWST 86 upon completion of this course for a total of 2 credits for JWST 86 and JWST 87.

Offered: Spring.

Language and Advanced Language Study Abroad Program

Departments of French and Italian, German Studies, Russian, and Spanish and Portuguese, and the Asian Societies, Cultures and Languages, and Middle Eastern Studies interdisciplinary programs are included in this section. .

A student may choose to satisfy the Language Requirement through a combination of two preparatory courses at Dartmouth and one term of study abroad. It is preferred that students take the preparatory courses as close to departure as possible. After satisfactory completion of the required language prerequisite, the student will spend one term abroad studying the language and culture. Language Study Abroad (LSA) is available in France, Germany, Italy, Argentina, or Spain.

Advanced Language Study Abroad (LSA+) is available in Brazil, China, France, Italy, Japan, Morocco, and Russia. Students must have the equivalent of language 3.

Possible enrollment is limited by the number of spaces available; all students who wish to participate in an LSA or LSA + program must receive the department's minimum grade in Arabic, Chinese, French, German, Italian, Japanese, Portuguese or Spanish in their preparatory course or courses. Students will be selected on the basis of their application forms and letters of reference; actual participation is subject to maintenance of satisfactory academic standing. Admission to these programs cannot be guaranteed. Formal applications are available online from the Guarini Institute's website. It is the student's responsibility to contact Guarini Institute for application deadline information. Students interested in an LSA but unable to participate in their second year for curricular reasons should review the Regulations section of this catalog.

Latin American, Latino and Caribbean Studies

Chair: Professor Desirée J. Garcia

Professors: Mary K. Coffey (Art History and LALACS), Desirée J. Garcia, Matthew J. Garcia; ; **Associate Professors:** Reighan A. Gillam; **Assistant Professors:** Jorge E. Cuéllar, Marcela A. Di Blasi; **Visiting Professors:** Peter DeShazo, Christina Gómez; **Senior Lecturer:** Douglas J. Moody; **Lecturers:** Mario R. Machado ; **Fellows:** Sofia J. Chavez, Lyrienne E. Gonzalez (Chavez Fellowship), Henrique Yagui Takahashi (Andrew W. Mellon Postdoctoral Fellowship).

Latin American, Latino, and Caribbean Studies (LALACS) is an interdisciplinary department. LALACS offers the opportunity to take courses in the social sciences, humanities, and interdisciplinary studies that examine borders and borderlands, race and representation, film and media, literature, visual arts and art history, food systems and climate, and history across the Americas. An exchange program in Havana, Cuba and a Foreign Study Abroad program in Brazil provide international experiences for students.

We offer a major, modified major, and minor that involve introductory and more advanced courses and are designed to ensure both a broad exposure to Latin American, Latino, and Caribbean Studies and the theoretical and empirical rigor of study in a single discipline or area of scholarship.

Major Requirements

One Prerequisite

- Demonstrated Language Competency in Spanish or Portuguese equivalent to:
- [SPAN 3](#) or [PORT 3](#). Must be satisfied before the end of the sixth term.

Ten Required Courses

- Two survey courses from the following:
 - LACS 1 Introduction to Latin America and the Caribbean
 - LACS 2 (old LATS 5) Complexities of Latino Identity
 - LACS 3 (old LATS 3) Introduction to Latino Studies

- LACS 4 History, Culture and Society: The Many Faces of Latin America

- Seven LACS courses

- Four of the seven courses must constitute a concentration that reflects a disciplinary or scholarly focus.

- One LACS Senior Seminar course that serves as the Culminating Experience in the fall of senior year.

Two courses from the Cuba FSP, the Spanish FSP in Argentina, or the Portuguese FSP in Brazil, may be counted toward the LACS Major.

Modified Major Requirements

The Modified Major consists of six LACS courses plus four courses above the prerequisite level in one or more other department(s) or program(s). A written rationale including an explanation for how all courses meet the requirements of a unified and coherent modified major must be submitted.

One Prerequisite

- Demonstrated Language Competency in Spanish or Portuguese equivalent to:
- [SPAN 3](#) or [PORT 3](#). Must be satisfied before the end of the sixth term.

Ten Required Courses

- One survey courses from the following:
 - LACS 1 Introduction to Latin America and the Caribbean
 - LACS 2 (old LATS 5) Complexities of Latino Identity
 - LACS 3 (old LATS 3) Introduction to Latino Studies
 - LACS 4 History, Culture and Society: The Many Faces of Latin America
- Four LACS courses from at least two different regions.

- One LACS Senior Seminar course that serves as the Culminating Experience in the fall of senior year.

- Four courses above the prerequisite level in one or more other department(s) or program(s).

Minor Requirements

Six Required Courses

- Two survey courses from the following:

- LACS 1 Introduction to Latin America and the Caribbean
- LACS 2 (old LATS 5) Complexities of Latino Identity
- LACS 3 (old LATS 3) Introduction to Latino Studies
- LACS 4 History, Culture and Society: The Many Faces of Latin America

- Four LACS courses from at least two different regions.

Modified Major with LACS as the Secondary Department Requirements

Five Required Courses

- One survey courses from the following:

- LACS 1 Introduction to Latin America and the Caribbean
- LACS 2 (old LATS 5) Complexities of Latino Identity
- LACS 3 (old LATS 3) Introduction to Latino Studies
- LACS 4 History, Culture and Society: The Many Faces of Latin America

- Four LACS courses from at least two different regions.

Honors Program

Senior Honors Project Requirements and Application Process

- 1.

Have two completed survey courses before the end of your junior year from the following.

- LACS 1 Introduction to Latin America and the Caribbean
- LACS 2 (old LATS 5) Complexities of Latino Identity
- LACS 3 (old LATS 3) Introduction to Latino Studies
- LACS 4 History, Culture and Society: The Many Faces of Latin America

1. Meet the minimum grade point average (GPA) of 3.3 for all Dartmouth courses and 3.3 in the LACS Major.
2. Obtain a faculty advisor.
3. Write a project proposal, have it signed by your faculty advisor, and submit it to the LALACS Dept. Administrator by May 15 of the junior year.
4. By week 9 of fall term of the junior year, submit a five-to seven-page project prospectus to the LALACS Dept. Administrator to be reviewed and approved by the LALACS Dept. Steering Committee.
5. Enroll in LACS 98 in the fall of your senior year, and LACS 99 in the winter. If necessary, LACS 99 may continue in the spring term. In this case, a grade of ON (ongoing) will be assigned for LACS 99 for the winter term, and the final grade will be assigned at the end of the spring term.
6. Honors Projects must be completed by the eighth week of spring term of the senior year. Students missing this deadline may be liable to lose eligibility for honors.

Associated Courses for LACS

LACS - Latin American and Caribbean Studies Courses

ASSOCIATED COURSES FOR LACS/LATS

ASSOCIATED COURSES FOR LACS/LATS
Courses with a central focus on Latin America, Latino and the Caribbean offered by various departments. These classes count toward the LACS/LATS major.

Anthropology 35: Maya Indians under Mexican and Guatemalan Rule
 Anthropology 37: Legacies of Conquest: Latin America
 Government 80: Readings in Government
 Portuguese 12: Introduction to Brazilian Literature
 Portuguese 20: The Portuguese-Speaking World and its Literatures and Cultures: The Definition of an Identity
 Portuguese 25: Advanced Portuguese Composition
 Portuguese 35: Advanced Studies in Brazilian Culture and

Society (DFSP)

Portuguese 36: Studies in Contemporary Brazilian Literature (DFSP)

Portuguese Courses listed below: count when main content is Brazil

Portuguese 60: The Portuguese-Speaking World: Literature and Culture by Period

Portuguese 60.03 America & the Oblique Gaze

Portuguese 61: The Portuguese-Speaking World: Genre

Portuguese 62: Film, Media, Performance and the Arts in the Portuguese-Speaking World

Portuguese 63: Special Topics: Literary and Cultural Productions in the Portuguese-Speaking World

Portuguese 80: Seminar

Portuguese 87: Independent Study

Spanish 33: Argentine Civilization: Society, Culture and Politics in Argentina

Spanish 35: Studies in Spanish-American Literature & Culture

Spanish Courses listed below: count when main content is Latin American/Latino.

Spanish 40: Hispanic Literature by Culture and Period

Spanish 43.05: Drawn to Resist: The Latin American Comics

Spanish 45.02: Diaspora and Economic Imaginaries in Hispanic Caribbean Literature

Spanish 50: Politics of Masculinity: Latin American Narrative, Film and Politics

Spanish 50.01 Of Macho and Malinches

Spanish 55: Hispanic Literature, Culture, and Politics

Spanish 55.04 Humor and Politics in Latin American Literature, Film and Culture

Spanish 55.06 Slaughterhouses. The Life and Death of Humans and Animals in the Southern Cone

Spanish 55.07 Revolution and Art in Mexico

Spanish 55.08 The New Argentine Short Story

Spanish 55.09 Revoltosos/as: Forms of Rebellion and Revolution in Imperial Spain and Spanish America

Spanish 60: Race and Ethnicity in Hispanic Studies

Spanish 63: Latin American Film Studies

Spanish 63.01 Latin American Film

Spanish 63.05 Latin American Film: Brazil

Spanish 65.05 Staging Globalization in Latin America

Spanish 65.06 Crossing the US-Mexico Border: Myths and Icons of Hybridity

Spanish 65.07 Staged Rebellions: Dissidence in Latin American Theatre

Spanish 65.08 War Pics: Photography in 19th Century Latin American Conflicts

Spanish 80.05 Senior Seminar, Latin American

LACS - Latin American and Caribbean Studies Courses

To view Latin American and Caribbean Studies requirements, click here (p. 530).

LACS 1 - Introduction to Latin America and the Caribbean

Instructor: R. Gillam

This interdisciplinary course introduces students to the geographical conditions, historical roots, and enduring cultural diversity of Latin America and the Caribbean. After a brief survey of the physical and cultural geography of the region, the course examines the history of selected countries to highlight the way European conquest and colonialism have molded Latin American institutions and attitudes. The course then turns to particular case studies of contemporary life and society to analyze the ongoing problems of ethnicity, inequality, and political repression engendered by the region's colonial past. Finally, the course draws on these historical and anthropological understandings to assess recent economic, social, and political developments in Latin America. By juxtaposing historical realities with their living consequences, the course presents a multi-disciplinary perspective on the nature, dynamics-and future prospects-of the many peoples who inhabit this vast and diverse continent.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 2 - Complexities of Latino Identity

Instructor: M. Machado

The Latino population currently consists of approximately 40 million people in the United States; by the year 2050, the Census estimates that the Latino population will make up at least 25 percent of the total U.S. population. This diverse group traces its origins to a variety of countries. Their experiences and identities in the United States are quite varied. This introductory course examines the experiences of reception, settlement, and transnational lives of various Latino groups - Chicanos, Puerto Ricans, Cubans, Dominicans, Central and South Americans - in the United States. By using interdisciplinary research, this course explores issues of race, class, gender, migration, and representation of group politics.

Cross-Listed as: LATS 005 SOCY 044

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

LACS 3 - Introduction to Latino Studies

Instructor: M. Di Blasi

This course provides students with a critical overview of some of the most central themes and issues that have shaped the experiences of Latina/o populations in the U.S. The main areas of inquiry that this course will address include: the history of ethnic communities, the formation of transnational communities and identities; the politics of language and bilingualism; race, class, and ethnicity;

gender and sexuality; political and social movements; geographic space and localities; and media and popular culture. In order to foster an interdisciplinary and hemispheric approach to Latina/o Studies, course materials will draw from the social sciences and the humanities, as well as from U.S. and Latin American scholarship and cultural traditions. This course will serve as a general introduction to the more focused areas of study developed in intermediate and upper level LATS.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 4 - History, Culture and Society: The Many Faces of Latin America

The Spanish discovery and conquest of this continent created Latin America and the Caribbean out of the diverse and complex realities of the pre-Columbian world. Since colonial times Latin American and Caribbean cultures have developed against a background of cultural repression, racial conflict, political domination, colonial exploitation, and gender inequality. And yet, in the midst of all this turmoil, Latin America and the Caribbean have produced an extraordinary variety and wealth of artistic creations, ranging from literature to the visual arts, from music to film. In this course we will turn to some of the works by Latin American and Caribbean artists and writers in an attempt to illuminate and explore some of the wonders of the cultural dynamics that shape the many faces of what we call Latin America and the Caribbean.

Cross-Listed as: AAAS 16

Degree Requirement Attributes: Dist:LIT; WCult:NW

LACS 7 - First Year Seminars in Latin American, Latino and Caribbean Studies

Instructor: R. Gillam

Consult special listings

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

LACS 20.01 - Latina/o Social Movements

People of Latin American descent (aka “Latina/os,” or the gender neutral, more inclusive “Latinx”) have been at the forefront of a variety of social movements over the last century. In some cases, they have insinuated themselves into existing movements, while in others, they have built movements that uniquely speak to their concerns as soldiers and anti-war activists, undocumented residents, racial minorities, farm workers and/or perceived impediments to economic progress. Always, they have asserted their rights to protest. Frequently, they have taken these actions regardless of their citizenship status. This class charts the growth of these movements and anticipates

the future of social protest and Latinx politics in the United States.

Cross-Listed as: HIST 31.01 LATS 020

Degree Requirement Attributes: Dist:SOC; WCult:W

LACS 20.02 - Migrant Los Angeles

This course will focus on the history, culture and literature of Los Angeles, California, the second largest city in the United States. We will briefly examine its founding in the eighteenth century as a Northwest outpost of the Spanish empire in the Americas, and its origins and evolution as a Mexican pueblo and U.S. city in the nineteenth century. The majority of our attention will be on the historical and contemporary struggles of people who have migrated to greater Los Angeles to create the unique, multiethnic, multiracial metropolis.

Cross-Listed as: HIST 31.03

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 20.03 - Mexicanidad: Race/Raza, (trans)Nation, and Mexican(o/a/x) Cultural Identity

Since the Mexican Revolution (1910-17), artists, intellectuals, and state-actors have endeavored to define and re-define Mexican national identity, or what is known as *Mexicanidad*. From the 1920s and 30s, when an emphasis was placed on Mexico’s rural and indigenous populations to the 1940s and 50s, when greater attention was given to Mexican modernization, through the years after 1968, when artists and intellectuals endeavored to reveal the repressive nature of *Mexicanidad* and its role in propagandizing an authoritarian state and ruling party, to the 1990s when any consensus about the nation dissolved under the pressures of neoliberalism, state and narco-violence, free trade and labor migrations, and the rise of new social movements from Zapatismo, queer, feminist, and environmental activism. In this course we will place artists like Jose Clemente Orozco and Frida Kahlo within a broader visual cultural context that includes not only mural art and painting, but also sculpture, architecture, printmaking, photography, installation, film, and performance. We will cover art produced in Mexico and “Greater Mexico” from the turn of the 20th century through the “boom” years of the 1990s, with a focus on issues of race, class, gender, and sexuality throughout. The course is organized around themes that brings the past into conversation with contemporary events. Students will learn about the history of Mexican art and develop an understanding of how visual culture participates in the construction of national identity and racial formation as well as how art can critique and queer those constructions. Through weekly discussions, activities and group work, they will enhance skills in the visual analysis of modern and contemporary art and refine their ability to write effectively. This course has no pre-requisites and requires no prior knowledge of Art History or Mexican art and

history. Not open to students who have received credit for LACS 30.09

Cross-Listed as: ARTH 40.04

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 20.04 - Mexican Muralism

This survey course introduces students to Mexican muralism. Students will learn about the fresco technique and how to visually analyze a mural. We will consider the following themes: cultural nationalism; art and class politics; the legacy of muralism in the US; the ethics of aesthetic indigenism; and the gender politics of public art. Student projects will concentrate on Jose Clemente Orozco's mural at Dartmouth College.

Cross-Listed as: ARTH 63.01

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 20.05 - Mexican Cinema

Instructor: D. Garcia

This course serves as an introduction to Mexican cinema and the global system of filmmaking in which it developed. We will examine the history of Mexican film, filmmaking practices, aesthetics and business concerns, as well as audiences inside and outside of Mexico. One central point of inquiry will be the extent to which Mexican cinema was truly "national." We will question the concept of "national cinema" all the while analyzing the extent to which issues in Mexican politics, society, and culture were reflected on and influenced by the screen. The transnationality of Mexican film will be central to our investigation as we examine the influence of the United States and Hollywood during Mexican cinema's development. Students will learn about the various styles and genres of Mexican film and the theories with which film scholars have interpreted them. Among the filmmakers to be studied are Sergei Eisenstein, Fernando de Fuentes, Emilio "El Indio" Fernandez, Luis Buñuel, Alfonso Arau, Maria Novaro, Natalia Almada, Guillermo del Toro, Alfonso Cuarón, and Alejandro Gonzales-Iñárritu. Proficiency in Spanish is not required.

Cross-Listed as: FILM 42.14

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

LACS 20.06 - Making Video Essays

This course introduces students to the art and scholarship of videographic criticism, the practice of using sounds and images to make arguments about film and television. We will take Latinx cinematic history as our subject and employ videographic methods in order to better understand Latinx representation, performance, stardom, and labor in

Hollywood. The course will be equally split between learning this history and becoming acquainted with the theory and evolution of videographic practice. To understand how these two realms of inquiry intersect, students will create a series of video essays, workshop their creations with peers, and produce a final, sophisticated essay that demonstrates what they have learned.

"Making Video Essays" is an interactive, collaborative course in which students regularly share and receive feedback on their essays. To that end, we will work from a common body of films during the first part of the term. These will include seminal films in the history of Latinx representation in Hollywood that possess rich aesthetic potential for videographic critique. They are: the film noir, *Border Incident* (Mann, 1949); the Western, *High Noon* (Zinneman, 1952); the melodrama, *Giant* (Stevens, 1956); and the musical, *West Side Story* (Wise, 1961). After working closely with these films, students will have the opportunity to choose a different film that will form the basis of their final two essays.

Cross-Listed as: FILM 44.14

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 20.07 - Latinx Stage and Screen

This course will examine the Latinx stage and screen, focusing specifically on musicals that portray Latinx lives. We will focus on canonical works—including *West Side Story*, *Zoot Suit*, and *Hamilton*—in order to deepen our knowledge of their form, production history, historical reception, and contemporary place in American culture. We will take an interdisciplinary approach, drawing our reading assignments from the fields of Ethnic Studies, American Studies, Performance Studies, and Film and Media Studies, in order to analyze these productions as they traveled from stage to screen (and sometimes, back to the stage) and the representational and cultural politics involved in that shift. Finally, we will explore not only the musicals themselves, but also the historiography that has informed our understanding of them. Writing assignments will ask the students to reflect on the evolution of scholarly arguments regarding these canonical works.

Cross-Listed as: FILM 47.29 THEA 10.27

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 20.08 - Latinx-ploitation

This course serves as an introduction to the history of Latinx cinema, Latinx film spectatorship, and exploitation cinema in the United States. Latinx audiences have long been an interest and target of the Hollywood studios. Since the beginning of sound in film, the studios grappled with reaching this linguistically and culturally-diverse demographic. Since the late 20th century, the studios have widely acknowledged the box office power of that group. Time and again, however, the Hollywood industry has

failed to accurately identify and engage Latinx peoples on both sides of the US-Mexico border. Applying theories of racialized spectatorship and performance and film genre and authorship, we will interrogate this historically troubled relationship and grapple with its consequences for Latinx representation and inclusion in American cinema. \f

Cross-Listed as: FILM 41.18

Degree Requirement Attributes: Dist:ART; WCult:NW

LACS 20.09 - Speculative Pasts: Latinx Fantasy

Instructor: M. Di Blasi

In this course we will explore how the genres of speculative fiction envision alternative racial pasts and futures. If science fiction is the genre associated with speculative futures then fantasy is the genre associated with speculative pasts, and so we will ask how these books, television shows, films, and musicians employ the genre of fantasy to ask racial questions about hybridity, historical power structures, and migration. How does Latinx high fantasy re-imagine the colonial encounter and resistance to it? How does Latinx low fantasy employ artifacts, mythologies, and folklore to revisit and reframe the stories that shape identity? In this course, you will be learning how to use close textual analysis as a form of evidence for literary arguments, although not all assignments will require this style of argument.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

LACS 20.10 - Fighting With Your Mother: What generational conflict in Latinx Literature can teach us

Instructor: M. Di Blasi

Without fail, Latinx coming of age narratives involve some kind of fight between the protagonist and their mother. These fights usually stem from generational differences in ideas about religious faith, education, sexuality, labor, and community. Through the tension between mother and protagonist we always learn something about how we as a society perceive threats to an imagined Latinx future. Whether these threats are real or not, they speak to the very different ways we imagined ideal Latinx futurity. This cultural studies course closely examines these fights, tensions, and disagreements in order to better understand Latinx futurity. We will think through these pivotal moments historically, politically, figuratively, and literally in terms of the movement of Latinx people throughout the United States as well as the ongoing role of Latinx cultural production in society.

Cross-Listed as: ARTH 40.04

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:CI

LACS 20.12 - Performing Activism in the Américas

In this course we will examine the intersection of activism and performance in the Americas. "Performance" will refer to a wide range of embodied artistic practices from street theater, community-based theater, site-specific performance art, interventionist art, Hip Hop, and muralism. We will study the ways in which performance has been used as a forum that not only raises political, social, and cultural consciousness, but also interrupts daily life and rehearses notions of community in the 20th and 21st centuries. Theoretical articles on performance and activism will serve to complement the varied modes of performance studied and explicate how they have sparked civic dialogue and social change. We will pay special attention to the ways Latin American and Latino activist practitioners have engaged civil society as well as government and corporate structures through their praxis. Throughout the term, we will revisit the questions: why be an activist, where, how and when; and how can performance be placed at the service of activism. Class discussions and activities will underscore the critical interconnection between theory and practice (praxis). In addition to studying the power of performance as a tool for activism students will have the opportunity to experience hands-on performance techniques that can be used to engage social and political issues of concern to the class. Working in groups, students will take a stance on one of these issues before creating a public intervention. These interventions might draw from street/guerilla theater, installation art, invisible theater, performance art, dance, protest poetry, photography, muralism, or digitally mediated performance. This course is open to all students with or without experience in the arts.

Degree Requirement Attributes: Dist:ART

LACS 20.13 - Migrant Lives and Labor in the Upper Valley: Latinx Studies for Community Engagement

Instructor: D. Moody

This course introduces students to the cultural, social, and political issues surrounding migrant dairy farm labor through a combination of in-class readings and films, as well as a community engagement component at local dairy farms in the Upper Valley. The course readings include social science scholarship and literature, film, and cultural studies readings, through which we will explore a range of issues affecting local, national, and transnational agricultural and dairy farm workers. On a regular basis during the term, Dartmouth students will visit local dairy farms to engage in collaborative projects with the Spanish-speaking migrant farm workers who live and work on these area farms, some of whom have been residents in the region for many years. We consider how historical and contemporary causes and contexts of migration, settlement patterns, labor market experiences, demographic profiles,

identity formations, forms of political participation, structural incorporation, and cultural expressions affect this population of immigrants.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

LACS 20.14 - Representations of/from Latinos in the Media and the Arts

What role do the media and the arts play in the formation of ethnic, racial and cultural identities for Latinos/as? How do Latinos respond to these representations of themselves through various electronic media and the arts? This class investigates how race, ethnicity, gender, and "otherness" are represented in various media and art forms, including: cinema, radio broadcasting, performance art, mural art, graphic novels, and the Internet. We will trace the history of Latinos in various media and artistic movements, as well as hold online discussions and video conferences with students and professionals working in these areas. Students will explore the politics and dynamics of representation by producing their own creative and critical work and presenting it to the Dartmouth community through their final projects.

Degree Requirement Attributes: Dist:ART

LACS 20.15 - Culture and Identity in Modern Mexico

Instructor: P. Voekel

From the Porfiriato and the Revolution to the present, a survey of Mexican society and politics, with emphasis on the connections between economic developments, social justice, and political organization. Topics include fin de siècle modernization and the agrarian problem; causes and consequences of the Revolution of 1910; the making of the modern Mexican State; relations with the United States; industrialism and land reform; urbanization and migration; ethnicity, culture, and nationalism; neoliberalism and social inequality; the problems of political reform; and the zapatista rebellion in Chiapas. Open to all classes.

Cross-Listed as: HIST 087

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 20.16 - Crossing Over: Latino Roots and Transitions

Instructor: C. Gomez; M. Di Blasi

This course focuses on the histories and experiences of Latinx transnational migrants—from Mexico, Central America, Puerto Rico, the Dominican Republic, and Cuba—living in the United States. You will study the historical, political, and economic processes that have led to these migrations, as well as the varying ways in which race/ethnicity, class, gender/sexuality, and citizenship affect Latinx migrant lived experience. Given our focus on

“crossing,” readings will foreground subjects that capture this theme, from the literal movement of people, to the constant back and forth that shapes Latinx lives, to the adjustments Latinx people make given their language, their proximity to other immigrants and communities of color, and their varying acceptance within the United States.

Cross-Listed as: ANTH 12.19 SOCY 043

Offered: Spring, Summer.

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 20.17 - Print the Revolution: Latinx Art and Activism

Instructor: M. Coffey

This class offers beginning, intermediate, and advanced students an overview of activist print culture produced by Latinx artists from the mid-1960s to the present. We will focus on the political *and* aesthetic characteristics of Latinx print culture through object-based study of posters, zines, and prints associated with both community print collectives and fine art print ateliers. Class will meet frequently at the library and Hood Museum of Art to explore print materials in Dartmouth’s collections and to take advantage of *Printing the Revolution! The Rise and Impact of Chicano Graphics, 1965 to Now*, an exhibition at the Hood Museum of Art. Students will engage in hands-on activities at the Book Arts Workshop to produce political posters and zines of their own. In addition to asking “what is Latinx art?” and critically exploring attempts to define, represent, and market the category, we will consider Mexican and Latin American Pop Art antecedents for the aesthetics of Chicano and Puerto Rican Graphic Arts of the 1970s, the role of Queer networks, feminist and punk zines, and prints made by print collectives, including Self-Help Graphics, the Dominican York Print Collective, Justseeds, and Dignidad Rebelde, among others. In addition to the communities and themes identified here, students will have opportunities to identify themes and/or Latinx communities/histories that they want to explore through their individual and group projects and to propose acquisitions of print materials to expand Dartmouth’s collections accordingly. Finally, the class features scholarship by and opportunities to meet and learn from some of the leading Latinx scholars and artists working today. The course adheres to the principles of student-centered design. We will therefore ground our learning in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through peer-to-peer learning collectives. No prior knowledge is required for this course.

Cross-Listed as: ARTH 40.05 LATS 012

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 25.01 - Race & Gender in American Film

This course is an introduction to the history of race and gender in American film. These fundamental social constructs in American life have been central to the development of American film narrative from the beginnings of cinema at the turn of the twentieth century. In turn, American films have profoundly shaped the ways that we think about race and gender and racialized and gendered beings. We will analyze the shifting and situational meanings of race and gender throughout the twentieth century, and in particular, how they have been influenced by the forces of history, including wars, economic depressions, and social movements. While we will focus our attention on Hollywood cinema of the “golden age”, the period from the 1920s-1960, we will also spend significant time considering American independent cinema and the post-classical period of filmmaking from the 1960s to the present. In our consideration of race and racialized peoples, we will include African Americans, Native Americans, Asian Americans and Latinos. Our discussions of gender will be expansive to include not just women and femininity, but men and masculinity as well.

Cross-Listed as: AAAS 32.01 FILM 47.24 LATS 025

Degree Requirement Attributes: Dist:ART; WCult:W

LACS 25.02 - Solo Performance

This course will introduce and engage the history, texts, topics, theoretical guideposts, and landmark figures/performances central to the genre of solo performance. Working between critical examination and practice, participants will analyze the form and content of leading solo performers while also composing a series of short exercises that activate solo performance strategies and methods. The course will culminate in the creation of a participant's self-authored, short solo performance piece.

Cross-Listed as: THEA 025

Degree Requirement Attributes: Dist:ART

LACS 25.03 - Staging Rebellion. Dissidence in Latinx American Theatre

This course follows the history of theatre in the Latinx Americas (encompassing a hemispheric approach) for social change. Students will learn about Theatre of the Oppressed, guerilla theatre in all its forms used throughout Latin America and Latinx communities, playwrights writing about social justice issues, and activist performance. We will focus on plays and performances that have as their central theme rebellion and the rebel as we question the nature of rebellion, its manifestations, and consequences.

Cross-Listed as: THEA 10.68

Degree Requirement Attributes: Dist:ART; WCult:NW

LACS 25.04 - Migrant Nation: Immigration and Racialization in the Making of the United States

Instructor: P. Voekel and B. Moreton

Current public discussions of immigration are deeply rooted in centuries-long conversations about who is allowed into the country and what it means to be an American. Drawing explicitly on the collective work of the “hashtag syllabus” movement, this course seeks to contextualize current debates over immigration reform, integration, and citizenship by considering migration from multiple perspectives—not just Ellis Island, but the Rio Bravo, Angel Island, Congo Square, and the Spirit Lake Dakota Indian Reservation.

Cross-Listed as: HIST 31.02

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 25.05 - Race, Gender, & Revolution in the Atlantic World

Instructor: P. Voekel

This course examines how the events and intellectual production of the Haitian Revolution and decolonization struggles in the Spanish Empire shook the Atlantic World and forced a reconsideration of political categories such as liberty, tyranny, citizenship, rights, and the relationship of race and gender to all of these concepts. The Enlightenment influenced Latin American and Caribbean revolutionaries, but these rebel intellectuals in turn challenged some of the Enlightenment’s fundamental tenets, ushering in new polities with radical notions of citizenship and belonging. Not open to students who have received credit for HIST 41.02.

Cross-Listed as: AAAS 62.75 HIST 09.09 WGSS 025

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 25.07 - Slavery and Emancipation in Latin America and the Caribbean

For over 300 years, Africans were transported to Latin America and the Caribbean to work as enslaved laborers. This course will examine the history of African slavery in the region from the beginning of the Atlantic slave trade to the abolition of slavery in Brazil in 1888. For each class session, students will review primary source documents such as autobiographies, slave codes, plantation journals, visual images, and anti-slavery tracts as well as historical scholarship.

Cross-Listed as: AAAS 060 HIST 92.03

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

LACS 25.08 - The Global Caribbean

Paradise or plantation? Cultural destination or economic periphery? Capitalist birthplace or IMF delinquent? From the Columbian conquest to contemporary tourism, the Caribbean has borne the burdens and opportunities of being an intercontinental crossroads. Colonial governments, enslaved Africans, indentured servants, and foreign settlers have all made the Caribbean an exemplar of modernity and globalization—for better or worse. Drawing on social scientific, literary, and policy texts, this course offers an historically deep and geographically broad anthropology of the Caribbean.

Cross-Listed as: AAAS 83.08 ANTH 033

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 25.09 - Haiti and American Empire: History of Revolutions and Authoritarianism

Instructor: M. Chochotte

The course explores the historical struggle between democracy and authoritarianism in Haiti throughout its two hundred seventeen years of independence as a free black nation, which also makes the island one of the oldest sovereign countries in the Western Hemisphere. To understand the island's history, students are expected to read what historians and writers have written about Haiti; and to read the primary letters of frantic French planters, rebellious African slaves, egalitarian peasants, entrepreneurial market women, conscientious revolutionaries, exuberant military generals, loquacious politicians, feared dictators, and dreaded militias through time. The course will, indeed, move through four important, though overlapping, historical moments. First, we begin with an examination of the 1791-1804 Haitian Revolution when enslaved Africans revolted against the French colonial planters to successfully abolish slavery and to achieve national independence. Second, we read through the formation of grassroots and institutional democratic traditions in the nineteenth century and how they were undone during the 1915-1934 US Occupation of Haiti, where US President Woodrow Wilson ordered the American military to invade Haiti and control the island for almost two decades. Third, we will explore how the undoing of democracy led to the rise of the Francois and Jean-Claude Duvalier dictatorship (1957-1971) and its dreaded militia called the *tonton makout* militia (often spelled in the following French orthography: *tonton macoutes*). Finally, we will conclude the class by looking at how and why the Haitian peasantry overthrew the dictatorship to replace it with the democratically elected President Jean-Bertrand Aristide (1991).

Cross-Listed as: AAAS 61.05

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 25.10 - Caribbean History: 1898 to the present

This course surveys the major issues that have shaped Caribbean society from the late 19th-century to the present, including: imperialism, urbanization, migration and globalization, struggles for national independence, the transition from plantation to tourism-based economies, and the global spread of Caribbean popular culture. Our readings and discussions will focus on the historical trajectories of Cuba, Haiti, Jamaica, Puerto Rico, Trinidad, and the Dominican Republic using historical scholarship, music, literature, film, and personal narratives.

Cross-Listed as: AAAS 061 HIST 92.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

LACS 25.11 - Nationalism and Revolution in the Caribbean

Instructor: M. Chochotte

The islands of the Caribbean have served as the site for two of the most significant revolutionary upheavals of the modern era—the Haitian Revolution and the Cuban Revolution and have produced anti-colonial luminaries such as José Martí, Frantz Fanon, Marcus Garvey, and Claudia Jones. This course will explore the origin, trajectory, and outcome of nationalist struggles in the Caribbean from the eighteenth-century to the present through primary and secondary materials, memoirs, fiction, and film.

Cross-Listed as: AAAS 062 HIST 92.02

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

LACS 25.13 - Childhood, Memory, and the Caribbean

Have you ever wondered what it's like to grow up in Haiti, Surinam, Guadeloupe, Cuba, or the Dominican Republic? In this course, students will embark on a literary journey through the Caribbean, examining coming-of-age stories that unravel the complex tapestry of postcolonial experiences.

Through a critical exploration of the Caribbean bildungsroman, students will delve into the profound impact of colonialism on various facets of life, including family structures, the roles of women, education, languages, socioeconomic status, mobility, and the intricate development of identity.

The course will introduce students to a diverse array of literary works from the Caribbean, offering insights into the nuanced perspectives of postcolonial authors. Engaging with critical theories from key thinkers such as Frantz Fanon, Edouard Glissant, Carole Boyce Davies, and

Antonio Benitez-Rojo, students will analyze the intellectual frameworks that shape Caribbean literature.

Cross-Listed as: AAAS 83.10 COLT 52.09

Degree Requirement Attributes: Dist:INT or LIT;
WCult:W

LACS 25.14 - Immigration, Race and Ethnicity

Instructor: S. Kim

This course examines twentieth-century immigration to the United States. This course pays special attention to issues of race and ethnicity. The course begins with a brief history of US immigration and then thematically covers specific topics such as economic impacts and costs, social mobility, citizenship, transnationalism, assimilation, and religious issues and their relationship to the immigrant experience. We feature nativist reactions to immigration and highlight differences within and between Latino, Asian, and European groups throughout the course.

Cross-Listed as: LATS 040 SOCY 048

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 25.15 - Maid in America: The Politics of Domestic Labor

Instructor: F. A'Ness

In *Maid in America* we study the representation, history, and rights of domestic workers in the Americas with a focus on the United States, Brazil, Mexico, Chile, and Argentina. Specifically, we look at representation and rights from artistic, legal, and sociological perspectives. Using the theoretical frames of intersectional and transnational feminism we will analyze primary texts that include essays, manifestos, theater, and documentary film. Topics we will explore will include media representation and controlling images, migrant imaginaries, invisible labors, modern-day slavery, the feminization of migrant work, and labor organization and rights. The class will include a theater workshop component that will culminate in the public presentation of an original group performance titled: Making the Invisible Visible: The Politics of Domestic Labor.

Cross-Listed as: WGSS 30.05

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 25.16 - Latinx Performance

This course offers a critical investigation of performance in the Americas through a queer and transgender/travesti lens. We explore specific social, political, and economic contexts in which artists are performing and interweave written texts with audio, visual, and other modes of doing theory. Our texts are interdisciplinary: we listen to music,

watch films, do written performance responses, and read memoir, history, ethnography, manifesto, and critical theory. The course will be organized around various themes that can be transposed to many other areas of study. Creative and critical written assignments provide opportunities to develop self-reflexivity, writing and thinking skills, and making connections between our everyday lives and larger workings of power. Ultimately, the course invites students to think about how queer and trans/trava performance is imbricated with social justice artistic formations in the contemporary world.

Cross-Listed as: LATS 30.01 WGSS 59.07

Degree Requirement Attributes: Dist:INT or ART;
WCult:CI

LACS 30.01 - Politics & Culture in Transnational Central America

This course offers an interdisciplinary introduction to the transnational histories, politics, and cultures of 20th and 21st century Central America. Using select case studies alongside audiovisual material that reflects the tensions of state and racial formation in the region, we will cover: US imperialism, the "Central American Wars", environmental crisis, migration and insecurity, narco-trafficking and youth gangs, social movements against extractivism, and key issues around (Afro-) indigeneity and environment. Bringing mixed-method approaches to the study of the people from Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama will allow us to explore the centrality of the isthmian region to the development of hemispheric politics and these nations' centrality to the formation of Latin American culture.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 30.02 - Art and Politics in Modern Latin America

This course offers beginning, intermediate, and advanced students an opportunity to explore works of art produced by artists living in Latin and Latin@ America during the 20th and 21st centuries. We will approach this topic through case studies of some of the major figures and movements in Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru, Puerto Rico, Uruguay, and the U. S. We will examine how national identity, racial formation, class difference, gender inequality, political struggle, and state violence have been addressed by artists from the region and in diaspora. And we will consider the ways that identity and culture are informed by and intervene in the political and economic conditions of these countries. Some themes we will consider are: modernization and class politics, Indigenism and racialization/racism, development/underdevelopment, authoritarianism and state-violence, diaspora and migration, transnationalism and the politics of museum exhibitions, contemporary human rights and social justice movements. Students will have opportunities to develop their own areas of research

and to expand the course content in ways that speak to their interests and experiences. This course adheres to the principles of student-centered course design. We will therefore ground our study in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through peer-to-peer learning collectives. No prior knowledge is required for this course. Not open to students who have received credit for LACS 078

Cross-Listed as: ARTH 40.03

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 30.03 - Latin America and the U.S.: The Dynamics of Foreign Policy

This course examines how different forms of collective identity—including class, race, ethnicity, indigeneity and gender—have shaped Latin American and Latino politics in the 20th and 21st centuries. We will focus on a range of cases in Latin America and the U.S. to address the following questions: In what ways does the state create and sustain certain categories of identity as the basis for political inclusion and exclusion? What explains changes in the political salience of certain categories of collective identity? Why do some identities become politically salient and others do not? How have forms of political representation changed over the past century? How does state policy affect the ability of groups to mobilize and press for demands? How do organized groups affect state policy? What are the possibilities and limitations of identity-based mobilization?

Cross-Listed as: GOVT 84.35

Degree Requirement Attributes: Dist:INT; WCult:W

LACS 30.04 - Black Culture and Politics in Brazil

Instructor: R. Gillam

Brazil is commonly understood as an example of a “racially democratic” nation, but as scholars have recently shown, racism permeates all aspects of Brazilian society. This course examines the development of the theorization of race, racial identity and race relations in contemporary Brazil. The approach of the course will be interdisciplinary, drawing upon works from anthropology, literature, history, music, and film. Topics will include colonialism and enslavement, nationalism, social activism, and popular culture. We will also consider how Brazilian social relations differ from or conform to other racialized patterns in other nation-states in the Americas. Particular attention will be placed on the impact of the interrelationship between race, gender, class, and nation on the lives of black Brazilians.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

LACS 30.05 - Land, Belonging, and Social Change in Latin America

This course examines the entanglements of society and nature in Latin America with respect to political economic processes that affect land use, its management, and its productive capacities in our present age of environmental degradation and heightened social conflict. Debates around multispecies thinking, the nature/culture divide, and environmental affect figure prominently in the interlinked and interdisciplinary discussions dealing with the curating, imagining, and use of environment in the hemispheric Americas. By thinking through the environment, we approach a different way of examining the history of Latin America, interrogating how we imagine Latin American nature as both object and site of our collective environmental imaginations. Topics include the politics of sustainability, green capitalism, indigenous land struggles, contemporary theories of nature, ecotourism, and select case studies at the intersection of ecology, conservation, and security.

Degree Requirement Attributes: WCult:NW

LACS 30.07 - Trading Places: How Chile Passed Argentina on the Road to Development

Instructor: P. DeShazo

This course will investigate and analyze the factors that led to and inhibited development in Chile and Argentina. It will trace key economic, political and social variables in both countries from the export-led growth period of the Second Industrial Revolution to the present time in an effort to draw conclusions regarding why, when, and how Chile was able to advance at a faster pace than Argentina.

In doing so, the course will draw on tools of economic, political and historical analysis, seeking to compare the two case studies in a multi-disciplinary framework. The course will be a seminar in order to stimulate student discussion.

Cross-Listed as: GOVT 84.38

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

LACS 30.08 - Race, Class, Gender and Sexuality in Contemporary Brazilian Film

Instructor: R. Gillam

In this course film will be viewed as text and used to analyze discourses around race, sex, gender; and class in contemporary Brazil. It is the hope that film will offer students an additional cultural context to critically examine the development of nation and national ideologies such as

"the myth of racial democracy." Class discussions based on scholarly readings and film screenings will focus on how Brazilians view themselves and the construction and function of social institutions within the contemporary nation

Cross-Listed as: FILM 42.24

Offered: Fall.

Degree Requirement Attributes: Dist:INT; WCult:CI

LACS 30.13 - Latin America's Search for Democracy and Development

Instructor: P. DeShazo

This course examines the political, economic, and social development of the five countries of the Andean region of South America (Venezuela, Colombia, Ecuador, Peru, Bolivia). It contrasts the current governance and economic policy approaches taken by the five countries as a means of analysing variables linked to the consolidation of democracy and sustained economics development.

Cross-Listed as: GOVT 40.14

Offered: Winter.

Degree Requirement Attributes: Dist:INT; WCult:NW

LACS 30.14 - Commodities, Globalization, and Development in Latin America

Instructor: P. DeShazo

The course traces the economics history of Latin America since 1870 by highlighting the different stages in macro-policy (export-led growth, import substitution industrialization, current models juxtaposed) and by focusing on the role of commodities in the national and regional developmental process. Specific commodities to be studied include silver, guano, nitrates, coffee, sugar, cereals, beef, henequen, rubber, cocaine, and oil. Topics will be covered more or less chronologically, with the last classes analyzing current developments. Particular attention will be paid to the larger economies of the region (Mexico, Brazil, Argentina, Colombia, Peru, Chile, Venezuela) and the development strategies they pursued. The course will take on the issues of why Latin America has failed to reach levels of development achieved by industrialized countries in Europe and Asia and what can be done to achieve sustained development.

Cross-Listed as: GOVT 40.15

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:NW

LACS 30.15 - Media and the Activist Amazon

Instructor: Broner

The course will foreground the role of Indigenous peoples in defending the Amazon while also investigating pressing

issues such as extractivism and land demarcation. Texts from fields including anthropology, sociology, visual studies, and architecture will provide an interdisciplinary approach to media objects that range from a Netflix series about a detective who reads the forest to a virtual reality piece that allows you to become a kapok tree in Madre de Dios.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 30.16 - Revolution, Reform and Reaction: The Cold War in Latin America

Instructor: P. DeShazo

This course examines and analyzes the key variables that determined the course of Latin America's political, economic, and social evolution during the period of the Cold War (1946-1990). It focuses on the relationship of Latin America to the global Cold War, the manifestation of U.S. and Soviet foreign policy in the region, and the responses of key actors in Latin America to the geo-strategic, ideological and political rivalry between the two superpowers.

Cross-Listed as: GOVT 20.05

Offered: Fall.

Degree Requirement Attributes: Dist:INT; WCult:NW

LACS 30.19 - Consuming Culture?: Food & Identity Across the Afro-Americans

This interdisciplinary course intends to examine an array of socio-cultural questions about Afro-Latin America and the role that food has had in constructing and imagining Afro-Latin American communities and subjectivities. By placing Afro-Latin America at the center as subjects and knowledge producers, this course commits to an intentional practice of learning from and of the Global South and decentering the United States, and the west more broadly, within the arena of political, intellectual, and cultural production. Beginning with Brazil, the country that has the largest Afro-descendent population outside of Africa and once heralded internationally as a "racial democracy," we will examine the ways that food has served to both reinforce and disrupt socio-cultural assumptions and stereotypes related to race, gender, and class. We will examine food's relationship to questions of gender norms, sexuality and labor and place these conceptualizations in dialogue with other countries and Afro-descendent populations across the Americas. We will end the course placing Afro-Latin America in dialogue with the Afro-Latinx diaspora and African Americans.

Cross-Listed as: AAAS 83.09

Degree Requirement Attributes: Dist:SOC

LACS 30.21 - History of Cuba

Instructor: M. Machado

Despite its modest size, the Caribbean nation of Cuba has long possessed an outsized mystique and influence within Latin America and across the globe. From the indigenous Taino people who first encountered Europeans, to the Afro-Cubans who fought for independence from Spain, to the revolutionary army that overthrew Batista, to the exile community in the US, Cuban history has been marked by extraordinary peoples and events that have changed fate not only for the island, but for the region and the world. This course explores the complicated, entangled and at times contradictory history of Cuba to better understand how the island has come to occupy such a unique position in geopolitics and within the popular imagination. Beginning in prehistory, this course will trace the evolution of Cuba from native homeland, to colony, to vassal state, to independent nation, to a revolutionary and anti-imperialist beacon to the Global South, to a leader in the global conservation and the agroecology movement. It will culminate with a critical examination of modern-day Cuba and the contemporary issues--such as immigration, telecommunications, tourism, economic crisis, rapprochement with the US, an aging population and a post-Revolutionary transition--all of which will lead to radical and far-reaching changes as the future of Cuba continues to unfold.

Offered: Fall.

Degree Requirement Attributes: Dist:INT; WCult:W

LACS 30.22 - Latin America and the Invention of Nature

Instructor: M. Machado

Nature, as a concept, is often taken as a given, its meaning self-evident, its status normative and unquestioned. The reality, however, is that the ideas that define nature--what is nature and what is not; where nature begins and where it ends--are in fact historically contingent, based on past and present ideological, religious, scientific, cultural and political constellations of knowledge and power. Put another way, nature is not a "natural" category; it is a socio-political category constructed and maintained by humans, albeit unequally. Any understanding of this history--the history of 'nature'--would be incomplete and perhaps even impossible to tell without a discussion of Latin America. It is within the cauldron of European colonization of the Americas, and specifically of Spanish colonization of Latin America and the Caribbean, that we can trace the true roots of many of our contemporary understandings of nature.

From the initial impressions of natural abundance by European colonizers, to the founding of the field of ecology by Alexander von Humboldt in Ecuador, to Darwin's theory of natural selection in the Galapagos, to the anthropological study of the Amazon, to the complex

and wide-ranging lives, livelihoods and socio-ecological practices of an immense diversity of indigenous people, we find that the "discovery" of the Americas by Europe and the subsequent processes of colonization, imperialism, genocide and extraction laid the groundwork for the what Andrea Wulf calls the 'invention of nature' (2013). This course delves deeply into the question of how nature has been historically constructed through the integration of Latin America, its people and its landscapes, into our collective vision of the world. The course culminates in a forward-looking prospectus, pondering the state of nature today in the context of the Anthropocene and asks: where do we go from here? And in what ways, for better or worse, is this distinctively Latin American history of nature still with us?

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 30.26 - Social Movements in Latin America

Instructor: M. Machado

Social movements have long been a critical component of the social, cultural and political landscape across Latin America. From defying authoritarian rule, to resisting austerity measures, to pushing for LGBTQI and indigenous rights, collective action in the form of protests, demonstrations, and direct action, among other methods, is part and parcel of popular political expression across the region. Within this unique socio-political history, rural peasants (campesinos) and landless workers have long occupied a prominent position, garnering transnational support for causes that fight for environmental injustice, reject neoliberalism and claim rights to land where such rights have long been denied. This course will examine a variety of social movements--from the MST in Brazil, to the Zapatistas in Mexico, to indigenous groups in Paraguay--to understand how they operate both "within and against the state" (Ellner et al. 2022) to chart new social, cultural, political and ecological pathways. Through a combination of documentaries, academic articles, and books, the course material will show how anti-colonial and anti-neoliberal critiques are operationalized through these movements as a way to preserve critical and culturally-significant environmental resources, assert collective rights, and build actual alternatives with implications for landless and indigenous people throughout Latin America and beyond.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

LACS 35.01 - New Latin American Cinema

Instructor: G. Gemunden

With emergence of filmmakers such as Alejandro Inarritu (Mexico), Lucrecia Martel (Argentina), and Jose Padilha

(Brazil), the last decade has seen a creative boom in Latin American cinema that includes art house cinema, blockbusters, documentary, and experimental film. Beginning with a quick overview of key forerunners, this course will focus on the major directors, genres and aesthetic trends that characterize the new Latin American cinema. On the one hand, we will pay special attention to the distinct national cinemas: the different historical and cultural contexts out of which they emerge; and the different aesthetics that this gives rise to.

Cross-Listed as: COLT 52.02 FILM 42.03 INTS 17.12

Offered: Fall.

Degree Requirement Attributes: Dist:INT

LACS 35.02 - Social, Political, and Cultural Trends in Contemporary Brazil

This class will be taught in English and will explore social, political, and economic issues in contemporary Brazil. Since 2013, the climate in Brazilian society has become more and more tense due to a series of street protests and polarized public debates on race, class, political representation, democracy, religion, gender, sexuality, environmental protection and economic justice. The present scenario in Brazil will be discussed in relation to historical and cultural contexts. Materials for the course will include films, documentaries, music, and a wide variety of readings (mainstream media, blogs, academic essays, official documents, fiction). Invited guests (scholars, activists, journalists, artists) will deliver lectures, in presential or remote way.

Cross-Listed as: AAAS 86.04 PORT 35.01

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 35.03 - Brazil: History, Culture, Politics and Systemic Racism

This course provides a rigorous treatment of the dynamics of Brazilian racial relations. Students will learn about the economic, social and political history of slavery in Brazil and will be exposed to the leading racial relations and racism theories that have been produced in the social sciences and through social movements. The course explores the colonial legacy of servitude in post-abolition Brazilian society and examines the development of an Afro-Brazilian culture and identity.

Cross-Listed as: PORT 35.02

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

LACS 35.04 - Caring for the City: Activism, Diversity and resistance in Sao Paulo, Brazil

Sao Paulo has a homeless population of about twenty-four thousand people. More than five million families live in Brazil's favelas, with little or no basic services and

infrastructure. Two-thirds of Sao Paulo's population live on the outskirts, underserved areas of the city. This course discusses housing challenges in urban environments in Brazil. It focuses on the history of urban development in Sao Paulo and how it intersects with issues of race, gender, and migration.

Cross-Listed as: PORT 37.01

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

LACS 35.05 - Experiencing Brazil: Research in a Study Abroad Context

This course offers native speakers and advanced students of Portuguese who join the study abroad program in Brazil an opportunity to develop a research project on the country's cultural and social features, problems, assets, and prospects. The purpose is to encourage students to take full advantage of being in the country by exploring local sources of information and learn from interpersonal iterations with scholars, entrepreneurs, artists, activists, and other subjects.

Cross-Listed as: PORT 70.01

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

LACS 35.06 - On Survivors, Memories, and Tombs: State Violence in South America through Literature and Cinema

In the 1960s and 1970s, South America experienced a new cycle of state violence perpetrated by military dictatorships. The authoritarian regimes installed in Brazil (1964-85), Uruguay (1973-85), Chile (1973-90) and Argentina (1976-83) caused deep ruptures in collective and individual lives and still resonate in the South American political, social and cultural landscapes. After the democratic systems were reestablished in the region, new facts about the abuse of power by the militaries were disclosed, and a heated debate took place in the public sphere about how to deal with the past. Feature films, documentaries, and fiction and non-fiction literature played an essential role in that debate by providing different strategies of healing scars, honoring victims and survivors, and preserving the memory of both the terror and the grassroots resistance. The experiences and memories of the so-called "dirty war" in Argentina, Brazil, Chile, and Uruguay generated not only several fictional renderings of state terrorism during the "years of lead," but also a whole series of *testimonios* by those directly affected by it, such as the daughters, sons and spouses of *desaparecidos* who were assassinated by the machinery of state repression.

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This class focuses on the legacies of dictatorships in South America and the politics and aesthetics of representation of state violence and political resistance. Students will be

introduced to central concepts of memory and trauma studies and will conduct comparative literary and cinematic analyses of works by Latin American writers and film directors.

Cross-Listed as: COLT 52.05

Degree Requirement Attributes: Dist:LIT; WCult:NW

LACS 35.07 - Arts Against Empire: Fictions of Revolution and Solidarity in the Americas

Instructor: P. Stuelke

Anticolonial struggle and movements for social justice have always been accompanied by a range of cultural practices, including fiction, art, music, film, murals, theater, graffiti, and theory. This course explores that tradition of cultural activism, considering attempts to narrate revolutionary formation, imagine solidarity, and write decolonial theory. We will begin by examining revolutionary nationalist and anti-imperialist culture in the Americas—ranging from the memoirs of Che Guevara and Malcolm X to Nuyorican and Chicano Movement literature—in order to consider the formation of revolutionary subjects, and how 20th century ideas of revolution were raced and gendered. We will then consider how novelists, artists, photographers, filmmakers, and activists attempted to imagine solidarity with revolutionary movements and suffering others in the Americas, from Central America solidarity photography to performance art in solidarity with Guantanamo Bay prisoners. We will pay special attention to the work of feminist and queer solidarity artists, writers, and performers. Finally, we will examine contemporary activist cultural projects, such as PanAmerican public art road trips and hashtag-activism. Students will have the opportunity to produce a creative or multimedia final project.

Cross-Listed as: ENGL 63.04 WGSS 52.04

Offered: Summer.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

LACS 35.08 - The Tropical Fantastic: Science Fiction, Fantasy, and Horror in Brazilian Literature and Film

Magic transformations. Hauntings. Mystical worlds. Brazilian authors have been writing about the fantastic and unreal for centuries, a tradition that extends far beyond what has been characterized as “magical realism.” This course will explore this rich literature, both on its own and in a comparative perspective. In particular, we will examine the political, psychological, ecological, and historical questions that these works raise. How, for example, does fantastic literature shed light on psychoanalytic concepts such as the uncanny? How did Brazilian writers in the late 1960s use science fiction, horror, and fantasy to address the repression of the military dictatorship? What kinds of broad theoretical issues arise

when looking at this genre? We will read works from “canonical” authors such as Machado de Assis, Lygia Fagundes Telles, Mário de Andrade, and Guimarães Rosa as well as those by lesser-known and up-and-coming writers, comic artists, and filmmakers.

Cross-Listed as: COLT 52.04

Degree Requirement Attributes: Dist:LIT; WCult:NW

LACS 35.09 - Transnational Utopias: Latin American Anarchisms

This course focuses on how anarchism developed in Latin America and the Caribbean at the turn of the twentieth century. It offers a brief historical and historiographical introduction to the idea of anarchism and its first adherents in the region. It also explores the materiality of anarchist transnational networks and the creation of working-class intellectual communities. The class ends by critically examining the legacies of anarchism in contemporary Latin America and the Caribbean.

Cross-Listed as: HIST 82.04

Degree Requirement Attributes: Dist:TMV; WCult:NW

LACS 35.10 - Twentieth-Century Latin America

This course seeks to address major issues in twentieth-century Latin America through the history of three or four countries. Topics discussed will include development, imperialism, nationalism, revolution, state formation and violence. Open to all classes.

Cross-Listed as: HIST 083

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 35.11 - The History of Capitalism in Latin America

Instructor: P. Voekel

This course will ask what five centuries of Latin American history can tell us about the origins and consequences of global capitalism. We will listen to capitalism’s champions and critics, including state actors, the Church, non-governmental organizations, and organized social movements, and ask how the interplay between them has influenced economies, politics, and culture. Capitalist development and transformation involved elaborate cultural campaigns to win hearts, minds, and bodies to the project, and we will focus on how and why, for example, at its most extreme some people equated capitalism with sin while others found spiritual succor within its logics.

Cross-Listed as: HIST 080

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

LACS 35.12 - Sex and the State in Latin America

This course examines women's movements in Latin America. Women in Latin America are perhaps the most highly mobilized population in the world. Throughout the region women have organized around myriad issues, including the right to vote, human rights, poverty, legal rights, anticommunism, the workplace, race, ethnicity and war. Women's efforts to challenge fiercely repressive regimes, deeply entrenched norms of machismo and extreme poverty defy conventional stereotypes about women and provide us with inspiring examples of how to sustain hope during difficult times. The seminar will introduce students to recent scholarship on women's movements in Latin America in the 20th century and seek to understand the emergence, evolution and outcomes of women's movements in particular countries and cross-nationally.

Cross-Listed as: GOVT 49.04

Degree Requirement Attributes: Dist:SOC; WCult:NW

LACS 35.13 - Protest and Parties in Latin America

This course will examine the conditions that prompt people organize on behalf of their collective interests, how those movements evolve, and under what conditions efforts to mobilize will succeed. We compare protests, revolutionary movements, social movements, political parties and other forms of political action in various countries throughout the region.

Cross-Listed as: GOVT 49.05

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

LACS 35.15 - Mestizaje: Music in Latin America

Instructor: P. Chin

This course will introduce and explore the music of Latin America from both historical and analytical perspectives. It will study the music of Latin America as the result of a complex process of constant merging and amalgamation of cultures, experiences, ideologies, and practices. Throughout this course, students will become familiar with popular music genres, autochthonous instruments, significant pieces and composers, cosmologies and ideologies reflected in various musics, and general aspects of the local cultures.

Cross-Listed as: MUS 03.09

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 35.17 - Media and Environment

At a time of increasing reliance on technology to enhance and even transform the environment, how do media shape our perception of the world around us? This course

introduces students to environmental media studies methods and concepts through a focus on contemporary Latin America. As we work comparatively across a range of media—including film, photography, visual art, and virtual reality—we will consider the specific ways in which each can reveal or reformulate conceptions of the environmental. Among key topics, we will discuss the stakes of defining nature as media, the ecological materiality of media formats, and the role of environmentalist media in present-day Latin America. The course culminates in a project that asks students to simultaneously analyze and create media.

Conducted in English; no previous media experience required.

Cross-Listed as: COLT 70.08 FILM 48.08 SPAN 65.17

Degree Requirement Attributes: Dist:ART; WCult:W

LACS 40.01 - Food History

Instructor: M. Machado

We will look at issues of food production and consumption, and how our relationship to food contributes to the political and social structures that we live with. Our approach will be historical and pay special attention to the ways in which our production and consumption of food has been shaped by the movement of people over the last century. The readings explore how food creates ways for people to form bonds of belonging while also creating bonds of control and regimes of inequality.

Cross-Listed as: HIST 08.06 LATS 008

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:W

LACS 40.02 - Comparative Perspectives on the US-Mexican Borderlands

Instructor: D. Garcia

"U.S.-Mexico Borderlands" explores the histories, policies, economies, structures, and cultures of the southern divide from the early nineteenth century to the present day. The U.S.-Mexico border is often understood as a periphery, an edge to the nation, a marginal region of little importance. However, the border is also an interface; a region that facilitates connections, crossings, and junctures. Its importance, this class argues, cannot be overstated. Taking an interdisciplinary approach to borderlands studies will allow us to seek the "who," "what," "when," "where," "why," and "how" the border comes into being. This class will emphasize the lived experiences of peoples and communities living along the border by engaging with secondary and primary sources. Further, this class will utilize art, poetry, music, podcasts, and performance as a way to understand how the border was and continues to be contested. While the class moniker identifies only two nations, the plight of indigenous nations' claim to land,

sovereignty, and resources is also studied. Further, by taking a relational ethnic studies approach, the histories of Asian & Asian American, Black, and other racialized peoples on the border are highlighted. Each of these histories is important to understand the origins of the southern divide and how these origins manifested forms of exclusionary nation-building and its shifts over time.

Cross-Listed as: ANTH 034 LATS 045

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 40.03 - Comparative Borderlands in the Americas

Instructor: J. Cuellar

This hemispheric course examines the history, politics, and cultures of select borderlands, processes of border-making and the sociocultural effects of geopolitical divisors in Latin America and the Caribbean using the interdisciplinary approaches of contemporary Latin American, Latinx, and Caribbean Studies. By attending to a diverse array of boundary-making practices across the Americas, this course will expose you to a range of methods and subjects that will help us tackle the multitude of “border problems” that today constitute some of the major social, political, and economic issues of the region. Taking a geographically expansive view, we will utilize interdisciplinary approaches to analyze how border formation, cross-border activities, and gendered, racialized, and national identities are important sites of analysis that, in turn, anchor the political debates and the significance of these complex contact zones. We ask: how do borders produce mobility and belonging? How do they attempt to sustain law and order, and articulate sovereignty? How have specific borders changed over time? How are borders a central technology to the making of the modern world?

This course is organized in two parts. The first few weeks of the course will lay out the terms of engagement and present different approaches to the study of historical and contemporary borders in a global frame. We will discuss historical border formation in the Americas and move around different key sites to arrive at analytical clarity, develop a theoretical base, and understand the various expressions, practices, and realities initiated by specific borders across the region. In the second half of the course, we will inhabit the perspective of border-crossers, border-dwellers, and transborder persons to gather on-the-ground perspectives on what borders do, how they are experienced, as well as how they are resisted, reconfigured, and actively adapting to a changing, increasingly mobile world. These latter issues, from Week 5 onward, will follow the typical route of a contemporary migrant, that starts in their country of origin, starts, or passes through South America, moves swiftly through Central America, onwards north to U.S.- Mexico. Following these routes, we will engage ethnographic, journalistic, and audiovisual

materials that speak to the contemporary debates around borders, displacement, and migration. This course contends that these elements must be always examined in dynamic relation to one another.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

LACS 40.04 - Global Race x Global Migration

Instructor: M. Huang and J. Cuellar

The racialized migrant is the dominant figure in contemporary global capitalism. This figure represents the contradiction at the heart of planetary dynamics, and is increasingly the node on which politics, economy, and culture turns. What would it mean to read the history of the globe from the figure of the racialized migrant? This course breaks away from the disciplinary categories and cartographies of area studies while pushing beyond Western racial epistemologies that have bracketed the study of migration and race. Instead, we attend to migration’s “corridors” “zones,” “circuits” and “ecologies” to understand the ways that race and contemporary mobility are made—across various terrestrial, aqueous, and aerial spaces—always in relation to the layered histories of colonial, imperial, and global formations.

Cross-Listed as: WGSS 003

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

LACS 45.01 - Literature and Culture of the Americas

Instructor: P. Stuelke

This course surveys a series of critical paradigms for studying the literature and culture of the Americas. We’ll explore a variety of approaches to hemispheric literary and cultural studies, which may involve analyzing comparative and shared romantic and revolutionary discourses; border cultures; state-sponsored literary institutions that cross national borders; inter-American attempts to imagine solidarity; and hemispheric aesthetic strategies and genres for mapping US empire, global capitalism, and settler colonialism. Authors may include Leonora Sansay, Martin Delany, Carmen Lyra, Gabriel García Márquez, Jamaica Kincaid, Valeria Luiselli, Fernanda Melchor, and Silvia Moreno-Garcia. All texts are available in English or in translation.

Cross-Listed as: COLT 52.08 ENGL 53.32

Offered: Fall.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

LACS 45.03 - Framing Ecology and Gender

At a time when women from Argentina to Mexico are at the forefront of a transnational fight for environmental justice, this course focuses on Latin America to explore how images of these struggles and others circulate and inform our perception of ecological crisis. As we study a range of media, we will attend to the ways in which visual objects illuminate the imbrications of gender and environment in order to investigate problems such as extractivism and neocolonialism. Concentrating on film, photography, television, visual art, and graphic novels, we will consider the potential of images to challenge, resist, or perpetuate environmental devastation and the concomitant marginalization of women and LGBTQIA persons. Whether by exposing the toxicity of agribusiness in the Amazon or foregrounding enduring connections between heteronormativity and colonialism, the media and critical texts we will examine ask us to notice the inseparability of social and environmental violence. As we pay special attention to ecofeminism and the activism of Indigenous women across Latin America, we will search for new perspectives that allow us to imagine alternatives to capitalist environmental exploitation. This course is taught in English.

Cross-Listed as: SPAN 50.06 WGSS 66.32

Degree Requirement Attributes: Dist:ART; WCult:NW

LACS 45.04 - Sounding Out Power and Dissent

How does authority reach the ear? What are the sonic features of speaking truth to power? Who shapes the ways we hear, and where might we learn to listen differently? This course sounds out displays of authority as well as how we can act against such structures by turning to representations of the auditory in both literature and cinema. As we consider questions of sound and its reproduction, we will work across geographical contexts to determine which concerns resonate widely and what role acoustics, or the specific properties of a space, might play. Readings will come from writers such as Valeria Luiselli, María Sonia Cristoff, Franz Kafka, Frantz Fanon, and Severo Sarduy, while films will range from *Fitzcarraldo* to *Sorry to Bother You*.

Cross-Listed as: COLT 40.08 FILM 47.31

Degree Requirement Attributes: Dist:INT

LACS 51 - Politics in Latin America

Instructor: Carey

This course is an introduction to the political development and the current context of politics in Latin America. It combines material on historical and theoretical topics with material on the current politics of specific countries. The central theme of the course is to evaluate the development of political institutions in Latin America and the challenges currently confronting democracy in the region. We

examine the conditions under which Latin American republics gained independence in the 19th Century, and their trajectories of political and economic development. We then consider a range of political challenges confronting Latin American countries, including corruption and criminal violence, human rights abuses past and present, and revolutionary and populist challenges to state authority.

Cross-Listed as: GOVT 49.01

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

LACS 78 - Art and Politics in Modern Latin America

Instructor: Coffey

This course offers beginning, intermediate, and advanced students an opportunity to explore works of art produced by artists living in Latin and Latin@ America during the 20th and 21st centuries. We will approach this topic through case studies of some of the major figures and movements in Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru, Puerto Rico, Uruguay, and the U. S. We will examine how national identity, racial formation, class difference, gender inequality, political struggle, and state violence have been addressed by artists from the region and in diaspora. And we will consider the ways that identity and culture are informed by and intervene in the political and economic conditions of these countries. Some themes we will consider are: modernization and class politics, Indigenism and racialization/racism, development/underdevelopment, authoritarianism and state-violence, diaspora and migration, transnationalism and the politics of museum exhibitions, contemporary human rights and social justice movements. Students will have opportunities to develop their own areas of research and to expand the course content in ways that speak to their interests and experiences. This course adheres to the principles of student-centered course design. We will therefore ground our study in the validation of personal experience, the emotional growth and ownership that comes from self-reflection, and the knowledge generated through peer-to-peer learning collectives. No prior knowledge is required for this course.

Cross-Listed as: ARTH 40.03

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 80.01 - Ethnic Los Angeles

This course will focus on the history, culture and literature of Los Angeles, California, the second largest city in the United States. We will briefly examine its founding in the eighteenth century as a Northwest outpost of the Spanish empire in the Americas, and its origins and evolution as a Mexican pueblo and U.S. city in the nineteenth century. The majority of our attention will be on the historical and contemporary struggles of people of color in

metro-Los Angeles throughout the twentieth and into the twenty-first centuries.

Cross-Listed as: HIST 96.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

LACS 80.02 - Identity and Power in the Americas

This course examines how different forms of collective identity—including class, race, ethnicity, indigeneity and gender—have shaped Latin American and Latino politics in the 20th and 21st centuries. We will focus on a range of cases in Latin America and the U.S. to address the following questions: In what ways does the state create and sustain certain categories of identity as the basis for political inclusion and exclusion? What explains changes in the political salience of certain categories of collective identity? Why do some identities become politically salient and others do not? How have forms of political representation changed over the past century? How does state policy affect the ability of groups to mobilize and press for demands? How do organized groups affect state policy? What are the possibilities and limitations of identity-based mobilization?

Cross-Listed as: GOVT 84.06; AAAS 90.01

Degree Requirement Attributes: Dist:INT; WCult:W

LACS 80.03 - Border Crossers

Instructor: M. Garcia

This senior seminar will focus on people whose lives traversed the Americas and crisscrossed the borders and boundaries between the United States and Latin America. They include: José Martí; William Ellis/Guillermo Eliseo; Americó Paredes; Luisa Moreno; Maria Moreno; Dolores Huerta; Lourdes Portillo; Ruben Blades; and Selena Quintanilla. In choosing these individuals, I sought figures who connect what José Martí called “Nuestra América” (Latin America) and “The Other America” (the United States). In many cases, their creative work shaped the perceptions of “Americans” in Latin America, and “Latin Americans” in the United States. My focus on “border crossers” compliments the overall curriculum in LALACS, which is committed to an expansive, hemispheric, and interdisciplinary approach that challenges US-centric definitions of the field and resists strict separation of Latin America and the United States. Ultimately, these individuals will serve as a foundation for a biographical study of someone of your own choosing who bridges or bridged these two worlds.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:CI

LACS 80.04 - Rita Moreno: Identity, Performance, Stardom

Rita Moreno is a Puerto Rican actress, singer, and dancer whose career has spanned the 20th and 21st centuries. She has worked across film, television, and theater, and most famously, starred in *West Side Story* (1961) for which she won an Academy Award, the first Latina to do so. The course will explore her life and career as a means of exploring broader contexts of Latinx history and culture.

Cross-Listed as: FILM 47.35

Degree Requirement Attributes: Dist:ART; WCult:W

LACS 80.21 - Rita Moreno: Identity, Performance, Stardom

Rita Moreno is a Puerto Rican actress, singer, and dancer whose career has spanned the 20th and 21st centuries. She has worked across film, television, and theater, and most famously, starred in *West Side Story* (1961) for which she won an Academy Award, the first Latina to do so. The course will explore her life and career as a means of exploring broader contexts of Latinx history and culture.

Cross-Listed as: FILM 47.35

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

LACS 89 - Independent Study

Instructor: See chair

Students wishing to pursue intensive supervised study in some aspect of Latin American and Caribbean Studies should consult the appropriate member of the LACS faculty to design and carry out an independent study project. Students are required to submit a short description proposal to the program office in the term prior to doing the independent study. This course fulfills the "culminating experience" requirement for all majors who do not complete the Honors Program. Prerequisite: permission of the instructor.

Offered: Fall, Spring, Summer, Winter.

LACS 98 - Honors Thesis I

Instructor: See Chair

Guidance in the selection of a topic and in research and writing will be provided by the student's thesis adviser. Only students accepted into the Honors Program may take this sequence.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for LACS-099 and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the “ON” for both LACS-099 and this course upon

completion of this course at the end of the third term of coursework.

Offered: Fall, Winter.

LACS 99 - Honors Thesis II

Instructor: See Chair

Guidance in the selection of a topic and in research and writing will be provided by the student's thesis adviser. Only students accepted into the Honors Program may take this sequence.

Students are awarded one course credit for successful completion of this course. Students who have registered for LACS-098 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both LACS-098 and this course upon completion of this course at the end of the third term of coursework.

Offered: Spring, Winter.

Lesbian, Gay, Bisexual, and Transgender Studies

Associated faculty: S. Ackerman (Religion, Women's, Gender, and Sexuality Studies), C. G. Boggs (English, Women's, Gender, and Sexuality Studies), S. J. Brison (Philosophy), A. A. Coly (African and African American Studies, Comparative Literature), M De Berry (Women's, Gender, and Sexuality Studies), M. Desjardins (Film Studies), G. Dietze (Women's, Gender, and Sexuality Studies), V. Fuechtner (German), M. R. Graver (Classics), M. Huang (Women's, Gender, and Sexuality Studies), E. B. Lim (Women's, Gender, and Sexuality Studies), C. H. MacEvitt (Religion), K. F. Milich (Liberal Studies), A. Martin (Spanish and Portuguese), C. H. MacEvitt (Religion), T. S. Monson (Women's, Gender, and Sexuality Studies), B. E. Moreton (History), G. Munafo (Women's, Gender, and Sexuality Studies), A. Orleck (History), I. Reyes (Spanish and Portuguese), I. T. Schweitzer (English, Women's, Gender, and Sexuality Studies), A. M. M. Storti (Women's, Gender, and Sexuality Studies), P. R. Stuelke (English), S. Swayne (Music), J. T. Wernimont (Women's, Gender, and Sexuality Studies), B. E. Will (English), M. F. Zeiger (English).

ABOUT LESBIAN, GAY, BISEXUAL, AND TRANSGENDER STUDIES

Lesbian, Gay, Bisexual, and Transgender Studies examines the lives, experiences, and representations of lesbian, gay, bisexual, and transgender persons, studying in historical, contemporary, and theoretical contexts LGBT communities, institutions, politics, languages, art, literature, and relationships to heterosexual norms. Drawing upon interdisciplinary and multicultural

resources, LGBT Studies analyzes sexuality and sexual identity as complex social and historical phenomena. Up-to-date listings for LGBT courses can be found under Women's, Gender, and Sexuality Studies.

Linguistics

Chair: L. J. Whaley

Professors: C. K. Donahue (Linguistics), J. N. Stanford (Linguistics), L. J. Whaley (Linguistics and Classics); **Associate Professors:** L. E. McPherson (Linguistics), D. A. Peterson (Linguistics); **Assistant Professor:** R. Coto-Solano (Linguistics); **Senior Lecturer:** T. Ernst (Linguistics), T. J. Pulju (Linguistics and Classics); **Lecturer:** S. Wray (Linguistics, Cognitive Science, and Psychological and Brain Sciences)

To view Linguistics courses, click here (p. 552).

The Linguistics Department offers two different majors and one minor: the Linguistics Major, the Linguistics Minor, and the Computational Linguistics Major. The Linguistics Major may be modified with another program of study, but the Computational Linguistics Major may not. Because the Computational Linguistics Major is a combination of linguistics and computational coursework, students may not major in both Linguistics and Computational Linguistics, nor is there a minor in Computational Linguistics.

The Major in Linguistics

Students who pursue a major in linguistics should take ten courses beyond LING 1.

The ten courses for the major should be constituted as follows:

1. LING 22
2. LING 20 or LING 21
3. One course in the 30s (LING 33 or LING 35)
4. At least three additional courses in the 20s or 30s (LING 20, 21, 23, 24, 25 (p. 557), 26, 27, 28, 33, 35), or higher
5. Four more courses in Linguistics, including one that satisfies the requirement for a culminating activity, which may be met in one of three ways:
 - a. Completing a senior Honors Thesis (LING 86 - LING 87)
 - b. Taking an advanced seminar in linguistics (LING 80)
 - c. Carrying out a one or two term Independent Study project (LING 85)

6. Of the courses not used to satisfy the culminating activity requirement under 5, students may substitute up to two courses from the following, in consultation with an advisor: Anthropology 9, French 35, Philosophy 6, Philosophy 34, and/or Russian 48. Certain courses not listed here, such as advanced seminars in various departments, may also be counted towards the major with permission of the Chair.
7. Majors may not include more than two courses designated as LING 11.
8. LING 5 and LING 7 do not count towards the LING major.

For Classes of 2027 and prior, there is a language requirement for the major: Linguistics majors must also take two foreign language courses in addition to courses taken to fulfill the College's foreign language requirement. Each of these two courses must belong to any of the following categories (not necessarily the same category for both): (a) courses beyond the first-year level, not in a language that the student speaks as a first language; (b) first-year courses in a language not closely related to the language used by the student to fulfill the College language requirement; (c) LING 8 and LING 35, with the caveat that a LING 8 or 35 used to fulfill the language requirement may not also be counted as one of the ten courses required for the linguistics major.

For Classes of 2028 and later, this language requirement has been eliminated.

The Minor in Linguistics

The minor in Linguistics has a prerequisite of LING 1 and then five additional courses. Three or more of the five additional courses must be courses taught in the Linguistics Department, and at least two of these should be numbered in the 20s. The remaining courses are to be selected in conjunction with the student's advisor.

The Modified Linguistics Major

Students may modify Linguistics with another course of study to create a Linguistics Modified Major. Students who wish to pursue a Modified Linguistics Major should speak with the Chair of Linguistics first. In order to pursue a Modified Linguistics Major, students must take six courses for the Linguistics portion.

1. At least three linguistics courses in the 20s, 30s, 40s, or 50s.
2. At least two other courses, chosen from the offerings in linguistics and/or the related courses approved for the regular major in linguistics.

3. A course which satisfies the requirement for a culminating activity, which may be met as for the regular major in linguistics.

The Computational Linguistics Major

Students who wish to pursue a Computational Linguistics major should take ten courses beyond the prerequisites LING 1 and COSC 1.

The ten courses for the Computational Linguistics major should include the following:

1. Three Linguistics courses chosen from the following list:
 - a. LING 10, 17, 20, 22, 23, 24, 26, or other LING course in consultation with the major advisor
2. Two Computational Linguistics courses:
 - a. LING 50.06 (or other 50.XX topics specifically related to Computational Linguistics)
 - b. LING 28 **or** LING 48
3. Three Computer Science/Math courses:
 - a. COSC 10
 - b. COSC 50
 - c. MATH 22 **or** COSC 70
4. One Elective Course: One elective course can be drawn from Linguistics, Computer Science, Quantitative Social Science, or a related field. This course is selected in consultation with the major advisor. Relevant Computer Science courses include COSC 76 and COSC 78
5. Culminating Experience LING 85 or LING 86-87. Students may either take a one-term Independent Study (LING 85) or a two-term senior honors thesis (LING 86-87). These courses provide hands-on experience and personal mentoring in a computational project. The honors thesis provides two course credits (LING 86-87), so students who choose this option may reduce one course from among the other required categories in the major, with the approval of the major advisor. It is important to consult with the prospective advisor for your independent study as early as possible, preferably during the junior year and no later than the start of senior fall.

Honors Program

The Honors Program in Linguistics offers qualified students the opportunity to undertake independent research under the direction of a faculty member. Students who plan to undertake such a project should have a 3.0 grade average in all courses taken at the College and an average

of 3.3 for courses within the major. It is important to consult with a prospective advisor as early as possible, preferably during the junior year; applications to the Honors Program may be submitted to the Chair either during the spring of the junior year or the fall of the senior year. The project itself normally lasts two terms. The completed thesis is to be submitted during the spring term, and then an oral presentation is given at a special seminar of students and faculty. See departmental website for more information.

Study Abroad Program

Linguistics offers a study abroad program (FSP) in Auckland, New Zealand and Rarotonga in the Cook Islands every winter. Information about this program is available through the Frank J. Guarini Institute for International Education.

See Linguistics (p. 552) courses

LING - Linguistics Courses

To view Linguistics requirements, click here (p. 550).

LING 1 - Introductory Linguistics

Instructor: McPherson (26W), Pulju (26S), Wray (25F)

An introduction to the scientific description of human language. The course teaches methods of analyzing languages' sound systems (phonology), word structure (morphology), sentence patterns (syntax), and systems of meaning (semantics and pragmatics). Some important implications of linguistics for the study of human cognition and cultural behavior will be discussed. This course is a prerequisite for all majors in linguistics. Open to all classes.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:QDS; Lang:LRP

LING 5 - Topics in the Study of Language

Instructor: See individual topics under this rubric.

Courses designated as Linguistics 5 are specifically designed for non-majors to provide them with a deeper awareness of the complexity of human language, linguistic geography or the intersection of language and human society.

LING 5.01 - Words

In this course we will explore all aspects of this most familiar unit of language. Among the questions we will address are: How exactly can we – or dictionary-makers – describe the precise meaning of a word? Is this even possible? How can two politicians honestly differ about the meaning of the word "lie"? How can a word's meaning

change over time? How and why are words borrowed from one language into another? How do our brains think of the words we want so fast? Why do we sometimes mishear song lyrics? What kinds of building blocks make up a word, and what ways are there of inventing new words? What makes a word part of slang or a specialized vocabulary? How do children learn their first words – and how do they learn tens of new words a day at their peak of vocabulary acquisition around age 2?

Degree Requirement Attributes: Dist:SOC

LING 5.02 - The Digital Portfolio: Theory, Design, and Function

Instructor: Donahue

This course introduces students to the scholarly conversation about portfolio website design and function, and to analytical methodologies for studying website discourse and design. The theoretical and methodological work of the course will include studying the ways in which portfolios are a particular kind of discourse and the features of that discourse; the nature of multimodal design as communication; the functions of visual rhetoric and visual semiotics; the role of storytelling in portfolio design; the concept of integrative knowledge; and metacognitive reflection as an essential component of building that knowledge. In addition to analyzing portfolio website artifacts in light of these conceptual components, students will create their own portfolios in order to develop their understanding of the nature and value of portfolio websites. The practical components will include curating a WordPress portfolio's contents, developing its features and design, and presenting it to each student's major department or program. Students will create a portfolio, build knowledge in the process of reflecting on and curating its contents, reflect on its design and their discursive choices in that design, and analyze the meaning-making features of digital portfolios. A secondary benefit will be improvement of writing ability and writing knowledge within the disciplinary context of their major or minor via reflection on the student's body of work across courses.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

LING 5.03 - Languages of Middle-Earth

Instructor: Pulju

This class approaches Tolkien's writings from the standpoint of his languages, with special focus on the Elvish languages Quenya and Sindarin. We will consider the ways in which Tolkien's invented languages and his invented world interact to create a quality of verisimilitude that has done much to ensure the enduring popularity of his writings and of derivative works. We will also discuss invented languages not just in Tolkien's works, but in imaginative literature in general.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

LING 7 - First-Year Seminar in Linguistics

Instructor: Donahue

Offered: Spring.

LING 8 - The Structure of Maori

Instructor: Peterson (26W)

This course is an introduction to the structure of the Maori language. Emphasis is given to the morphology and syntax of basic Maori clause structure. This course is taught by a member of the Department of Maori Studies at the University of Auckland.

Prerequisite: LING 1 and one other Linguistics course in the 20s.

Offered: Winter.

LING 10 - Statistics for Linguistics

Instructor: Coto Solano (26W)

This course is designed to introduce you to the exploration of linguistic data using quantitative methods. It will enable you to apply statistical methods to explore linguistic patterns in your data, formulate hypotheses about linguistic research, and present your findings in linguistic fora. We will study descriptive statistics (e.g. mean, media, mode, variance, standard deviation), inferential statistics (e.g. t-student, ANOVA, chi-square, linear regression) and the basics of Bayesian statistics (e.g. probability distributions, population comparisons). Because of the large overlap in material covered, no student may receive credit for more than one of the courses PBPL 10, ECON 10, GOVT 10, MATH 10, PSYC 10, ENVS 10, QSS 15, or SOCY 10 .

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

LING 11.02 - Languages of China

Instructor: Pulju

In this course, we will survey both the history of language in China, and the current linguistic situation. Topics will include: geographical and genealogical classification of languages in China; the phonological and grammatical systems of representative languages; the reconstruction of Middle and Old Chinese; ways of writing both Sinitic and non-Sinitic languages; language as a marker of ethnic identity; and past and present language policies, both governmental and non-governmental.

Cross-Listed as: ASCL 60.19

Degree Requirement Attributes: Dist:SOC; WCult:NW; Lang:LRP

LING 11.03 - Curses, Compliments, and Secrets: Verbal Behavior in the Middle East

Instructor: Glinert

This course in anthropology and ethnography of language illustrates how Middle Eastern cultures employ language to construct and reflect values, identities and institutions, to create relationships and project personal status, and to perform actions (such as ending a phone call, apologizing, paying compliments and negotiating business deals). Particular attention will be paid to the language of health and healing. No prior knowledge of a particular language or culture is assumed. NOT OPEN TO STUDENTS WHO HAVE RECEIVED CREDIT FOR MES 16.03

Cross-Listed as: MES 81.04

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; Lang:LRP; WCult:CI

LING 11.06 - Language Revitalization

Instructor: Whaley

There is currently a measurable reduction in the amount of linguistic diversity around the world as many languages become moribund or cease to be spoken. With greater awareness of language endangerment and attrition, there have been counteracting efforts to maintain and revive the use of many of these languages. In this course we examine the phenomena of language endangerment and language revitalization. We will evaluate the socio-historical reasons for language shift, the rationale for language revitalization and the relative degrees of success in different revitalization programs. There will be a focus on the languages of North America.

Cross-Listed as: NAIS 040

Degree Requirement Attributes: Dist:SOC; WCult:CI

LING 11.09 - The World's Englishes

Instructor: Donahue

Billions of people can speak and write some form of English. The course explores diverse Englishes around the world, taking up both linguistic and philosophical questions such as: Why is English so widespread? What are the structural differences among different Englishes? Why are some forms of English considered prestigious while others are viewed negatively? How are personal, ethnic, and national identities constructed through language practices? How are international power relations perpetuated and contested through language?

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

LING 11.10 - Language in Africa

Instructor: McPherson

Africa: home to around 2000 of the world's 7000 languages, yet ask an average person on the street to name five African languages and they may be hard-pressed to do so. This course explores the languages of Africa from a historical, linguistic, and cultural standpoint, including the migration and diffusion of different language groups across the continent, similarities and differences in linguistic structure between African languages, the amazing complexity of the Khoisan languages (best known for their use of clicks), the effects of colonialism on language, writing systems, and many other topics.

Cross-Listed as: AAAS 87.11

Degree Requirement Attributes: Dist:SOC; WCult:NW; Lang:LRP

LING 11.11 - Languages of the World

Instructor: Ernst

This course examines cross-cultural differences as manifested in languages of the world and the way these languages are used by their speakers. We will take an in-depth look at five languages – Japanese, Swahili, Jacalteco, Mohawk, and Cape York Creole. In each unit we will start with a brief examination of the structure of that language, and then branch out to a broader discussion of one or more larger, cross-linguistic phenomena and how they are manifested in that language. These include: politeness and social solidarity; universal patterns of word order and word-formation; multilingualism and language choice; language and ethnic identity; case and agreement systems; endangered languages and language revitalization; and pidgins and creoles.

Degree Requirement Attributes: Dist:INT or SOC; Lang:LRP

LING 11.12 - Language and Cognition

Instructor: Whaley

This course examines some of the interrelationships between language and thought. Do people who speak different languages think differently? What does language tell us about the ways in which people conceptualize objects and abstract concepts such as time? How does language relate to other cognitive processes? Is language a uniquely human ability? Topics include linguistic relativism, folk taxonomies, metaphor, categorization, causation, space, time and gender. No prior courses in linguistics or cognitive science are required.

Degree Requirement Attributes: Dist:SOC

LING 11.13 - The Language-Music Connection

Instructor: McPherson and Levin

Language and music are universal components of human experience, so integral that they are often considered part of what defines us as humans. While we treat them as

distinct phenomena, the overlap between the two is immense, structurally, neurologically, and culturally. Such connections have long been recognized, but recent research from diverse fields like linguistics, (ethno)musicology, cognitive psychology, anthropology, and neuroscience continues to reveal just how intertwined the two faculties are. Drawing on this body of research and our respective specialties, we explore the language-music connection from the basic ingredients (pitch, timbre, rhythm, syntax), to cultural expression, to evolution and origins. Running through the course is a hands-on case study of a West African xylophone tradition where language and music are so intimately related that they cannot be separated. Students will be taught by a master of the tradition, Mamadou Diabaté, to feel for themselves what it means to speak through an instrument.

Cross-Listed as: COCO 023 MUS 17.06

Offered: Fall.

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

LING 11.14 - History and Structure of the Latin Language

Instructor: Pulju

This course focuses on the grammar, pronunciation, and writing of Latin, starting from its origin in Proto-Indo-European (c. 4000 BC), proceeding through early Latin into the classical period (1st cent. BC to 1st cent. AD), and ending with the post-classical era. Through analysis of language data and reading of selected ancient texts, students will gain a greater mastery of synchronic language patterns, and also will understand the diachronic origins of those patterns.

Prerequisite: LAT 3 or equivalent

Cross-Listed as: LAT 30.08

Offered: Summer.

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP

LING 11.15 - History and Structure of the Greek Language

Instructor: Pulju

This course focuses on the grammar, pronunciation, and writing of ancient Greek, starting from its origin in Proto-Indo-European (c. 4000 BC), proceeding through Homer to classical Attic (1st millennium BC), and ending with the post-classical era. Through analysis of language data and reading of selected ancient texts, students will gain a greater mastery of synchronic language patterns, and also will understand the diachronic origins of those patterns.

Prerequisite: GRK 3 or equivalent.

Cross-Listed as: GRK 30.08

Offered: Summer.

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP

LING 11.18 - History of the Arabic Language

Instructor: Wray

In this course, we will survey the history of the Arabic language and the current linguistic situation across the Arabic speaking world. We will learn about the foundations of Arabic grammatical and philological tradition, and compare these with modern linguistic perspectives. We will also engage with the ideologies surrounding the multiple dialectal varieties, which serve as both liturgical and administrative languages, as well as languages of thought, conversation, and artistic expression.

Cross-Listed as: MES 15.12

Degree Requirement Attributes: Dist:SOC; Lang:LRP

LING 11.19 - The Reading Brain: Education and Development

Instructor: Coch

The majority of children entering first grade do not know how to read; the majority of children leaving first grade do know how to read, at least at a basic level. What is involved in the amazing development of the ability to make meaning of marks on a page? What goes on in the brain during reading and learning to read? We explore answers to these questions and more in this introduction to reading as we investigate the roles of orthography, phonology, semantics, syntax, and comprehension in reading. We focus on the development of reading behaviors, the brain bases of reading skills, and how scientific discoveries can inform educational practices. Open to all classes.

Cross-Listed as: COGS 033 EDUC 050 PSYC 52.09

Degree Requirement Attributes: Dist:SOC; Lang:LRP

LING 11.20 - Aphasiology and the Neurobiology of Language

Instructor: Wray

What happens when language is lost or impaired through injury or degeneration? In this course, we will first cover traditional models of brain and language, and compare them with current research linking linguistic processing to neurobiological mechanisms. We will then focus on classification of types of aphasia, covering symptoms and causes of each. We will investigate how disordered language is intertwined with general cognition, and how it is separate. Language breakdown will be analyzed at each

level of representation and processing to provide a general understanding of aphasia and associated disorders.

Prerequisite: COGS 1 OR LING 1 OR PSYC 1, or with instructor permission

Cross-Listed as: COGS 50.07

Degree Requirement Attributes: Dist:SCI

LING 11.25 - Introduction to Indigenous Languages

Instructor: Whaley

This is a hybrid course that will combine elements of independent study with seminar-style discussion. Students will design a plan for deep and meaningful engagement with their target language and discuss relevant methodologies and case studies. Recognizing the particular urgency and challenges many learners of indigenous language face, the course will cover methodologies, strategies for language learning, as well as the opportunities and constraints to equip students as indigenous language learners.

Cross-Listed as: NAIS 30.25

Offered: Fall.

Degree Requirement Attributes: Lang:LRP; Dist:SOC; WCult:NW

LING 11.26 - Languages of Russia and the Former Soviet Union

Instructor: Apresyan

When asked what languages are spoken in Russia, most people would probably say Russian. Yet, Russia and the former Soviet territories stretch from the icebergs of the Arctic to the steppes of Central Asia and are home to more than 150 languages from a multitude of language families, including Indo-European, Uralic, Turkic, and Mongolic.

This course will explore the rich linguistic landscape of these territories from a linguistic, as well as geographical, historical, social, and cultural standpoints. We will begin by tracing the diffusion and migration of different language groups from the Middle Ages to the present time. We will then focus on examining the phonetic, morphological, and semantic diversity across different languages and learn their distinct writing systems. Finally, we will analyze how language policies of the Russian state impacted the evolution and preservation of the regional languages.

This course examines the evolution of languages in different regions of Russia and the former Soviet Union, highlighting present-day efforts to document and conserve endangered languages and the challenges encountered by language activists. In terms of content, the course combines academic readings with popular and opinion pieces and videos.

Cross-Listed as: EEER 38.30

Degree Requirement Attributes: Dist:INT or SOC;
Lang:LRP; WCult:NW

LING 15 - Language Acquisition

Instructor: Wray

Language is a socially and cognitively complex activity, yet most healthy individuals acquire language in the first years of their life with no expended effort. This course provides an in-depth overview of typical language development from fetus to adult, as well as atypical development. The study of this topic within this course is informed by cognitive science, speech and hearing, psychology, philosophy, and neurology, and is ultimately couched in linguistic framework and terminology.

Not open to students who have received credit for LING 11.17.

Cross-Listed as: EDUC 015

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

LING 17 - Sociolinguistics

Instructor: Stanford

The field of sociolinguistics deals with the ways in which language serves to define and maintain group identity and social relationships among speakers. In this course we will consider such topics as regional and social variation in language; the relationship of language and ethnicity, sex and gender; language and social context; pidgin and creole languages; language endangerment and the fate of minority languages in the US and other countries; language planning, multiculturalism and education. Open to all classes.

Cross-Listed as: SOCY 49.28

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:CI;
Lang:LRP

LING 18 - History of the English Language

Instructor: Pulju

This course traces the development of English as a spoken and written language belonging to the Indo-European language family. We will work forward from Proto-Indo-European through Old English (Beowulf), Middle English (Chaucer), and Early Modern English (Shakespeare), up to contemporary American English. Our focus will be on the structural history of the language, especially changes in pronunciation and grammar, and the implications of those changes for English as spoken and written today. Open to all classes.

Not open to students who have received credit for ENGL 047.

Cross-Listed as: ENGL 55.24

Degree Requirement Attributes: Lang:LRP; Dist:QDS;
WCult:W

LING 20 - Experimental Phonetics

Instructor: Stanford

This course is an introduction to speech physiology, articulation, and the acoustic analysis of speech. Students will acquire knowledge of the experimental and computational techniques that are relevant for investigating the production of speech. This includes equipment functioning, data collection and recording techniques, techniques for analyzing speech acoustics, and analysis of data from a variety of languages.

Prerequisite: LING 1

Offered: Spring.

Degree Requirement Attributes: TAS

LING 21 - Phonology

Instructor: Staff

Phonology is the study of the system underlying selection and use of sounds in languages of the world. The course will introduce students to investigation of these topics from the perspective of recent theories of phonology. Readings, class discussions, and homework problems will provide a basis for understanding the origin, role, and uses of sound systems in spoken languages.

Prerequisite: LING 1

Degree Requirement Attributes: QDS

LING 22 - Syntax

Instructor: Ernst

An introduction to the formal analysis of grammatical structure. The course aims to familiarize the student with Principles and Parameters Theory (PPT), the theoretical framework which currently dominates the field of syntax in North America. The course also provides an introduction to using data to support one syntactic analysis over another, and an overview of some of the major syntactic phenomena in the world's languages.

Prerequisite: LING 1

Offered: Fall.

Degree Requirement Attributes: QDS

LING 23 - Semantics

Instructor: Ernst

An investigation of 'meaning' in language: word meaning, sentence meaning and its relation to syntactic structure, and the role of both linguistic and extra-linguistic context.

Prerequisite: LING 1

Degree Requirement Attributes: Dist:QDS

LING 24 - Pragmatics & Discourse Analysis

Instructor: Peterson

Discourse analysis examines linguistic structure that exists beyond the sentence level. In this course we will consider the structures of naturally occurring spontaneous speech (such as conversations, interviews, oral narratives) and those in written text. Special attention is given to the global priorities of connected speech and writing, including mechanisms of coherence and cohesion. Other topics include narrative structures, new and old information, topicalization, foregrounding and backgrounding, and the methods of conversational analysis and variation analysis.

Prerequisite: LING 1.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

LING 25 - Psycholinguistics

Instructor: Wray

The deceptively simple tasks of perceiving and producing language require the performance of complicated and often overlapping functions at high speeds. How can we study the representations and processes that make language possible as they interact in the black box that is the human mind? The goal of this course is to provide a broad understanding of research focusing on how the human mind structures, stores and accesses linguistic information. Not open to students who have received credit for LING 50.01.

Prerequisite: LING 1 or permission of instructor

Cross-Listed as: COGS 50.05 LING 50.01 PSYC 51.13

Degree Requirement Attributes: Dist:SCI

LING 26 - Morphology

Instructor: Pulju

Morphology is the study of word structure and word-formation processes, and how these interact with phonology, syntax, and the lexicon. This course focuses on analyzing morphological phenomena in a wide range of typologically diverse languages. Topics to be addressed include the place of word formation in relation to phonological and syntactic phenomena, as well as the contribution of morphological analysis to our understanding of lexical processing. We will consider the history of morphological theory in generative grammar,

with special attention to recent approaches, including Distributed Morphology.

Prerequisite: LING 1

Degree Requirement Attributes: QDS

LING 27 - Historical Linguistics

Instructor: Pulju

This course focuses on the principles and methods of historical linguistics. Students will learn how languages change on all levels (phonetic, phonological, morphological, syntactic, semantic, and lexical), and will learn to apply the principles of language change to the reconstruction of vanished protolanguages and their associated cultures.

Prerequisite: LING 1 or LING 18.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

LING 28 - Computational Linguistics

Instructor: Coto Solano

The study of human language from a computational perspective. This course will survey formal models for representing linguistic objects, and statistical approaches to learning from natural language data. We will pay attention to the use of computational techniques to understand the structure of language, as well as practical engineering applications like speech recognition and machine translation. Students will implement simple algorithms for several key tasks in language processing and learning.

Prerequisite: LING 1

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

LING 33 - Typology & Linguistic Universals

Instructor: Peterson

In what ways, if any, are all languages the same? Just how different can they be? What are the most common types of constructions found in language? Why are they common? These are the central questions of Typology. In this class we begin by exploring the core assumptions and methods of the discipline. Then, we examine what typologists have discovered about sound systems, morphological systems and grammatical constructions.

Prerequisite: LING 1

Degree Requirement Attributes: Dist:SOC

LING 35 - Field Methods

Instructor: McPherson

This course provides an overview of issues that arise in collecting language data in the field. We will examine techniques used in the gathering and analysis of data and practical problems that confront the fieldworker.

Prerequisite: LING 21 and one other course in the 20s.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

LING 48 - Accelerated Computational Linguistics

Instructor: Coto Solano (26S)

The study of human language from a computational perspective. This accelerated course has programming background equivalent to that provided by COSC 1 as a prerequisite. This course will survey formal models for representing linguistic objects, and statistical approaches to learning from natural language data. We will pay attention to the use of computational techniques to understand the structure of language, as well as practical engineering applications like speech recognition and machine translation. Students will implement simple algorithms for several key tasks in language processing and learning.

Prerequisite: COSC 01

Cross-Listed as: COSC 072

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

LING 50.04 - History of the Romance Languages

Instructor: Pulju

This course focuses on the internal history of three Romance languages—Italian, Spanish, and French—showing how they diverged from their common ancestor to become three separate languages today. Although we will pay some attention to social, cultural, political, and literary developments, the bulk of the course will cover changes in linguistic structure. We will trace the development of phonology, morphology, and lexicon from Vulgar Latin up through the present.

Prerequisite: LING 1

Degree Requirement Attributes: Dist:QDS; WCult:W; Lang:LRP

LING 50.05 - History of Linguistics

Instructor: Pulju

This course covers the history of linguistics from ancient times up until the present, concentrating on 20th century. Major themes include: the controversy over the status of linguistics as a science; the recurrent conflict between theoretical and applied linguistics; the relation of trends in linguistics to general contemporaneous intellectual trends; and the relative importance of social factors in determining the acceptance of particular

linguists' ideas. Specific theoretical issues will also be considered, such as: the nature and significance of the phoneme; the degree to which syntax is independent of semantics and pragmatics; realist vs. nominalist views of linguistic description; and formalist vs. functionalist disagreements over the autonomy of language.

Prerequisite: LING 1

Offered: Summer.

Degree Requirement Attributes: Dist:TMV

LING 50.06 - Computational Psych of Language

Instructor: Wray

Computational approaches are becoming increasingly prevalent in cognitive science and psychology as they allow us to leverage advances in robust datasets and computing power to investigate aspects of human cognition and behavior such as language. This course seeks to address the processing of language in the mind and brain through computational modeling. The goal of this course is to provide a broad understanding of research utilizing computational psycholinguistics to investigate how the human mind acquires, stores, and accesses language. This course will also serve as an introduction to methodology utilized in this field and provide hands-on opportunities to produce research focusing on language processing.

Prerequisite: COGS 1 OR LING 1 OR PSYC 1, or instructor permission. Also some programming experience is assumed.

Cross-Listed as: COGS 50.06

Degree Requirement Attributes: Dist:TAS

LING 54 - Foreign Study in Linguistics

Instructor: Peterson

This course is one of two local courses that will be taken by linguistics students on the Dartmouth Foreign Study Program at the University of Auckland in New Zealand. The course will be taught by one or more faculty at the University of Auckland. Although the content of the course may vary, the course will normally be an advanced level course on an aspect of the languages of the Pacific, Maori culture or Maori language. Credit is awarded to students who have successfully completed the designated course at the University of Auckland.

Prerequisite: LING 1 and one other Linguistics course in the 20s.

Offered: Winter.

Degree Requirement Attributes: SOC

LING 80 - Seminar in Linguistics

Instructor: See individual topics under this rubric.

Offered every Spring. Seminar topic will vary according to instructor.

Prerequisite: Prerequisite: two or more 20s-level LING courses, or permission of instructor.

Offered: Spring.

LING 80.06 - Tone

Instructor: McPherson

Over half of the world's languages are tonal, making tone a crucial aspect of human language, and yet many researchers shy away from it or otherwise treat it as exotic. In addition to being found on almost every continent, from South America to Europe, tone also interfaces with nearly every component of grammar. As renowned tonologist Larry Hyman once wrote, "Tone can do everything that segmental and metrical phonology can do, but the reverse is not true." Amazingly, all of this is achieved with just a single phonetic parameter: fundamental frequency, or pitch. In this seminar, we look at tone from all angles: phonetics, phonology, morphology, syntax, typology, and even its interfaces with music. Readings range from foundational papers to cutting edge research. Students will choose a tone language to focus on throughout the quarter, culminating in an individual research project on a tone topic of their choice.

Degree Requirement Attributes: Dist:SOC

LING 80.07 - Advanced Linguistics Seminar: Variation and Dialects

Instructor: Stanford

Regional dialects have always stimulated popular interest and curiosity. Variation is a key part of linguistics that can be objectively investigated in terms of regional dialects and also age, gender, ethnicity, social class, speech style, and other factors. This course examines a wide range of issues in linguistic variation using the latest empirical and analytical methods and theoretical perspectives. The course includes opportunities for "hands-on" field projects and laboratory research.

Prerequisite: Two or more 20s-level LING courses, or permission of instructor.

Degree Requirement Attributes: Dist:SOC

LING 80.08 - Nonconcatenative Morphology

Instructor: McPherson

The field of morphology investigates word structure: How are complex words built up from their component parts? Arguably the most common kind of morphology, affixation and compounding are *concatenative*: two or more separable morphemes are combined to create a complex word. This course focuses on the more challenging set of phenomena known as *nonconcatenative morphology*: those cases where a clean line cannot be

drawn between morphemes. We will explore a range of data patterns included under this heading, including Semitic root-and-pattern morphology, grammatical tone, reduplication, ablaut, truncation, and consonant mutation. We will then evaluate formal approaches to nonconcatenative morphology, which pushes most theoretical frameworks of morphology to their limits.

Prerequisite: two or more 20s-level LING courses, or permission of instructor.

Degree Requirement Attributes: Dist:QDS

LING 80.09 - Speech Surrogates

Instructor: McPherson

The natural modality of human language is spoken or signed, but many cultures around the globe have developed secondary systems of communication—speech surrogates—that take this natural language and transpose it to traditionally “non-linguistic” modalities. While the best known systems involve whistling or drumming (“talking drums”), a wide variety of other instruments are also attested. Despite their fundamentally linguistic nature, serious research in the field of linguistics has begun only recently. The study of speech surrogates intersects with all aspects of linguistics, from phonetics and phonology to discourse analysis and language documentation. In this seminar, students will study the linguistic structure of speech surrogates through reading primary literature, guest visits from traditional practitioners, and the development and experimental testing of their own speech surrogate.

Prerequisite: two or more 20s-level LING courses, or permission of instructor.

Degree Requirement Attributes: Dist:ART; WCult:NW

LING 80.10 - Indo-European Linguistics

Instructor: Pulju

Overview of the structure of reconstructed Proto-Indo-European and of the major developments from PIE to descendant languages. The course will focus on controversial topics in Indo-European linguistics, and on their relevance for broader issues in historical linguistics and for linguistic theory in general.

Prerequisite: Any one of the following: LING 27, LING 18 / ENGL 55.24, LING 11.15 / GRK 30.08, LING 11.14 / LAT 30.08, or instructor permission

Degree Requirement Attributes: WCult:W

LING 85 - Independent Study and Research

This course offers qualified students of linguistics the opportunity to pursue work on a topic of special interest through an individually designed program. Requires permission of the instructor and the Chair.

Offered: Fall, Spring, Summer, Winter.

LING 86 - Honors Research

Linguistics 86 and 87 consist of independent research and writing on a selected topic under the supervision of a Program member who acts as advisor. Open to honors majors in Linguistics. Permission of the thesis advisor and the Chair required.

Offered: Fall, Spring, Summer, Winter.

LING 87 - Honors Thesis

Linguistics 86 and 87 consist of independent research and writing on a selected topic under the supervision of a Program member who acts as advisor. Open to honors majors in Linguistics. Permission of the thesis advisor and the Chair required.

Offered: Fall, Spring, Summer, Winter.

Literature in Translation**COURSE LISTING****Minor in Materials Science**

Joseph J. BelBruno, Director, Nanomaterials Center

Ian Baker, Sherman Fairchild Professor of Engineering

The minor in Materials Science is sponsored by faculty in Chemistry, Physics and Engineering who share an interest in interdisciplinary education and research in materials science. The program is coordinated through the Center for Nanomaterials Research at Dartmouth. The minor can be readily combined with majors in any of the three departments.

Prerequisites : The necessary background is obtained by completion of CHEM 5 and CHEM 6, and PHYS 13 and PHYS 14 or equivalent courses.

Requirements: A total of four additional courses are required. These must include ENGS 24 and PHYS 76 or ENGS 137. Two elective courses are chosen from the following combinations: ENGS 131 or PHYS 73; ENGS 74; CHEM 108 or CHEM 109; ENGS 73, ENGS 132 or PHYS 43. (If ENGS 137 is taken, one of the electives must be from outside the engineering department.)

Mathematics - Undergraduate

Chair: Dimitris Giannakis

Vice Chair: Dana Williams

Professors V. Chernov, S. Elizalde, A. Gelb, D. Giannakis, P. J. Hanlon, P. Mucha, R. C. Orellana, S. D. Pauls, D. Rockmore, C. J. Sutton, E. van Erp, D. P. Williams, P. Winkler; Associate Professors A. Auel, F. Fu, Y. Lee, I. Petkova, J. D. Trout; Assistant Professor J. Bruce, P. Ju, E.

Levien, A. Mallick, S. Tayou; Research Instructors H. Deng, R. Dougherty-Bliss, A.R. Haj Saeedi Sadegh, G. Park, T. Zdyrski; Research Associates, Lectures, and Fellows K. Eikenberry, G. Hoefler, L. Huynh, M. Latifi Jebelli, L. Liu, J. MacDonald, M. Montgomery, T. Phillips, C. Vales, J. Welborn, Y. Xiao; Research Professors J. Slawinska; Adjunct Professor H. Chang, E. Demidenko.

To view Mathematics Undergraduate courses, click here. (p. 566)

To view Mathematics Graduate requirements, click here. (p. 963)

To view Mathematics Graduate courses, click here.

See the Department website for projected terms for future course offerings.

Please note that course meeting times and instructors are subject to change until the Timetable of Class Meetings for the specific term is published by the Registrar's Office.

Introductory Courses

The four courses MATH 1, MATH 3, MATH 8, and MATH 13 provide a coherent four-term sequence in calculus. MATH 1, MATH 3 and MATH 8 cover the basic calculus of functions of a single variable, as well as vector geometry and calculus of scalar-valued functions of several variables. In addition, the latter two courses are prerequisite for many advanced courses in Mathematics and Computer Science. MATH 13 covers the basic calculus of vector-valued functions of several variables. MATH 11 is a special version of MATH 13 and MATH 9 is a special version of MATH 8, both for first-year students with two terms of advanced placement. Most students planning advanced work in mathematics or the physical sciences will need an additional course in calculus, MATH 23. Students with two terms of advanced placement credit who possibly are interested in a mathematics major or minor should consider MATH 17 as an option in their second term. MATH 17, "An Introduction to Mathematics Beyond Calculus," is a course designed for students interested in learning about some of the aspects of mathematics not usually encountered in the first years of mathematical studies. Topics change from year to year but may include aspects of combinatorics, algebra, analysis, number theory, geometry, and/or topology. Students planning to take upper-level mathematics courses are encouraged to take MATH 22 or MATH 24 (linear algebra) early in their curriculum. MATH 19, Introduction to Set Theory, is an introductory course that also provides good preparation for upper-level mathematics courses.

A student wishing to devote only two to three terms to the study of mathematics is encouraged to choose among courses MATH 1, MATH 3, and MATH 10. MATH 1 and MATH 3 will introduce the student to the ideas and

applications of the differential and integral calculus depending on their background. MATH 10 covers the fundamental concepts of statistics.

The Mathematics Department offers two distinct majors: (I) The Major in Mathematics and (II) The Major in Mathematical Data Science.

I. THE MAJOR IN MATHEMATICS

The major in mathematics is intended both for students who plan careers in mathematics and related fields, and for those who simply find mathematics interesting and wish to continue its study. The content of the major is quite flexible, and students may select courses largely to reflect their interests. Students who major in mathematics have an opportunity to participate in activities that bring them in close contact with a faculty member—for example, through a small seminar or through an independent research project under the direction of a faculty member. In addition to regular course offerings, a student with specialized interests, not reflected in our current course offerings, can arrange for an independent reading course. Proposals for independent activities should be directed to the Advisor to Majors.

In general, the mathematics major requires the student to pass eight mathematics or computer science courses beyond prerequisites. At least six of the required eight courses must be mathematics, and at least four of these courses must be taken at Dartmouth. In addition, a student must fulfill the College's requirement for a culminating experience in the major (see below). Additional requirements for honors are described below in a separate section.

Students are encouraged to take MATH 22/ MATH 24 as soon as feasible, since not only is it a prerequisite to many upper-division courses, but also the level of mathematical sophistication developed in MATH 22/ MATH 24 will be presumed in many upper-division courses for which MATH 22/ MATH 24 is not an explicit prerequisite.

Mathematics Major Requirements

Prerequisite Courses: MATH 3; MATH 8; MATH 13; MATH 22 or MATH 24

Requirements: A major in mathematics comprises at least eight courses in addition to the prerequisites, as well as a culminating experience (which may or may not be part of the eight major courses). These eight courses must include:

1. (Algebra) MATH 31 or MATH 71;
2. (Analysis) At least one of MATH 35, MATH 43, or MATH 63;
3. Six additional Mathematics/Computer Science courses numbered 17 or above (except MATH 22 and MATH 24) for Mathematics, and 30 or above for Computer Science.

Caveats:

Not acceptable: MATH 97, COSC 99

While undergraduates are encouraged to take graduate-level courses in mathematics, the following graduate courses cannot be used to fulfill any of the requirements for a major or minor in mathematics: MATH 104, 117, 147, 148 and 151.

At most two Computer Science courses may be used. The culminating experience requirements are described in a separate section below.

Choosing Courses for the Major

While the student interested only in a general exposure to mathematics may choose their major courses subject only to the constraints above, those with more focused interests (pure mathematics, applied mathematics, and mathematics education), will want to consider the course recommendations below.

1. (Pure Mathematics) For students interested in pure mathematics, MATH 24 is preferable to MATH 22 as prerequisite.

We recommend that the following courses be included among the eight courses needed for the major:

(Algebra) MATH 71 and MATH 81;
(Analysis) MATH 63, and MATH 43 or MATH 73;
(Topology/Geometry) MATH 54, and at least one of MATH 32, MATH 42 or MATH 72, MATH 74.

Students planning to attend graduate school should take substantially more than the minimum requirements for the major. In particular, such students are strongly urged to take both MATH 43 and MATH 73; moreover, undergraduates with adequate preparation are encouraged to enroll in graduate courses.

2. (Applied Mathematics) Applied mathematics now encompasses a wide expanse of mathematical activity in the sciences, ranging across finance, sociology, psychology, biology, physics, computer science, and engineering. Students interested in applied mathematics, especially those considering graduate school in applied mathematics or any of the sciences, are advised to take MATH 23, MATH 20 or MATH 60, MATH 46, and MATH 40.

We recommend choosing additional courses from among the following: MATH 26, MATH 28, MATH 36, MATH 38, MATH 42, MATH 43, MATH 46, MATH 53, MATH 75, MATH 76.

We do not make any specific recommendations concerning the choice of MATH 22 versus MATH 24 as prerequisite and the choices for requirements (1) Algebra and (2) Analysis; these choices depend on the interest of the student.

All students planning to attend graduate school should take substantially more than the minimum requirements for the

major. In particular, undergraduates with adequate preparation are encouraged to enroll in graduate courses.

3. (Mathematics Education) Certification as a public school Mathematics teacher is available through partnership with the Education Department. Contact the Education Department for details about course requirements.

Students who are considering a career in teaching should pay close attention to the recommendations of the National Council of Teachers of Mathematics (NCTM). The NCTM has endorsed a series of recommendations for a suggested course of study for those people interested in teaching mathematics at the secondary level. In general, their recommendations (www.nctm.org) are for a vigorous course of study. At the moment, these recommendations far exceed the requirements for obtaining a teaching certificate, but indicate the direction in which the NCTM hopes that educators will proceed. Highly qualified teachers in the elementary and secondary schools are of vital national importance, and these guidelines should be carefully considered. Dartmouth courses that closely fit the recommendations of the NCTM are (in addition to the prerequisites): MATH 20 or MATH 60; MATH 23 or MATH 36; MATH 25 or MATH 75; MATH 28, MATH 38 or MATH 68; MATH 31 or MATH 71; MATH 32 or MATH 42 or MATH 72; MATH 35 or MATH 43 or MATH 63; MATH 40

Culminating Experience

The Department will accept any of the following in satisfaction of the requirement of a culminating experience:

1. Submission of an Honors thesis acceptable for honors or high honors. Students using this option enroll in MATH 97 while completing the honors thesis.
2. Satisfactory completion of any graduate course in mathematics except MATH 107, MATH 117, MATH 147, MATH 148, MATH 151.
3. Satisfactory completion of a one-term independent research project (subject to approval by the advisor to majors). Students enroll in MATH 87 while completing the independent research project.
4. Satisfactory completion of an advanced undergraduate course from among: MATH 66, MATH 68, MATH 69, MATH 70, MATH 72.XX, MATH 73, MATH 74, MATH 75, MATH 76.XX, MATH 81, MATH 86, MATH 96.

II. THE MAJOR IN MATHEMATICAL DATA SCIENCE

Statistics has become a ubiquitous tool not only in traditional areas in the natural and social sciences, but in emerging cross-disciplinary fields in data science. The

major combines a solid theoretical foundation with application to one or more fields of study.

Prerequisites: MATH 3, MATH 8, MATH 13; MATH 22 or 24; COSC 1 or other programming experience.

Four courses are required: MATH 20, MATH 40, MATH 50, and MATH 70.

Students must also satisfy a computational requirement for the major, selecting at least one of either COSC 35 or COSC 74. Students taking both of these courses may count additional selections as partially satisfying the next requirement.

Further, students must select three courses from the following list at the discretion of the Adviser to Majors.

MATH 76, MATH 86, MATH 96, MATH 116, MATH 120, MATH 126;

QSS 41;

BIOL 29, BIOL 47, BIOL 59;

COSC 35, COSC 74 (see above);

ECON 20, ECON 80.

Culminating Experience: Majors in Mathematical Data Science must complete a data intensive research project to satisfy the culminating experience. Students may complete this by writing a thesis (while enrolled in MATH 97), completing an independent research project (while enrolled in MATH 90), or completing a course with a significant statistical project. The culminating experience must be approved in advance by the Adviser to Majors.

Minors in Mathematics

The following minors are available to all students who are not majoring in mathematics and who do not have a modified major with the Mathematics Department. For each minor, the prerequisites and required courses are listed below. Approval of a minor can be obtained through the Department's Advisor to Mathematics Majors.

Caveat:

While undergraduates are encouraged to take graduate-level courses in mathematics, the following graduate courses cannot be used to fulfill any of the requirements for a major or minor in mathematics: MATH 104, 117, 147, 148 and 151.

I. Mathematics

Prerequisites: MATH 3, MATH 8, MATH 13, MATH 22

Required Courses (4 courses): MATH 31 or MATH 71; MATH 35 or MATH 43 or MATH 63; plus two other Mathematics courses numbered 20 or above.

II. Applied Mathematics for Physical and Engineering Sciences

Prerequisites: MATH 3, MATH 8, MATH 13 or MATH 22, COSC 1

Required Courses (4 courses): MATH 23, MATH 46 or MATH 53, MATH 40 or MATH 60, MATH 43 or MATH 56 or MATH 76.

III. Applied Mathematics for Biological and Social Sciences

Prerequisites: MATH 3, MATH 8, MATH 13, MATH 22

Required Courses (5 courses): MATH 20, MATH 23, MATH 28 or MATH 36 or MATH 38, and two courses from MATH 27, MATH 40, MATH 46, MATH 53, MATH 56 or MATH 76.

IV. Mathematical Biology

Prerequisites: MATH 3, MATH 8, MATH 13, and either MATH 22 or MATH 23; MATH 10 or BIOL 29

Required Courses (4 courses): Two courses chosen from among MATH 26, MATH 27, MATH 36, MATH 40; and two courses chosen from among BIOL 21/BIOL 51, BIOL 39, BIOL 47, BIOL 59, COSC 75, MATH 37, MATH 47 and ENGS 41 (p. 303).

V. Mathematical Logic

Prerequisites: MATH 3, MATH 8, MATH 24 (MATH 22 by permission)

Required Courses (5 courses): MATH 19; MATH 29 or COSC 39; MATH 39 or MATH 69; MATH 63 (not MATH 35); one additional course chosen from among MATH 31, MATH 71, MATH 54, PHIL 32, MATH 29 if COSC 39 is taken as a required course.

VI. Mathematical Physics

This minor is sponsored by the faculty in Mathematics and Physics. It may be combined with majors in either of the two departments, or any other department. Students majoring in both physics and mathematics cannot take the minor.

Prerequisites: PHYS 13, PHYS 14, PHYS 19 (or PHYS 15 and PHYS 16), and PHYS 40, MATH 3, MATH 8, MATH 13, and MATH 22 or MATH 24.

Requirements: A total of four additional courses are required. These must include MATH 23 and MATH 46. Mathematics majors must choose two elective physics courses from the following list; physics majors must choose two elective mathematics courses; students majoring in a department other than mathematics or physics must choose one math and one physics course.

PHYS 30, PHYS 31 (p. 665), PHYS 41, PHYS 43, PHYS 44, PHYS 47, PHYS 66, PHYS 50, PHYS 72, PHYS 75,

PHYS 77, PHYS 90 (p. 668). [NOTE: PHYS 50 requires PHYS 40]

MATH 31 or MATH 71, MATH 42, MATH 43, MATH 53, MATH 54, MATH 63, MATH 66, MATH 73, MATH 76.

An advanced undergraduate or graduate level physics or mathematics course may be substituted, with permission from the physics or mathematics department undergraduate advisor. No course may count towards both the major and minor.

VII. Mathematical Finance

Mathematical Finance is an interdisciplinary minor that will provide students with the opportunity to see how mathematics, economics and computer science can be used to study theoretical and applied problems arising in economics, finance and risk management. The minor requires students to take 5 courses beyond the prerequisites. To allow for maximum flexibility in scheduling, students are encouraged to complete (either MATH 60 or both MATH 20 and MATH 40), MATH 23 and COSC 1 by the end of their sophomore year as these courses are requirements for MATH 86, which serves as the capstone for the minor.

Prerequisites: MATH 3, MATH 8, MATH 13, MATH 22 or MATH 24, COSC 1, ECON 21.

Required Courses (5 courses): MATH 60 or both Math 20 and Math 40, MATH 23, MATH 86, ECON 26, ECON 36

VIII. Complex Systems

Complex Systems is an interdisciplinary field that integrates ideas and techniques from mathematics and the sciences to study emergent phenomena, generally characterized by an evolutionary nature in which the “whole is more than the sum of its parts.” Examples include the collective of species-species interactions that give rise to an ecosystem, the aggregate of buyer-seller interactions that create economies or markets, the neuron-neuron signalings that create the brain and mind, or individual social relationships that result in a coherent society, all of which display properties of adaptation and selection and multiscale structure. The study of complex systems is highly interdisciplinary, at its best, using insights into the etiology of one phenomenon to inform another, a kind of analogical reasoning made possible through the use of common mathematical and computational tools.

The minor requires students to take 5 courses beyond the prerequisites and includes the accomplishment of an integrative independent project, advised by a faculty member in mathematics, as evidence of the ability to integrate these ideas into a coherent whole.

Prerequisites: MATH 3, MATH 8, MATH 13, MATH 22 or MATH 24; One of COSC 1, COSC 3, COSC 8, COSC 10 or ENGS 20; BIOL 11 or PHYS 30/ENGS 30.

Required Courses:

(a) At least three courses within the Department of Mathematics, chosen as follows:

- Two courses from among the following, at least one of which must be MATH 36 or MATH 76: MATH 27, MATH 36, MATH 53, and MATH 76.
- MATH 87 (please note that students will need to find an advisor for their MATH 87 project, which must be integrative in nature);

(b) At least one course from outside the Department of Mathematics, chosen as follows:

- One course from among the following: BIOL 15, BIOL 16; CHEM 41, CHEM 75; COSC 16/PSYC 40, COSC 58, COSC 75, COSC 79, COSC 81; EARS 15, EARS 67; ECON 29, ECON 76; ENGS 30, ENGS 35, ENGS 114; PSYC 46; SOCY 16, SOCY 27; PHYS 30, PHYS 43.
- With the approval of the advisor to majors, a student may satisfy this requirement with an appropriate course offered by one of the departments represented in the preceding list or Environmental Studies.

(c) An additional course from any of the options listed in parts (a) or (b); or, with the approval of the Advisor to Majors, another appropriate course not listed in (a) or (b).

IX. Minor in Statistics

It is difficult to overstate the importance of statistical training in the twenty-first century, especially in today's (and the future) job market. Students completing this minor will have the skills to perform advanced statistical analyses and with the accompanying accreditation will be able to compete successfully for employment and professional school admission.

Prerequisites: MATH 3, MATH 8, MATH 13; MATH 22; COSC 1 or ENGS 20 or Permission of the Instructor.

Required Courses (4 courses): MATH 20 (or MATH 60), MATH 40, MATH 70 and one other major level course in Mathematics. At the discretion of the Advisor to Majors, students may substitute BIOL 59, COSC 74, or ENGS 107 for MATH 70.

The Honors Program in Mathematics

A student who satisfies the requirements of the College for admission to the Honors Program and is interested in doing independent work is strongly encouraged to participate in the departmental Honors Program. Students who successfully complete the Honors Program will have their degrees conferred with 'Honors' or 'High Honors' in mathematics; high honors is awarded only if the student submits a written thesis. Interested students should read this section of the ORC carefully and consult the Advisor to Majors. This program can be especially important to those who contemplate graduate work in mathematics or a related field.

Admission: Admission to the Honors Program requires a general College average of B, and a B average in the Mathematics Department at the time of admission and at the time of graduation. Moreover, a B+ average is required in the work of the Honors Program. The B average in the Department is computed as follows: Courses prerequisite to the major and undergraduate research courses (MATH 97) are not counted, but all other courses titled (or cross listed with) mathematics which the student has taken are counted, whether or not these courses form part of the student's formal major. In the case of a modified major, this average may include courses outside the Mathematics Department. The B+ average required in the work of the Honors Program is defined to be a grade of B+ given by the faculty advisor on the research project. Questions about this requirement should be directed to the Advisor to Majors.

Requirements: Under the supervision of a faculty member, the student must complete an independent research project or thesis beyond what is required as part of a course. Often the subject of the project or thesis will be motivated by concepts or the content of an advanced seminar or course in which the student has participated, and, typically, the project or thesis will be completed over a period of three terms. The student should consult with his/her prospective faculty advisor and submit to the Advisor to Mathematics Majors a brief written proposal of the project that has the written approval of the faculty advisor. The Advisor to Majors will then review the student's proposal and the courses that have been selected for the Honors major. Approval of the proposal and course selection constitutes formal admission into the Honors Program. This procedure should be completed by the beginning of fall term of the student's senior year. The student may then register for (at most two terms of) MATH 97, Undergraduate Research.

In the first week of the student's final term in residence, the student must register with his/her faculty advisor for 'Honors Thesis/Project Supervision.' This is not an official College course; rather, it represents a declaration of intent to the Department that the student wishes to be considered for honors at the time of graduation. Forms for this purpose are available from the Advisor to Majors. No student who has failed to file this intent form with the Advisor to Majors will be considered for honors in the major.

After the thesis is completed and submitted to the faculty advisor, the student will give a short presentation of their results. The advisor can then offer a recommendation for honors or high honors on behalf of the student; this recommendation must be ratified by a vote of the Department faculty.

Modified Majors

Modified Major with Mathematics as the primary Department

Prerequisite: Same as mathematics major plus some additional prerequisites from modifying major (subject to approval of Advisor to Majors).

Requirements: An algebra and an analysis course that satisfy the requirements of the mathematics major, together with four additional Mathematics courses that normally count towards the major in mathematics, including one course that satisfies the culminating experience requirement (choice subject to approval of Advisor to Majors). Subject to the approval of the Advisor to Majors, the algebra course can be replaced by one of the following courses: MATH 28, MATH 38, MATH 54, MATH 69.

Four additional courses from the secondary department selected with the approval of the Advisor to Majors and the secondary department. In particular, these ten non-prerequisite courses must form a coherent unit that renders the modified major academically more valuable than an abbreviated major together with a minor in the secondary department.

Mathematics Modified with Biology

Prerequisite: MATH 3, MATH 8, MATH 13, MATH 22. Students may replace MATH 22 with MATH 24 if they prefer.

Requirements: All students pursuing this modified major must complete an algebra and an analysis course which would satisfy the requirements for the Mathematics major, together with four additional courses that normally count towards the major in mathematics. One of these courses must fulfill the culminating experience requirement and two of these courses must be from the following list: MATH 20, MATH 27, MATH 36, MATH 46, MATH 40, MATH 53 and MATH 76.

All students pursuing the modified major must take one course from among BIOL 12 (Cell Structure and Function), BIOL 13 (Gene Expression and Inheritance), BIOL 14 (Physiology), BIOL 15 (Genetic Variation and Evolution) or BIOL 16 (Ecology) and three other biology courses from the list below. One additional course from among BIOL 12 - 16 may be used as one of the three additional courses. These should be chosen in consultation with the departments. Some possible areas of focus include:

Genomics: BIOL 47 (p. 175) (From Data to Analysis),

Biostatistics & Experimental Design: BIOL 22 (Methods in Ecology), BIOL 29 (Biostatistics), BIOL 59 (Advanced Biostatistics).

Ecology: BIOL 21/51 (Population Ecology), BIOL 27 (Animal Behavior), BIOL 58 (Advanced Community Ecology), BIOL 60.01 (p. 177) (Evolutionary Ecology).

Molecular & Cellular Biology: BIOL 38 (Experimental Genetic Analysis), BIOL 40 (Biochemistry), BIOL 45 (Molecular Biology), BIOL 66 (Molecular Basis of Cancer), BIOL 69 (Cell Signaling), BIOL 71 (Advanced Topics in Cell Biology).

In every case, the collection of courses must be approved. Majors should demonstrate a coherent intellectual rationale.

Modified Major in Mathematics with Philosophy

Prerequisite: MATH 3, MATH 8, MATH 13, MATH 24 (MATH 22 with permission); PHIL 1, PHIL 6.

Requirements: To complete the major, it is necessary to complete successfully at least six mathematics courses and four philosophy courses (as described below) in addition to the prerequisites, including a culminating experience. MATH 69 satisfies the culminating experience requirement. Modified majors may participate in the honors program and write an honors thesis. The required courses are: MATH 19, MATH 31 or MATH 71, MATH 35 or MATH 63, MATH 29 (COSC 39 may be substituted), MATH 39 or MATH 69, and an additional mathematics course numbered 20 or above, excluding MATH 97 (MATH 17 is also acceptable). Four philosophy courses chosen from among PHIL 26, PHIL 27, PHIL 29, PHIL 32, PHIL 33, PHIL 34 (p. 635).

Modified Major for Complex Systems

Complex Systems is an interdisciplinary field that integrates ideas and techniques from mathematics and the sciences to study emergent phenomena, generally characterized by an evolutionary nature in which the “whole is more than the sum of its parts.” Examples include the collective of species-species interactions that give rise to an ecosystem, the aggregate of buyer-seller interactions that create economies or markets, the neuron-neuron signalings that create the brain and mind, or individual social relationships that result in a coherent society, all of which display properties of adaptation and selection and multiscale structure. The study of complex systems is highly interdisciplinary, at its best, using insights into the etiology of one phenomenon to inform another, a kind of analogical reasoning made possible through the use of common mathematical and computational tools.

The major requires students to take 10 courses beyond the prerequisites, 6 in mathematics and 4 in other departments, and includes the accomplishment of an integrative independent project, advised by a faculty member in mathematics, as evidence of the ability to integrate these ideas into a coherent whole. This independent project satisfies the culminating experience requirement. Modified majors may participate in the mathematics department honors program; with the approval of the advisor to majors, the independent project may comprise part of an honors thesis project.

In every case, the collection of courses should be approved. Majors should demonstrate a coherent intellectual rationale.

Prerequisites: MATH 3, MATH 8, MATH 13, MATH 22 or MATH 24; One of COSC 1, COSC 3, COSC 8, COSC 10, or ENGS 20; BIOL 11 or PHYS 30/ENGS 30.

Required Courses:

- (a) A course in differential equations (MATH 23 or MATH 46);
- (b) A course in probability or statistics (MATH 20, MATH 40, or MATH 60);
- (c) Two courses from among MATH 27, MATH 36, MATH 53, MATH 76, at least one of which must be either MATH 36 or MATH 76.
- (d) MATH 87 (Note that students will need to find an advisor for their MATH 87 project, which must be integrative in nature);
- (e) One course from among MATH 31, MATH 35, MATH 43, MATH 63, and MATH 71.
- (f) Four courses chosen from BIOL 15, BIOL 16; ECON 29, ECON 76; SOCY 16, SOCY 27; EARS 15, EARS 67; PSYC 40/COSC 79, PSYC 46; PHYS 30, PHYS 43; COSC 58, COSC 75, COSC 81; CHEM 41, CHEM 75; ENGS 30, ENGS 35, ENGS 114. With the approval of the advisor to majors, students may replace up to two of these courses with other appropriate courses in biology, chemistry, economics, sociology, environmental sciences, computer science, physics, or psychology, or, with a compelling rationale, another department.

Courses

Course Numbering System: For most courses numbered 20 or above, the last digit in the course number indicates the field of mathematics as follows: probability and statistics, 0; algebra, 1; geometry, 2; analysis, 3; topology, 4; number

theory, 5; applications, 6; combinatorics, 8; logic and foundations, 9.

Course Prerequisites: In all cases in which a prerequisite to a course is listed, the honors or advanced placement equivalent of that course may be substituted. For example, wherever MATH 13 appears as a prerequisite, MATH 14 will serve. MATH 11 and MATH 12 also serve in place of MATH 13 as a prerequisite.

See the Department website for projected terms for future course offerings.

Please note that course meeting times and instructors are subject to change until the Timetable of Class Meetings for the specific term is published by the Registrar's Office.

MATH - Mathematics - Undergraduate Courses

To view Mathematics Undergraduate requirements, click here. (p. 560)

To view Mathematics Graduate requirements, click here. (p. 963)

To view Mathematics Graduate courses, click here.

See the Department website for projected terms for future course offerings.

Please note that course meeting times and instructors are subject to change until the Timetable of Class Meetings for the specific term is published by the Registrar's Office.

MATH 1 - Introduction to Calculus

Instructor: The Staff, The Staff, The Staff, Pauls

This course is an introduction to single variable calculus for students who have not taken calculus before. Students who have seen some calculus, but not enough to place out of MATH 3, should take MATH 3. MATH 1 reviews relevant techniques from algebra and pre-calculus, covers the manipulation and analysis of functions, including polynomial, trigonometric, logarithmic, and exponential functions, an introduction to convergence and limits, continuity, rates of change and derivatives, differentiation rules, and applications to approximation. Students wishing to continue their study of calculus after MATH 1 take MATH 3.

Offered: Fall.

Degree Requirement Attributes: QDS

MATH 3 - Calculus

Instructor: The Staff, The Staff, The Staff, Hanlon, Hanlon (Fall), C Sutton, Haj Saeedi Sadegh, The Staff (Winter)

This course is an introduction to single variable calculus aimed at students who have seen some calculus before, either before matriculation or in MATH 1. MATH 3

begins by revisiting the core topics in MATH 1 - convergence, limits, and derivatives - in greater depth before moving to applications of differentiation such as related rates, finding extreme values, and optimization. The course then turns to integration theory, introducing the integral via Riemann sums, the fundamental theorem of calculus, and basic techniques of integration.

Offered: Fall, Winter.

Degree Requirement Attributes: QDS

MATH 4 - Applications of Calculus to Medicine and Biology

This course will establish the relevance of calculus to medicine. It will develop mathematical tools extending the techniques of introductory calculus, including some matrix algebra and solution techniques for first order differential equations. These methods will be used to construct simple and elegant models of phenomena such as the mutation of HIV, spread of infectious disease, and biological disposition of drugs and inorganic toxins, enzyme kinetics and population growth.

Prerequisite: MATH 3. Note: This is a sequel to MATH 3, but it does not cover the same material as MATH 8, and does not serve as a prerequisite for MATH 13. There is a version of this course suitable for major credit: see MATH 27.

Degree Requirement Attributes: QDS

MATH 5.01 - Computational Text Analysis for the Social Sciences

Language is the medium for politics and political conflict. Candidates debate during elections. Representatives write laws. Nations negotiate peace treaties. Clerics issue Fatwas. Citizens express their opinions about politics on social media sites. These examples, and many others, suggest that to understand what politics is about, we need to know what political actors are saying and writing. This course introduces techniques to collect, analyze, and utilize large collections of text for social science inferences. Students will also have the opportunity to develop their programming abilities.

We will explore a range of datasets from the text of *The Federalist Papers* to the millions of tweets sent to and from members of Congress.

Prerequisite: GOVT/ECON/PSYC/SOCY/MATH 10 or QSS 15 or COSC 1

Cross-Listed as: GOVT 19.05 QSS 30.02

Degree Requirement Attributes: Dist:TLA

MATH 5.04 - Fundamental Applied Mathematics for the Sciences

Mathematics is the language of science. However, mathematics preparation for most science students typically involves only the study of calculus at the university level. While many scientific problems involve calculus, two other areas of mathematics are equally (if not more) important: linear algebra and probability. For example, linear algebra is fundamental to stoichiometry and the conservation of matter in chemistry, hydrology and atmospheric dynamics in earth sciences, and cell growth and population dynamics in biology. Moreover, most features of the natural world are probabilistic and frequently best described by probability models, such as the firing of neurons in the brain or the timing of earthquakes. Both are also central to all problems in statistics. This course will explore the application of linear algebra and probability to problems across the sciences. We will cover the basics of solving linear algebra and probability problems as well as formulating simple models to describe and analyze natural phenomena from across the sciences.

Cross-Listed as: BIOL 5

Degree Requirement Attributes: QDS

MATH 7 - First-Year Seminar in Mathematics

Instructor: Mucha

Offered: Spring.

MATH 8 - Calculus of Functions of One and Several Variables

Instructor: The Staff, Phillips, Bruce (Fall), Dougherty-Bliss, The Staff, Gelb (Winter), The Staff, The Staff (Spring)

This course is a sequel to MATH 3 and is appropriate for students who have successfully completed an AB calculus curriculum (or the equivalent) in secondary school. Roughly half of the course is devoted to sequences and series (including Taylor series) in one-variable calculus. The second half of the course studies scalar valued functions of several variables. It begins with the study of vector geometry, equations of lines and planes, and space curves (velocity, acceleration, arclength). The balance of the course is devoted to studying differential calculus of functions of several variables. Topics include limits and continuity, partial derivatives, tangent planes and differentials, the Chain Rule, directional derivatives and applications, and optimization problems including the use of Lagrange multipliers.

Prerequisite: MATH 3 or equivalent.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:QDS

MATH 9 - Multivariable Differential Calculus with Linear Algebra

Instructor: Tayou, Huynh

This course includes the multivariable calculus material present in MATH 8 along with a brief introduction to concepts from linear algebra, a topic pervasive throughout mathematics and its applications. The introduction to linear algebra enables a more thorough understanding of multivariable calculus. Topics include vector geometry, equations of lines and planes, matrices and linear transformations, space curves (velocity, acceleration, arclength), functions of several variables (limits and continuity, partial derivatives, the derivative as a linear transformation, tangent planes and linear approximation, the Chain Rule, directional derivatives and applications, and optimization problems including the use of Lagrange multipliers).

First-year students who have successfully completed a BC calculus curriculum in secondary school may complete multivariable calculus either by taking the two-term sequence MATH 9, 13 or by taking the single faster-paced course MATH 11, which covers the second half of Math 8 together with the material from Math 13 in a single term.

Prerequisite: Advanced placement into MATH 9 or MATH 11.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

MATH 10 - Introductory Statistics

Instructor: The Staff, Eikenberry, Zdyrski

An introduction to the basic concepts of statistics. Topics include elementary probability theory, descriptive statistics, the binomial and normal distributions, confidence intervals, basic concepts of tests of hypotheses, chi-square tests, nonparametric tests, normal theory t-tests, correlation, and simple regression. Packaged statistical programs will be used. Because of the large overlap in material covered, no student may receive credit for more than one of the courses ECON 10, ENVS 10, GOVT 10, MATH 10, PSYC 10, QSS 15, and SOCY 10, except by special petition to the Committee on Instruction.

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 11 - Accelerated Multivariable Calculus

Instructor: Chernov, Park, The Staff, The Staff

This briskly paced course can be viewed as equivalent to MATH 13 in terms of prerequisites, but is designed especially for first-year students who have successfully completed a BC calculus curriculum in secondary school. In particular, as part of its syllabus it includes most of the multivariable calculus material present in MATH 8

together with the material from MATH 13. Topics include vector geometry, equations of lines and planes, and space curves (velocity, acceleration, arclength), limits and continuity, partial derivatives, tangent planes and differentials, the Chain Rule, directional derivatives and applications, and optimization problems. It continues with multiple integration, vector fields, line integrals, and finishes with a study of Green's and Stokes' theorem.

Students who have successfully completed a BC calculus curriculum in secondary school may complete multivariable calculus either by taking the two term sequence MATH 9 and MATH 13 or by completing the single, faster-paced, MATH 11. Not open to students who have received credit for MATH 013.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

MATH 13 - Calculus of Vector-Valued Functions

Instructor: The Staff (Fall), The Staff, Zdyrski, Hofer (Winter), Liu, Chernov, Deng (Spring)

This course is a sequel to MATH 8 and provides an introduction to calculus of vector-valued functions. Topics include differentiation and integration of parametrically defined functions with interpretations of velocity, acceleration, arclength and curvature. Other topics include iterated, double, triple and surface integrals including change of coordinates. The remainder of the course is devoted to vector fields, line integrals, Green's theorem, curl and divergence, and Stokes' theorem. Not open to students who have received credit for MATH 011.

Note: First-year students who have received two terms on the BC exam generally should take MATH 11 instead. On the other hand, if the student has had substantial exposure to multivariable techniques, they are encouraged to take a placement exam during orientation week to determine if MATH 13 is more appropriate.

Prerequisite: MATH 8 or Math 9 or equivalent.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:QDS

MATH 17 - An Introduction to Mathematics Beyond Calculus

Instructor: The Staff (Winter), Lee (Spring)

Gives prospective Mathematics majors an early opportunity to delve into topics outside the standard calculus sequence. Specific topics will vary from term to term, according to the interests and expertise of the instructor. Designed to be accessible to bright and curious students who have mastered BC Calculus, or its equivalent. This course counts toward the Mathematics major, and is open to all students, but enrollment may be limited, with preference given to first-year students.

Prerequisite: MATH 8

Offered: Spring.

Degree Requirement Attributes: QDS

MATH 19 - Introduction to Set Theory

Instructor: Montgomery

This course introduces the axioms of set theory, the universe of sets, and set theory as a foundation for mathematics. It touches on historical and philosophical aspects of set theory. Mathematical topics covered include the algebra of sets, ordinals and cardinals, transfinite induction and recursion, and the axiom of choice. Students will learn language and concepts used throughout mathematics, and learn how to write mathematical proofs.

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 20 - Probability

Instructor: Ju (fall), Dougherty-Bliss (spring)

Our capacity to fathom the world around us hinges on our ability to understand quantities which are inherently unpredictable. Therefore, in order to gain more accurate mathematical models of the natural world we must incorporate probability into the mix. This course will serve as an introduction to the foundations of probability theory. Topics covered will include some of the following: (discrete and continuous) random variable, random vectors, multivariate distributions, expectations; independence, conditioning, conditional distributions and expectations; strong law of large numbers and the central limit theorem; random walks and Markov chains. There is an honors version of this course: see MATH 60. Not open to students who have taken MATH 060.

Prerequisite: MATH 8.

Offered: Fall, Spring, Summer.

Degree Requirement Attributes: Dist:QDS

MATH 22 - Linear Algebra with Applications

Instructor: The Staff, Dougherty-Bliss (Fall), Haj Saeedi Sadegh (Winter), Orellana, Orellana, Chen (Spring)

This course presents the fundamental concepts and applications of linear algebra with emphasis on Euclidean space. Significant goals of the course are that the student develop the ability to perform meaningful computations and to write accurate proofs. Topics include bases, subspaces, dimension, determinants, characteristic polynomials, eigenvalues, eigenvectors, and especially matrix representations of linear transformations and change of basis. Applications may be drawn from areas such as optimization, statistics, biology, physics, and signal processing. Students who plan to take either MATH 63 or

MATH 71 are strongly encouraged to take MATH 24. Not open to students who have taken MATH 024.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:QDS

MATH 23 - Differential Equations

Instructor: The Staff, Haj Saeedi Sadegh (Fall), The Staff, Deng (Winter), The Staff, The Staff (Spring)

This course is a survey of important types of differential equations, both linear and non-linear. Topics include the study of systems of ordinary differential equations using eigenvectors and eigenvalues, numerical solutions of first and second order equations and of systems, and the solution of elementary partial differential equations using Fourier series.

Prerequisite: MATH 13.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: QDS

MATH 24 - Linear Algebra

Instructor: Williams (Winter), Elizalde (Spring)

This course is an introduction to the fundamental concepts of linear algebra in abstract vector spaces. The topics and goals of this course are similar to those of MATH 22, but with an additional emphasis on mathematical abstraction and theory. (MATH 24 can be substituted for MATH 22 as a prerequisite for any course or program.) Not open to students who have taken MATH 022.

Prerequisite: MATH 8.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:QDS

MATH 25 - Number Theory

Instructor: Phillips

The great mathematician C. F. Gauss once wrote "Mathematics is the queen of sciences and number theory is the queen of mathematics." Number theory is that part of mathematics dealing with the integers and certain natural generalizations. Topics include modular arithmetic, unique factorization into primes, linear Diophantine equations, and Fermat's Little Theorem. Discretionary topics may include cryptography, primality testing, partition functions, multiplicative functions, the law of quadratic reciprocity, historically interesting problems.

Prerequisite: MATH 8.

Offered: Fall.

Degree Requirement Attributes: QDS

MATH 27 - Dynamical Systems with Applications

Instructor: Vales

Dynamical systems theory is the branch of mathematics that studies the properties of time-evolving phenomena. It finds a great variety of applications in areas spanning physics, engineering, ecology, finance, among many disciplines.

Math 27 is an introductory course, studying aspects of dynamical systems that evolve in discrete time, as well as continuous-time systems described by ordinary differential equations. A primary objective will be to explore and understand the qualitative properties of dynamics, such as the existence of attractors, periodic orbits and chaos. We will do this by means of mathematical analysis, as well as simple numerical experiments.

Prerequisite: MATH 22 and MATH 23, or instructor approval.

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 28 - Introduction to Combinatorics

Instructor: Park

Beginning with techniques for counting-permutations and combinations, inclusion-exclusion, recursions, and generating functions-the course then takes up graphs and directed graphs and ordered sets, and concludes with some examples of maximum-minimum problems of finite sets. Topics in the course have application in the areas of probability, statistics, and computing.

Prerequisite: MATH 8.

Offered: Winter.

Degree Requirement Attributes: QDS

MATH 29 - Introduction to Computability

What does it mean for a function to be computable? This course examines several different mathematical formalizations of the notion of computability, inspired by widely varying viewpoints, and establishes the surprising result that all these formalizations are equivalent. It goes on to demonstrate the existence of noncomputable sets and functions, and to make connections to undecidable problems in other areas of mathematics. The course concludes with an introduction to relative computability. This is a good companion course to COSC 39; the two share only the introduction of Turing machines. Offered in alternate years.

Prerequisite: None, but the student must be willing to learn to work abstractly and to read and write proofs.

Degree Requirement Attributes: QDS

MATH 30.04 - Evolutionary Game Theory and Applications

Instructor: Zdyrski, The Staff

Pioneered by John Maynard Smith and others, evolutionary game theory has become an important approach to studying a wide range of biological and social problems, such as microbial interactions and animal behavior. In evolutionary game dynamics, the fitness of individuals depends on the relative abundance of all individual types in the population, and higher-fitness individual types tend to increase in abundance. This course introduces basic concepts in evolutionary game theory, including evolutionarily stable strategies, replicator dynamics, finite populations, and games on networks, along with applications to social evolution, particularly to understanding human cooperation.

Prerequisite: Math 3 and Math 20

Cross-Listed as: QSS 30.04

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 31 - Topics in Algebra

Instructor: The Staff

This course will provide an introduction to fundamental algebraic structures, and may include significant applications. The majority of the course will consist of an introduction to the basic algebraic structures of groups and rings. Additional work will consist either of the development of further algebraic structures or applications of the previously developed theory to areas such as coding theory or crystallography. As a result of the variable syllabus, this course may not serve as an adequate prerequisite for MATH 81. Students who contemplate taking MATH 81 should consider taking MATH 71 instead of this course.

Not open to students who have taken MATH 071.

Prerequisite: MATH 22 or MATH 24

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:QDS

MATH 31.01 - Topics in Algebra

Instructor: The Staff

This course will provide an introduction to fundamental algebraic structures, and may include significant applications. The majority of the course will consist of an introduction to the basic algebraic structures of groups and rings. Additional work will consist either of the development of further algebraic structures or applications of the previously developed theory to areas such as coding theory or crystallography. As a result of the variable syllabus, this course may not serve as an adequate

prerequisite for MATH 81. Students who contemplate taking MATH 81 should consider taking MATH 71 instead of this course.

Prerequisite: MATH 22 or MATH 24

Degree Requirement Attributes: QDS

MATH 32 - The Shape of Space

Instructor: Petkova

Topics in intuitive geometry and topology, for example: how to turn a sphere inside out; knots, links, and their invariants; polyhedra in 2, 3, and 4 dimensions; the classification of surfaces; curvature and the Gauss-Bonnet theorem; spherical and hyperbolic geometry; Escher patterns and their quotients; the shape of the universe. Offered in alternate years.

Prerequisite: MATH 22 or MATH 24.

Degree Requirement Attributes: QDS

MATH 35 - Real Analysis

Instructor: Trout

This course introduces the basic concepts of real-variable theory. Topics include real numbers and cardinality of sets, sequences and series of real numbers, metric spaces, continuous functions, integration theory, sequences and series of functions, and polynomial approximation. Some applications of the theory may be presented. MATH 63 presents similar material, but from a more sophisticated point of view. This course may not serve as an adequate prerequisite for either MATH 73 or 83. Students who contemplate taking one of these two advanced courses should consider taking MATH 63 instead of this course. Not open to students who have taken MATH 063.

Prerequisite: MATH 13 and permission of the instructor, or MATH 22 or MATH 24.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

MATH 36 - Mathematical Models in the Social Sciences

Instructor: The Staff

Disciplines such as anthropology, economics, sociology, psychology, and linguistics all now make extensive use of mathematical models, using the tools of calculus, probability, game theory, network theory, often mixed with a healthy dose of computing. This course introduces students to a range of techniques using current and relevant examples. Students interested in further study of these and related topics are referred to the courses listed in the Mathematics and Social Sciences program.

Prerequisite: MATH 13, MATH 20.

Cross-Listed as: QSS 36

Offered: Fall.

Degree Requirement Attributes: TAS

MATH 37 - Computational methods in mathematical biology

Introduction into cellular automata and agent-based modeling using the Java programming language. Focus of this course will be simulation of stochastic events, model parameterization and calibration, model validation, simulation and result visualization. This is a hands-on course with laboratory sessions and training exercises on individual computers.

Prerequisite: MATH 22 and MATH 24, MATH 23, one of COSC 1, COSC 10, ENGS 20 or equivalent experience.

Degree Requirement Attributes: Dist:QDS

MATH 38 - Graph Theory

Instructor: Park

The theory of graphs has roots in both practical and recreational mathematics. Today there are major applications of graph theory in management science (operations research) and computer science. This course is a survey of the theory and applications of graphs. Topics will be chosen from among connectivity, trees, and Hamiltonian and Eulerian paths and cycles; isomorphism and reconstructability; planarity, duality, and genus; independence and coloring problems, including interval graphs, interval orderings and perfect graphs, color-critical graphs and the four-color theorem; matchings; network flows, including applications to matchings, higher connectivity, and transportation problems; matroids and their relationship with optimization.

Prerequisite: MATH 22 or MATH 24 (or COSC 55 and permission of the instructor).

Offered: Spring.

Degree Requirement Attributes: QDS

MATH 40 - Probability and Statistical Inference

Introduction to continuous probability and statistical inference for data analysis. Includes the theory of estimation and the theory of hypothesis testing using normal theory t-tests and nonparametric tests for means and medians, tests for variances, chi-square tests, and an introduction to the theory of the analysis of variance and regression analysis. Analysis of explicit data sets and computation are an important part of this hands-on statistics course. *NOTE: Prior to Fall 2014 Math 40 was numbered Math 50.

Prerequisite: MATH 13 and MATH 20, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: QDS

MATH 42 - Differential Geometry I

As the Greek roots of the word suggest, geometry has its origins in our natural and practical need to measure the world around us. Over the millennia, geometry has evolved to encompass the general study of the measurable properties of "space." Consequently, any problem that involves a notion of "space" and "measurement" has the potential to be "geometrized"; i.e., turned into a statement about geometry. A prime example of this is the geometrization of gravity in Einstein's general theory of relativity. With applications across STEM, this course will serve as an introduction to differential geometry, which applies ideas from linear algebra and multivariable calculus to the exploration of geometry. Topics might include: vector fields & integral curves; covariant differentiation, parallel transport & geodesics; (Gaussian) curvature and Gauss' Theorema Egregium; the Gauss-Bonnet Theorem; Isometries & Riemannian metrics.

Prerequisite: Math 13 and MATH 22 or MATH 24

Degree Requirement Attributes: Dist:QDS

MATH 43 - Functions of a Complex Variable

Instructor: The Staff

This course covers the differential and integral calculus of complex variables including such topics as Cauchy's theorem, Cauchy's integral formula and their consequences; singularities, Laurent's theorem, and the residue calculus; harmonic functions and conformal mapping. Applications will include two-dimensional potential theory, fluid flow, and aspects of Fourier analysis.

Prerequisite: MATH 13.

Offered: Spring.

Degree Requirement Attributes: QDS

MATH 46 - Introduction to Applied Mathematics

Instructor: Mucha

This course introduces a wide variety of mathematical tools and methods used to analyze phenomena in the physical, life, and social sciences. This is an introductory course and is accessible to undergraduate and graduate students in mathematics and other scientific disciplines who have completed the prerequisites. Topics include dimensional analysis and scaling, perturbation analysis, calculus of variations, integral equations, and eigenvalue problems.

Prerequisite: MATH 22 or MATH 24, and MATH 23, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

MATH 47 - Introduction to Mathematical Oncology

Introduction into cancer biology and basic mathematical approaches to simulate cancer dynamics on the subcellular, cellular, and tissue level. Techniques for quantitative modeling are plentiful, and an increasing number of theoretical approaches are successfully applied to cancer biology. Differential equation models and individual-based cell models paved the way into quantitative cancer biology about two decades ago. Herein we will give an introduction on how such models are derived and how they can be utilized to simulate tumor growth and treatment response. We will then discuss a number of different models and discuss their confirmative and predictive power for cancer biology.

Prerequisite: MATH 22 and MATH 24, MATH 23, one of COSC 1, COSC 10, ENGS 20 or equivalent experience.

Degree Requirement Attributes: Dist:QDS

MATH 50 - Introduction to Linear Models

Instructor: Levien, Levien

This course provides an introduction to the most common model used in statistical data analysis. Simple linear regression, multiple regression, and analysis of variance are covered, as well as statistical model-building strategies. Regression diagnostics, analysis of complex data sets and scientific writing skills are emphasized. Methods are illustrated with data sets drawn from the health, biological, and social sciences. Computations require the use of a statistical software package such as STATA.

Prerequisite: Any one of the following: MATH 8, MATH 22 or 24, MATH 10, or another elementary statistics course, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:TAS

MATH 53 - Partial Differential Equations

Partial differential equations play critical roles in wide areas of mathematics, science, and engineering. This is an introductory course, accessible to undergraduate and graduate students in mathematics and other scientific disciplines who have completed the prerequisites. Examples will come from both linear and non-linear partial differential equations, including the wave equation, diffusion, boundary value problems, conservation laws, and the Monge-Ampere equations. Offered in alternate years.

Prerequisite: MATH 22 or MATH 24, and MATH 23, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

MATH 54 - Topology I

Instructor: Chernov

This course begins with the definitions of topological space, open sets, closed sets, neighborhoods, bases and subbases, closure operator, continuous functions, and homeomorphisms. The course will study constructions of spaces including subspaces, product spaces, and quotient spaces. Special categories of spaces and their interrelations will be covered, including the categories defined by the various separation axioms, first and second countable spaces, compact spaces, and connected spaces. Subspaces of Euclidean and general metric spaces will be among the examples studied in some detail.

Prerequisite: MATH 13 and MATH 22 or MATH 24.

Offered: Summer.

Degree Requirement Attributes: QDS

MATH 56 - Computational Methods

Instructor: The Staff

This course introduces computational algorithms solving problems from a variety of scientific disciplines. Mathematical models describing a phenomenon of interest are typically too complex to construct analytical solutions, leading us to numerical methods. Motivated by models from physics, biology, and medicine, students will develop numerical algorithms and mathematically analyze their accuracy, efficiency, and convergence properties. Students will be expected to implement computational algorithms to verify their understanding of the theoretical results, but developing programming skills is not the main focus of the course. Sample topics include matrix decompositions, inverse problems, optimization, data fitting, and differential equations.

Prerequisite: MATH 22 or MATH 24, COSC 1 or ENGS 20, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

MATH 60 - Probability (Honors Section of MATH 20)

Instructor: The Staff

This course is a more theoretical introduction to probability theory than MATH 20. In addition to the basic content of MATH 20, the course will include other topics such as continuous probability distributions and their applications. Offered in alternate years. Not open to students who have taken MATH 020.

Prerequisite: MATH 13, or permission of the instructor.

Degree Requirement Attributes: Dist:QDS

MATH 63 - Real Analysis

Instructor: van Erp

This course introduces the basic concepts of real-variable theory. Topics include real numbers and cardinality of sets, sequences and series of real numbers, metric spaces, continuous functions, integration theory, sequences and series of functions, and polynomial approximation. Not open to students who have taken MATH 035.

Prerequisite: MATH 22 or MATH 24, or MATH 13 and permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

MATH 66 - Mathematical Topics in Modern Physics

Instructor: Trout

This introductory course presents mathematical topics that are relevant to issues in modern physics. It is mainly designed for two audiences: mathematics majors who would like to see modern physics and the historical motivations for theory in their coursework, and physics majors who want to learn mathematics beyond linear algebra and calculus. Possible topics include (but are not limited to) introductory Hilbert space theory, quantum logics, quantum computing, symplectic geometry, Einstein's theory of special relativity, Lie groups in quantum field theory, etc. No background in physics is assumed. Offered in alternate years.

Prerequisite: Math 23 and MATH 24 (or MATH 22 with permission of the instructor).

Degree Requirement Attributes: QDS

MATH 68 - Algebraic Combinatorics

Instructor: Elizalde

This course covers the use of abstract algebra in studying the existence, construction, enumeration, and classification of combinatorial structures. The theory of enumeration, including both Polya Theory and the Incidence Algebra, and culminating in a study of algebras of generating functions, will be a central theme in the course. Other topics that may be included if time permits are the construction of block designs, error-correcting codes, lattice theory, the combinatorial theory of the symmetric group, and incidence matrices of combinatorial structures. Offered in alternate years.

Prerequisite: MATH 28 and MATH 31, or MATH 71, or permission of the instructor.

Degree Requirement Attributes: QDS

MATH 69 - Logic (Honors Section of MATH 39)

This course begins with a study of relational systems as they occur in mathematics. First-order languages suitable for formalizing such systems are treated in detail, and several important theorems about such languages, including the compactness and Lowenheim-Skolem

theorems, are studied. The implications of these theorems for the mathematical theories being formulated are assessed. Emphasis is placed on those problems relating to first-order languages that are of fundamental interest in logic. Offered in alternate years.

Prerequisite: experience with mathematical structures and proofs, as offered by such courses as MATH 71, MATH 54, or MATH 24; or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: QDS

MATH 70 - Elements of Multivariate Statistics & Statistical Learning

Instructor: Demidenko

This course focuses on modern methods of statistical analysis including nonlinear models, data mining, and classification. Students gain a theoretical basis for multivariate statistical analysis, optimal statistical hypothesis testing, and point and interval estimation. The course is grounded in applications and students will gain experience in solving problems in data analysis. Students are required to use the statistical package R.

Prerequisite: MATH 40

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 71 - Algebra

Instructor: Auel

The sequence MATH 71 and 81 is intended as an introduction to abstract algebra. MATH 71 develops basic theorems on groups, rings, fields, and vector spaces.

Not open to students who have taken MATH 031.

Prerequisite: MATH 22 or MATH 24.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

MATH 72 - Topics in Geometry

Instructor: Sutton

This course develops one or more topics in geometry. Possible topics include hyperbolic geometry; Riemannian geometry; the geometry of special and general relativity; Lie groups and algebras; algebraic geometry; projective geometry. Offered in alternate years.

Prerequisite: Math 13, Math 22 or Math 24, and Math 35, or Permission of the Instructor

Degree Requirement Attributes: QDS

MATH 72.01 - Calculus on Manifolds

Manifolds provide mathematicians and other scientists with a way of grappling with the concept of “space” (from a global viewpoint). The space occupied by an object. The space that we inhabit. The space of solutions to a system of equations. Or, perhaps, the space of configurations of a mechanical system. While manifolds are central to the study of geometry and topology, they also provide an appropriate framework in which to explore aspects of mathematical physics, dynamics, control theory, medical imaging, and robotics, to name just a few. This course will demonstrate how ideas from calculus can be generalized to manifolds, providing a new perspective and toolkit with which to explore problems where “space” plays a fundamental role.

Prerequisite: Math 13, Math 22 or Math 24, and Math 35, or Permission of the Instructor

Degree Requirement Attributes: Dist:QDS

MATH 72.02 - Lie Groups: An Introduction Via Matrix Groups

Instructor: Sutton

Created by Sophus Lie (1842-1899) with the intent of developing a “Galois theory” of differential equations, Lie groups are a mathematically rigorous realization of our intuitive notion of “continuous transformation groups” and play a fundamental role in the study of geometry and physics.

Formally, a Lie group is a group G equipped with the structure of a smooth manifold with respect to which the group operations (i.e., multiplication and inversion) are smooth. Our exploration of Lie groups will begin with the study of “matrix groups” (e.g., $SO(n)$, $SU(n)$, $Sp(n)$ and $SL_n(\mathbb{R})$). By focusing on this concrete class of examples, we will build our intuition and encounter many of the interesting themes that arise in the general theory of Lie groups.

Prerequisite: Math 13, and Math 22 or Math 24, or Permission of the Instructor

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 72.10 - Topics in Geometry

Instructor: Sutton

This course develops one or more topics in geometry. Possible topics include ergodic theory & dynamics; hyperbolic geometry; the geometry of special and general relativity; algebraic geometry; projective geometry; theory of distributions. Offered on occasion.

Prerequisite: Math 13, and Math 22 or Math 24, or Permission of the Instructor

Degree Requirement Attributes: Dist:QDS

MATH 73 - Metric Spaces and Measure Theory

Instructor: Trout

This course reviews the basic theory of metric spaces and their topology including continuity, completeness, connectedness, and compactness. An introduction to abstract measure theory follows, with topics including measurability, measures, integration, the construction of Lebesgue measure, as well as additional topics as time allows.

Prerequisite: MATH 63 or Math 35 and permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:QDS

MATH 74 - Algebraic Topology

Instructor: Mallick

This course provides a foundation in algebraic topology, including both homotopy theory and homology theory. Topics may include: the fundamental group, covering spaces, calculation of the fundamental group, singular homology theory, Eilenberg-Steenrod axioms, Mayer-Vietoris sequence, computations, applications to fixed points and vector fields.

Prerequisite: MATH 31/ MATH 71 and MATH 54 and permission of the instructor or MATH 54 and MATH 101.

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

MATH 75 - Mathematical Cryptography

Instructor: Tayou

Cryptography is the science of secure communication over an insecure channel. This course focuses on understanding how mathematics is used in the design of modern cryptosystems, including both theoretical and algorithmic aspects. Specific topics will vary, but may include: substitution ciphers and statistical inference, the Enigma machine and permutation groups, Diffie-Hellman key exchange and discrete logarithms, RSA and integer factorization, AES and finite fields, elliptic curve cryptography, homomorphic encryption and lattices, and quantum cryptography.

Prerequisite: Math 71, or Math 25 and 31, or instructor permission

Degree Requirement Attributes: Dist:QDS

MATH 75.01 - Applied Topics in Number Theory and Algebra

Provides some applications of number theory and algebra. Specific topics will vary; two possibilities are cryptography

and coding theory. The former allows for secure communication and authentication on the Internet, while the latter allows for efficient and error-free electronic communication over noisy channels. Students may take Math 75 for credit more than once. Offered in alternate years.

Prerequisite: MATH 25 or MATH 22/ MATH 24 or MATH 31/ MATH 71, or permission of the instructor.

Degree Requirement Attributes: QDS

MATH 76 - Topics in Applied Mathematics

Instructor: Lee, The Staff

The numerical nature of twenty-first century society means that applied mathematics is everywhere: animation studios, search engines, hedge funds and derivatives markets, and drug design. Students will gain an in-depth introduction to an advanced topic in applied mathematics. Possible subjects include digital signal and image processing, quantum chaos, computational biology, cryptography, coding theory, waves in nature, inverse problems, information theory, stochastic processes, machine learning, and mathematical finance.

Degree Requirement Attributes: QDS

MATH 76.01 - Topics in Applied Mathematics

Instructor: Lee, The Staff

The numerical nature of twenty-first century society means that applied mathematics is everywhere: animation studios, search engines, hedge funds and derivatives markets, and drug design. Students will gain an in-depth introduction to an advanced topic in applied mathematics. Possible subjects include digital signal and image processing, quantum chaos, computational biology, cryptography, coding theory, waves in nature, inverse problems, information theory, stochastic processes, machine learning, and mathematical finance.

Prerequisite: MATH 22 or MATH 24, MATH 23, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: QDS

MATH 76.02 - Computational Inverse Problems

Instructor: Gelb

Inverse problems are ubiquitous in scientific research, and occur in applications ranging from medical imaging to radar sensing. The input data are often under-sampled, noisy and may additionally be blurry. Physical obstructions may also prevent accurate data acquisition. Recovering an underlying signal or image can be critical for diagnosis, classification, or inference. This course describes fundamental aspects of inverse problems and various computational approaches for solving them. Importantly,

the students will learn how to choose the appropriate methodology for the particular challenges presented by the given application, and moreover how to critically analyze the quality of their results. Specifically, students will analyze accuracy, efficiency and convergence properties of the computational techniques for various classes of problems and when possible to quantify the uncertainty of their results. Although programming will not be formally taught as part of the course, students will write numerical code in languages such as MATLAB or Python to compute their solutions. Resources will be provided to help students learn to write MATLAB code.

Prerequisite: MATH 22 or 24. MATH 20 or 60 recommended. Programming experience (e.g. COSC 1, ENGS 20) recommended.

Offered: Summer.

Degree Requirement Attributes: Dist:QDS

MATH 76.03 - Evolutionary Dynamics

Evolutionary dynamics is the mathematical study of evolutionary processes permeating every corner of biology. The course is intended for both upper-level undergraduate students and graduate students who are interested in applying mathematics to real-world problems. It will cover important topics related to cooperation, infectious diseases, and cancer, and introduce mathematical techniques and stochastic modeling approaches needed to tackle such problems.

Prerequisite: MATH 3, MATH 20, MATH 23 or upon approval of the instructor. Programming skills helpful, but not required

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

MATH 76.04 - Modeling and Simulation of Living Systems

Mathematical models play a key role in formulating null hypotheses for biological phenomenon and developing informative experiments. This course surveys stochastic and deterministic mathematical models of living systems, from single-cells to populations, and highlights their role in guiding experimental biology. An emphasis is placed on the multi-scale nature of biology and how processes on different scales interact with each other. Students also learn to perform simulations and data analysis in python.

Degree Requirement Attributes: Dist:QDS

MATH 81 - Abstract Algebra

Instructor: Auel

This course provides a foundation in core areas in the theory of rings and fields. Specifically, it provides an introduction to commutative ring theory with a particular

emphasis on polynomial rings and their applications to unique factorization and to finite and algebraic extensions of fields. The study of fields continues with an introduction to Galois Theory, including the fundamental theorem of Galois Theory and numerous applications.

Prerequisite: MATH 71. In general, MATH 31 is not an acceptable prerequisite; however, in consultation with the instructor, MATH 31 together with some outside reading should be adequate preparation for the course.

Cross-Listed as: MATH 111

Offered: Winter.

Degree Requirement Attributes: QDS

MATH 86 - Mathematical Finance I

Instructor: van Erp & Welborn

Financial derivatives can be thought of as insurance against uncertain future financial events. This course will take a mathematically rigorous approach to understanding the Black-Scholes-Merton model and its applications to pricing financial derivatives and risk management. Topics may include: arbitrage-free pricing, binomial tree models, Ito calculus, the Black-Scholes analysis, Monte Carlo simulation, pricing of equities options, and hedging.

Prerequisite: MATH 20 or MATH 60; and COSC 1 or ENGS 20 or equivalent.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

MATH 87 - Reading Course

Instructor: Williams

Advanced undergraduates occasionally arrange with a faculty member a reading course in a subject not occurring in the regularly scheduled curriculum.

MATH 89 - Seminar in Logic

A study of selected topics in logic, such as model theory, set theory, recursive function theory, or undecidability and incompleteness. Offered in alternate years.

Prerequisite: MATH 39 or MATH 69.

Degree Requirement Attributes: QDS

MATH 90 - Data Intensive Research Project

Instructor: Mucha

This course is intended for Mathematical Data Science majors as a means of satisfying their Culminating Experience requirement. Students will undertake a mathematically intensive independent project involving a sufficiently complex data set to meaningfully address a question of interest. Students will be required to submit a

journal style report and a scientific poster before the final grade is awarded.

Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for MATH-090 and receive a grade of “ON” (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace the “ON” at the end of the subsequent term at which time the coursework must be completed

MATH 96 - Mathematical Finance II

Instructor: Welborn

This course is a continuation of MATH 86 with an emphasis on the mathematics underlying fixed income derivatives. Topics may include: stochastic calculus, Radon-Nikodym derivative and change of measure, Girsanov's theorem, the Martingale representation theorem, interest rate models (e.g., H-J-M, Ho-Lee, Vasicek, C-I-R), interest rate derivatives, interest rate trees and model calibration, and credit derivatives. Offered in alternate years

Prerequisite: MATH 86, and Math 23.

MATH 97 - Undergraduate Research

Instructor: Williams

Open only to students who are officially registered in the Honors Program. Permission of the adviser to majors and thesis adviser required. This course does not serve for major credit nor for distributive credit, and may be taken at most twice.

Medieval and Renaissance Studies

Steering Committee: Tim Baker (Religion); Jessica Beckman (English); M. C. Gaposchkin (History); M. Otter (English and Comparative Literature); A. K. Reinhart (Religion); Matthew Ritger (English); A. Tarnowski (French and Italian); M. Warren (Comparative Literature); Nicola Camerlenghi (Art History).

Medieval and Renaissance Studies offers students the ability to modify their majors with a broad array of courses concerning societies and cultures that developed and flourished from late antiquity to early modernity. While centered on Europe, the concentration also embraces developments in related cultures, especially, but not only, those of the Mediterranean. This interdisciplinary course of study provides students with the opportunity to examine the period from a variety of interconnected perspectives. The Medieval and Renaissance Studies concentration is coordinated through the Leslie Center for the Humanities.

Modification

Students who choose to modify their majors with Medieval and Renaissance Studies are required to take four Medieval and Renaissance Studies courses in at least two

departments and/or programs (not including the department or program of the student's major). A list of Medieval and Renaissance Studies courses is available at www.dartmouth.edu/~medren/courses. Cross-listed courses may be taken for Medieval and Renaissance Studies credit, even if the student is majoring in one of the departments or programs offering the course. Although courses used to fulfill the requirements for a Medieval and Renaissance Studies modification cannot count toward a major, students are strongly advised to take Medieval and Renaissance Studies courses, when possible, within their majors. Students are also strongly advised to enroll in language courses appropriate to their field of study.

Students who wish to modify their majors with Medieval and Renaissance Studies must sign up for it no later than the third term prior to their graduation. Courses counting toward the modification will be chosen in consultation with a member of the Medieval and Renaissance Studies faculty. These courses, along with a short description of the student's reasons for modification, must be approved by a member of the Steering Committee.

Middle Eastern Studies

Chair: Jonathan Smolin

Professors T. El-Ariss, L. H. Glinert, J. Smolin; Associate Professors H. N. Kadhim; Senior Lecturers, J. Chahboun, E. C. Fishere, M. Ouajjani, A. Simon; Lecturers, B. Avishai, N. Ben Yehuda, M. Bouba

MIDDLE EASTERN STUDIES MAJOR

- Two language courses at the intermediate level: Arabic 22-23 or Hebrew 21-22 or approved language at equivalent level (e.g. Greek 20).
- Introduction to Middle Eastern Studies Seminar (MES 1)
- Two Core Courses (from MES 2, 3, 4, 5, 6, 8, or 9). Examples include:
 - MES 2.01: The Making of the Modern Middle East
 - MES 4.01: Energy and Society in the Middle East
 - MES 5.01: Identity and Representation in the Middle East
 - MES 8.01: Introduction to Middle Eastern Politics
- Four Electives from MES owned or cross-listed courses. Students may construct their disciplinary focus through these courses.

- One Culminating Experience (a course at the MES 80-level (i.e. 81 or 85)); substitutes may be approved by the Chair.
- Total = Ten Courses

All majors must have at least one course in: humanities, history or politics, pre-modern period, and modern period

All majors must have at least one course in: humanities, history or politics, pre-modern period, and modern period

HONORS PROGRAM

Standard major requirements with a minimum GPA of 3.25 and the following additional requirements:

- Two advanced language courses beyond Arabic 23 or Hebrew 23.
- Senior Thesis:
- MES 88, Senior Honors Thesis part 1, and MES 89, Senior Honors Thesis part 2. These two courses (taken in winter and spring) will be coordinated with a faculty advisor. The Honors proposal is due by the 5th week of the preceding fall term.

MIDDLE EASTERN STUDIES MINOR

The minor will consist of six courses. Students are required to take the Introduction to the Middle East Seminar (MES 1) and two core courses.

Only language courses beyond the first-year sequence may count for the minor. A maximum of three language courses may count for the minor.

HEBR - Hebrew Courses

To view Hebrew requirements, click here.

HEBR 1 - First-Year Courses in Modern Hebrew

Instructor: Ben Yehuda

An introduction to spoken and written Modern Israeli Hebrew (MIH). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory student-run drill sessions meet four times/week for one hour (4 hours/week) for all beginning Hebrew language classes.

Offered: Fall.

HEBR 2 - First-Year Courses in Modern Hebrew

Instructor: Ben Yehuda

An introduction to spoken and written Modern Israeli Hebrew (MIH). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory student-run drill sessions meet four times/week for one hour (4 hours/week) for all beginning Hebrew language classes.

Offered: Winter.

HEBR 3 - First-Year Courses in Modern Hebrew

Instructor: Ben Yehuda

An introduction to spoken and written Modern Israeli Hebrew (MIH). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory student-run drill sessions meet four times/week for one hour (4 hours/week) for all beginning Hebrew language classes.

Offered: Spring.

HEBR 21 - Intermediate Modern Hebrew

Instructor: Ben Yehuda

Continued study of Modern Israeli Hebrew grammar and syntax. Emphasis is placed on acquisition of the spoken language and on listening and reading comprehension. The course includes selected readings from contemporary Hebrew authors.

Prerequisite: HEBR 3 or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

HEBR 22 - Intermediate Modern Hebrew

Instructor: Ben Yehuda

Continued study of Modern Israeli Hebrew grammar and syntax. Emphasis is placed on acquisition of the spoken language and on listening and reading comprehension. The course includes selected readings from contemporary Hebrew authors.

Prerequisite: HEBR 3 or permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

HEBR 51 - The Hebrew of the Bible

Instructor: Ben Yehuda

An introduction to the language of the Hebrew Bible. The course teaches basic Biblical grammar, script, and vocabulary for recognition. Readings will be taken from a sampling of Biblical texts. This course serves as a requirement for students wishing to major and minor in Hebrew language and literature.

Cross-Listed as: JWST 24.01

Degree Requirement Attributes: Dist:LIT; WCult:NW

HEBR 59 - Independent Advanced Study in Hebrew Language and Literature

Instructor: Chair, J. Smolin

Available to students who wish to do advanced or independent study in Hebrew. The student must first submit a proposal to the Major/Minor advisor, and the section faculty, before obtaining permission from the faculty member with whom he or she wishes to work.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB - Arabic

ARAB 1 - First-Year Courses in Arabic

Instructor: Chahboun, Ouajjani

An introduction to written and spoken Modern Standard Arabic (MSA). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory apprentice-teacher-run drill sessions meet four times/week (4 hours/week) for all beginning Arabic language classes.

Never serves in partial satisfaction of Distributive or World Culture requirements.

Offered: Fall.

ARAB 1.01 - Intensive Beginning Arabic

Arabic 1-2 is a combined course of elementary to intermediate beginner Arabic that is built on the fundamentals experiential and skill-based learning. The focus of this course falls exclusively on Modern Standard Arabic (MSA) -- the standard language for reading, writing, and all formal speech in the media and school instruction. It is the basic foundation for any serious engagement with the Middle East and North Africa. We focus on the progressive development of the four skills: speaking, reading, listening and writing. We start with the beginning level designed as a basic introduction to the Arabic language, where students learn vocabulary, basic grammatical structures, and effective participation in daily life interactions, to a beginner's intermediate level that aims at building students' skills in understanding written texts, oral and audio-visual materials on a wide variety of topics while continuing to strengthen their proficiency skills in Arabic. This first course is part of an intensive version of ARAB 001 and 002 combined in one term where students will be required to enroll in both courses.

ARAB 1.20 - Intensive Arabic

Instructor: Bouba

ARAB 1.2 is an intensive course that combines elementary and intermediate beginner Arabic (ARAB 1 and 2). Students who take this course can go on to take ARAB 3. This intensive Arabic course is built on the fundamentals of experiential and skill-based learning. The focus of this course falls exclusively on Modern Standard Arabic (MSA) -- the standard language for reading, writing, and all formal speech in the media and school instruction. It is the basic foundation for any serious engagement with the Middle East and North Africa. We focus on the progressive development of the four skills: speaking, reading, listening and writing.

Offered: Winter.

ARAB 2 - First-Year Courses in Arabic

Instructor: Chahboun, Ouajjani

An introduction to written and spoken Modern Standard Arabic (MSA). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory apprentice-teacher-run drill sessions meet four times/week (4 hours/week) for all beginning Arabic language classes.

Never serves in partial satisfaction of Distributive or World Culture requirements.

Offered: Winter.

ARAB 2.01 - Intensive Beginning Arabic

Arabic 1-2 is a combined course of elementary to intermediate beginner Arabic that is built on the fundamentals experiential and skill-based learning. The focus of this course falls exclusively on Modern Standard Arabic (MSA) -- the standard language for reading, writing, and all formal speech in the media and school instruction. It is the basic foundation for any serious engagement with the Middle East and North Africa. We focus on the progressive development of the four skills: speaking, reading, listening and writing. We start with the beginning level designed as a basic introduction to the Arabic language, where students learn vocabulary, basic grammatical structures, and effective participation in daily life interactions, to a beginner's intermediate level that aims at building students' skills in understanding written texts, oral and audio-visual materials on a wide variety of topics while continuing to strengthen their proficiency skills in Arabic. This second course is part of an intensive version of ARAB 001 and 002 combined in one term where students will be required to enroll in both courses.

ARAB 3 - First-Year Courses in Arabic

Instructor: Chahboun, Ouajjani

An introduction to written and spoken Modern Standard Arabic (MSA). In addition to mastering the basics of grammar, emphasis is placed on active functional communication in the language, reading comprehension, and listening comprehension. Mandatory apprentice-teacher-run drill sessions meet four times/week (4 hours/week) for all beginning Arabic language classes.

Never serves in partial satisfaction of Distributive or World Culture requirements.

Offered: Spring.

ARAB 21 - Intermediate Arabic

Intermediate level of Modern Standard Arabic (MSA). Continuation of presentation of fundamentals of grammar and development of proficiency in reading, writing, spoken communication skills, and aural comprehension, including much authentic cultural material.

Degree Requirement Attributes: WCult:NW

ARAB 22 - Intermediate Arabic

Instructor: Chahboun, Bouba

Intermediate level of Modern Standard Arabic (MSA). Continuation of presentation of fundamentals of grammar and development of proficiency in reading, writing, spoken communication skills, and aural comprehension, including much authentic cultural material.

Prerequisite: ARAB 3 or equivalent.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 23 - Intermediate Arabic

Instructor: Ouajjani, Chahboun

Intermediate level of Modern Standard Arabic (MSA). Continuation of presentation of fundamentals of grammar and development of proficiency in reading, writing, spoken communication skills, and aural comprehension, including much authentic cultural material.

Prerequisite: ARAB 3 or equivalent.

Offered: Summer.

Degree Requirement Attributes: WCult:NW

ARAB 25 - Moroccan Arabic

Instructor: Chahboun

This course will introduce students to the colloquial language spoken today in Morocco. In addition to emphasizing grammar and vocabulary, this course will focus on daily communication and teach students how to interact with Moroccans in a wide variety of settings. Attention will also be paid to the role of culture in communication. ARAB 25 is a prerequisite for the LSA+.

Prerequisite: ARAB 3, or the equivalent, or permission of the instructor.

ARAB 31 - Advanced Arabic

Instructor: Ouajjani

A continuation of the fundamentals of grammar and further acquisition of spoken communication skills, aural comprehension, and proficiency in reading and writing. Students will be expected to master a wide variety of reading materials.

Prerequisite: Two out of the following three courses: ARAB 21, ARAB 22, ARAB 23, or permission of the instructor, or the equivalent.

Offered: Fall.

Degree Requirement Attributes: WCult:NW

ARAB 32 - Advanced Arabic

Instructor: Smolin

A continuation of the fundamentals of grammar and further acquisition of spoken communication skills, aural comprehension, and proficiency in reading and writing. Students will be expected to master a wide variety of reading materials.

Prerequisite: Two out of the following three courses: ARAB 21, ARAB 22, ARAB 23, or permission of the instructor, or the equivalent.

Degree Requirement Attributes: WCult:NW

ARAB 33 - Advanced Arabic

Instructor: Ouajjani

A continuation of the fundamentals of grammar and further acquisition of spoken communication skills, aural comprehension, and proficiency in reading and writing. Students will be expected to master a wide variety of reading materials.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 34 - Media Arabic

Instructor: Chahboun

This course is an introduction to the language of the Arabic press and broadcast media. It offers training in the basic skills required to read, comprehend, and translate Arabic media texts. The course is intended as a supplement to language training based on Modern Standard Arabic (MSA).

Prerequisite: Two second-year level Arabic courses or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 41 - Advanced Arabic

Instructor: Kadhim

This three-course series (41, 42 and 43) may be taken non-sequentially. Readings for the courses are extensive and of a high level of complexity; they are drawn from a variety of genres and periods. The progression towards full proficiency in the language is a fundamental objective of the sequence. The courses will be conducted entirely in Arabic.

Prerequisite: Two third-year level Arabic courses, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 42 - Advanced Arabic

Instructor: Kadhim

This three-course series (41, 42 and 43) may be taken non-sequentially. Readings for the courses are extensive and of a high level of complexity; they are drawn from a variety of genres and periods. The progression towards full proficiency in the language is a fundamental objective of the sequence. The courses will be conducted entirely in Arabic.

Prerequisite: Two third-year level Arabic courses, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 43 - Topics in Advanced Arabic

Instructor: Kadhim

Readings for these courses are extensive and of a high level of complexity; they are drawn from a variety of genres and periods. The progression towards full proficiency in the language is a fundamental objective of the sequence. These courses will be conducted entirely in Arabic.

Prerequisite: Two third-year level Arabic courses, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 43.01 - Advanced Arabic Conversation and Reading

Instructor: Kadhim

This course is designed to enable students to achieve a very high level of proficiency in Modern Standard Arabic. Readings for the course are extensive and are of a high level of complexity; they are drawn from a wide variety of Arabic literary, cultural, and journalistic texts. Special emphasis is placed on developing the student's speaking

and listening comprehension skills; the progression towards full fluency in the language is a fundamental objective of the course. The course will be conducted entirely in Arabic.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

ARAB 43.02 - Current Issues in Arab Media

Instructor: Kadhim

This course is designed to enable students to achieve a high level of proficiency in Arabic through examining a wide variety of topical issues in the Arab world ranging from current affairs to cultural and religious events and controversies that are widely discussed in Arabic print and broadcast media, and on social media platforms. Readings for the course emphasize language proficiency and cultural competence; they are drawn from a wide variety of Arabic print, broadcast, and digital media sources, including Arab satellite TV news networks such as al-Jazeera and al-Arabiya. Special emphasis is placed on developing the student's speaking and listening comprehension skills; the progression towards full fluency in the language is a fundamental objective of the course. Taught in Arabic.

Offered: Spring.

Degree Requirement Attributes: Dist:INT; Lang:LRP; WCult:NW

ARAB 59 - Independent Advanced Study in Arabic Language and Literature

Instructor: Chair, J. Smolin

Available to students who wish to do advanced or independent study in Arabic. The student must first consult with a faculty member and then obtain departmental permission in the term before the course.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES - Middle Eastern Studies**MES 1.01 - Introduction to Middle Eastern Studies**

Instructor: Fishere/Simon/Smolin/El-Ariss

This interdisciplinary course offers an introduction to the modern Middle East as a field of study, a region, and a site of cultural and artistic production. Starting with the rise of modernity and the effects of European colonialism on regional politics and culture, we will examine the rise of nationalism, authoritarianism, and fundamentalism. We will analyze recent developments in the region, focusing on social media and youth culture, displacement and exile, and gender and sexuality.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 2.01 - The Making of the Modern Middle East

Instructor: Simon

This panoramic course surveys major developments in Middle East history, politics, and society. Covering more than a two hundred year stretch, we will move across an expansive geography encompassing North Africa, the Levant, the Arabian Peninsula, and parts of Central Asia. Throughout this journey, particular attention will be paid to five important themes: imperialism, modernization, nationalism, Islam, and revolution. In the process of navigating these seminal topics, we will develop a more nuanced understanding of the modern Middle East and a greater appreciation for the insights offered by primary sources, from poems and national speeches to songs and motion-pictures, into the region's dynamic past. We will begin with a basic question – what and where is the Middle East? – prior to exploring the impact, importance, and mechanics of empires (Ottoman, French, British). Once elucidating this imperial backdrop, we will study sweeping reforms, struggles for independence, and the fashioning of nation-states, before examining a series of revolutionary moments, America's presence in the Middle East, and the "Arab Spring" and its aftermath. Whenever possible, we will strive to illuminate ordinary people, as opposed to only elite actors, who contributed to the making of the modern Middle East.

Cross-Listed as: HIST 90.04 JWST 44

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 2.02 - Introduction to Early Islamic History

Instructor: Nikpour/Najib

In the sixth and seventh centuries, various territories were brought into the fold of Islam, and in the following period, they experienced dramatic continuities and changes. This course will study these processes. Together, we will chart the late antique pre-Islamic world, the formation of Islam, the rise of centralized empires such as those of the Umayyads and the Abbasids, and the fragmentation of their central authority.

Cross-Listed as: HIST 04.02

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 2.03 - Introduction to the Modern Middle East and North Africa

Instructor: Simon/Nikpour

The diverse nations and peoples that make up the Middle East and North Africa are of major significance in our contemporary world, at the same time that they are often

misunderstood or given only superficial (albeit spectacular) popular attention. This lecture course is designed to give students a nuanced introductory overview of the modern histories of this region. Students will read a variety of primary and secondary materials designed to familiarize them with the historical, cultural, and social processes that have affected and transformed the region in question, and will learn to put these regional histories in a global framework. The course begins with a brief summary of the early modern Islamicate "Gunpowder" Empires—Mughal, Safavid/Qajar, Ottoman—and then moves through several topics of significance: the era of European colonialism; the establishment of the nation state; competing discourses of nationalism; the emergence of Third Worldist and anti-colonial movements; the Israeli-Palestinian conflict; debates over the politics of gender; the effects of the Cold War; the processes of decolonization and the establishment of post-colonial states; the rise of revolutionary Islamism; oil politics and policies; globalization and neoliberalism; 9/11, terrorism, and wars in Iraq and Afghanistan; the Arab uprisings of 2010-2011; and the region's uncertain present and future.

Cross-Listed as: HIST 04.03

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 3.02 - Archaeology of the Middle East

Instructor: Casana

This course provides an introduction to the civilizations of the ancient Middle East and to the history of archaeological research in this important region. Encompassing the modern nations of Iraq, Iran, Syria, Turkey, Jordan, Lebanon and Israel/Palestine, the Near East saw the emergence of the world's first villages, cities, and empires, and is therefore central to our understanding of human history. Following an overview of its geography, this course offers a survey of Middle Eastern cultural development, art, and archaeology from the earliest evidence of human settlement around 13,000 BC to the conquest of the region by Alexander the Great. This course is not open to students who have received credit for ANTH 12.02 - Archaeology of the Ancient Near East

Cross-Listed as: ANTH 039

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 4.01 - Energy and Society in the Middle East and North Africa

Instructor: Elias and Vandewalle

This course focuses on the economic, political, social and cultural consequences of rapid development in the hydrocarbon states of the Middle East and North Africa: states whose development is highly dependent on access to

the global economy for income from oil. The course aims to provide students with an understanding—from both a Social Science and a Humanities perspective—of how hydrocarbon-led development has dramatically changed the economic, political, and cultural life of what were previously tribal societies.

Cross-Listed as: GOVT 40.23

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:NW

MES 4.02 - History of Technology in the Middle East

Instructor: Simon

What may cassette tapes teach us about the creation of Egyptian culture? How may cameras assist us in picturing the past and archiving the present in the Arab world? And what is the relationship between online communities and offline activism in Iran? In this class, we will explore the impact, significance, and social life of numerous technologies throughout Middle East history. We will cover devices we often take for granted as well as things that command our attention. Cameras, radios, and records, dams, the Internet, and electrical grids, printing presses, clothing, and modes of transportation, will all surface in readings that transcend any single historical genre, bridging the local and the global, the social and the cultural, the intellectual and the environmental. The scope of this course is consciously panoramic in nature. In traversing nearly two hundred years of history, we will examine a wide array of case studies that unfold across the Middle East and occasionally travel further afield.

Degree Requirement Attributes: WCult:NW

MES 5.01 - Identity and Representation in the Middle East: Narratives of Loss

Instructor: Smolin

This interdisciplinary course lays the theoretical foundations for reflecting on the question of identity in Middle Eastern culture. Focusing on experiences of loss and dispossession, we will examine the discourse on identity and memory, identity and trauma, and national identity. We will analyze narratives of lamentations and humiliation following military and ideological defeats from the second half of the 20th century to the present.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 5.02 - Introduction to Hebraic and Israeli Culture

Instructor: Glinert

This course explores the interaction of Hebrew literature, film, music, religion, and society. For millennia, Hebrew has had a unique spiritual hold on both the Jewish and Christian identity. We will focus on the Bible as wisdom, law, and poetry, the Talmud of the ancient Rabbis,

Kabbalah and Hebrew alphabet mysticism, war and the Israeli cinema, Hebrew folk and rock culture, and a modern political mystery: how today's Hebrew created a new Jewish identity. Required for the major and minor. No knowledge of Hebrew is required.

Cross-Listed as: JWST 016

MES 6.02 - An Introduction to Islam

Instructor: Vignone

This course will provide students with useful tools for reading about, thinking about, or otherwise engaging with Islam and Muslims. It is first a survey of important topics in the study of the religion of Islam, including the Qur'an and the Prophet, the role of Islamic mysticism, Islam and the state, Islamic law, and Islamic theories of family and person. We also discuss Orientalism and the western study of Islam, so that we can understand ourselves as students of the Islamic tradition.

Not open to students who have received credit for REL 8

Cross-Listed as: REL 16.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 7.01 - Arab Revolutions: Dependency, Despotism and the Struggle for Democracy

Instructor: Fishere

This course explores the long struggle of Arabs to build independent and democratic states. After long cycles of revolutions and repression, the Arab World still suffers from despotism and dependency, and its people still yearn and struggle for freedom and good governance. Why have Arab revolutions failed? Are Arabs condemned to live under tyranny or is there hope for those who seek democratic, accountable governments and rule of law? To answer this question, we will dig into the complex political and cultural realities of the Arab World. We will read about old and new Arab revolutions; from Prince Abdul---Qader's armed revolt in Algeria (1832---1847); Egypt's multiple revolutions (1882 and 1919); Lawrence of Arabia's Arab revolt (1914---1918); the bleak revolution of Palestine (1936), all the way to the Arab Spring of 2011 and its subsequent collapse into civil war and despotism. The readings cover these revolutions and the deep dynamics that shape Arab societies and states. As such, this course introduces students to the politics and culture of one of the most turbulent regions of our world.

Degree Requirement Attributes: Dist:INT; WCult:NW

MES 7.03 - Jerusalem: Vision and Reality

Instructor: Glinert

Jerusalem has always mesmerized minds -- Royal City of Solomon, mystical core of the world, site of a foretold apocalypse, twice rased to the ground, focus of Jewish messianic dreams, since 1948 once more a Jewish capital

but still savagely fought over. In this course, we will sample the symbolism of Jerusalem in Jewish, Christian and Islamic intellectual and artistic expression, from the Bible down to the present. Why has this city evoked such passions?

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 8.01 - Introduction to Middle East Politics

Instructor: Fishere

This is a gateway course to the political life of the Middle East. It will introduce students to the main political issues and dynamics of the region, including: We will cover the basic contours and intellectual debates around these issues, analyzing the main texts tracing their development. The aim of this course is not only to familiarize students with the basic political features of the Middle East but also to equip students with the tools necessary to pursue future academic and analytical work on the politics of the region.

Cross-Listed as: GOVT 40.25

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 9.01 - Islam and Medicine from the Medieval to Modern Eras

Instructor: Vignone

What was the place of medicine in medieval Islamic societies? How does medicine inform the social, political and sexual experiences of Muslims living in modernity? In this course students will explore primary and secondary sources describing Islamic medical ethics, drug use, dieting, contagion and sexual practice. Students will learn how ideas of religious devotion, class, sexuality, gender and political legitimacy changed in the medieval to postcolonial Middle East while remaining in constant conversation with medicine. Open to all.

Not open to students who have received credit for REL 19.30

Cross-Listed as: REL 19.30

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 9.02 - Introduction to Classical Arabic Literature

Instructor: Kadhim

This course is an introduction to Arabic literature and culture from the sixth to the fourteenth centuries through close reading of a selection of texts drawn from a broad range of authors, genres and periods of Arab literary history.

The course is taught in English. Open to all students. No knowledge of Arabic or prior familiarity with Arabic literature are required.

Offered: Spring.

Degree Requirement Attributes: DIST: INT or LIT;
WCult:NW

MES 10.10 - Soundscapes of the Middle East

Instructor: Simon

In recent years, scholars have started to question the conspicuous “silence” pervading many academic works that privilege one sense – sight – to the detriment of all others. This seminar builds upon these long overdue efforts by critically engaging the writings of historians, anthropologists, ethnomusicologists, and media experts with the aim of uncovering how the study of sound may radically enrich our understanding of the modern Middle East. Beginning with an overview of sound studies, we will consider where multi-sensory scholarship on North Africa, the Levant, and the Gulf fits into this burgeoning field of inquiry. After situating the Middle East within a body of literature that is at once innovative and highly interdisciplinary, we will then shift to exploring several key themes, including religion, popular culture, mass media, gender, space, and the environment, in relation to the region’s soundscapes. We will listen to audiocassette sermons in Egypt, jazz in Istanbul, and the din of warfare in Iraq, among many other acoustic items, to gain a greater appreciation for the centrality of sound in people’s everyday lives and its significance in the domain of Middle Eastern studies.

Cross-Listed as: JWST 45

Offered: Winter.

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

MES 12.02 - Modern Iraq: Society, Politics, and Literature

Instructor: Kadhim

Iraq is a pivotal country in the Middle East. Known to history as “the cradle of civilization,” Iraq was also the center of the Islamic world in medieval times. From Baghdad, the present-day capital of Iraq, Abbasid caliphs ruled a vast Muslim empire from the eighth to the thirteenth centuries. The political history of modern Iraq, however, has been characterized by authoritarian rule, communal strife, wars and occupation. In this course, we will examine the politics of Iraq under the British mandate, as an independent state under the monarchy, and as a republic after the coup of 1958. We will also examine the rule of the Baath and of Saddam Hussein as well as the American invasion of Iraq and its aftermath. Drawing on a mixture of texts and media, the course explores the prevalent tropes of Iraqi culture, the ideologies underpinning these tropes and in doing so provides a cultural context for understanding the forces that shaped the modern history of that country.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 12.03 - Egyptian Culture, Society, and Politics

Instructor: Fishere/Di-Capua

This seminar will examine the cultural, social, and political life of modern Egypt. One way of examining this complex society is through revisiting Egypt's struggle with modernity. From Mohamad Ali's modernization program in the 19th century to the recent chanting for freedom in Tahrir Square, Egypt's different social forces, state, and international partners have been shaping its modernity in different—sometimes contradictory—ways. This struggle transformed the political, economic, social and cultural landscape of the country, and continues to be the focal point of its unfolding drama. The spread of modern ideologies (nationalism, liberalism, socialism), the construction of Islamism, the reordering of social hierarchies and family structure, the transformation of norms and values, among other issues, are better understood when read as part of this long, twisted, and tormented march of modernity.

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:W

MES 12.04 - America and the Middle East

Instructor: Fishere/Di-Capua/Ghattas

The United States has played a major role in shaping the political, economic and cultural development of the Middle East. Oil, global security, Israel's survival, and promotion of democracy, all have drawn the US into the complex politics of the Middle East since the 1920s. This course introduces students to various aspects of this role and the reactions it triggered. It covers the role played by American missionaries and travelers/immigrants around the turn of the 20th century. It analyzes the transformative impact of the discovery of Oil, the establishment of the state of Israel, the Cold War, Turkey's integration into NATO and the US attempts to establish a security regime for the Middle East. It also examines how Americans viewed the Middle East and their role in its life. In addition, the course then takes the students in a *tour d'horizon* of US role in Middle East politics: its involvement in the Arab-Israeli Peace Process, its responses to Radical Islamism and 9/11, the invasion of Iraq and its consequences, the uneasy relationship with a changing Turkey, and its policy of "democracy promotion". It discusses the doctrines defining US role in the region since Truman until Obama's "disengagement". Combining academic books with novels and movies, this course should give students a rounded view of the role and lasting impact of the United States in one of the world's most turbulent regions.

Cross-Listed as: GOVT 20.08 JWST 40.08

Offered: Spring, Summer, Winter.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

MES 12.05 - Arab Political Thought

Instructor: Fishere

This is a gateway course to Arab political thought. It will introduce students to the main political and intellectual debates in the modern Arab world since its nascent beginnings during the first half of the 19th century to the ideologies that animated the Arab Spring and its aftermath, including:

We will cover the basic contours and intellectual debates around these issues, analyzing the main texts tracing their development. The aim of this course is not only to familiarize students with the basic political features of the Middle East but also to equip students with the tools necessary to pursue future academic and analytical work on the politics of the region.

Cross-Listed as: GOVT 60.17

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

MES 12.06 - Dictatorship and Dissent: the Middle East in a Global Context

Dictatorship is the defining characteristic of some governments, especially in the Arab world. Dictatorship is usually described as a strongman imposing his will on the nation through sheer force. French political philosopher Étienne de La Boétie (1530–1563) in his seminal essay *Discours de la servitude volontaire (Discourse on Voluntary Servitude)* presented the existence of a dictatorship as a relationship between two parties. Before every dictator is a population that is willing to accept rule by the dictator. The dictator cannot impose his will on a people that shun a dictatorship. Extrapolating from this concept, we can consider dictatorship to be a syndrome. The dictionary defines a syndrome as "a group of signs and symptoms that occur together and characterize a particular abnormality or condition." In this course, students will examine the condition, signs, symptoms, and cures for the malady of dictatorship.

Cross-Listed as: GOVT 40.24

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 12.07 - The Sociology of International Development

This course will introduce students to the major sociological perspectives on economic and political development, with emphasis on developing countries. Among the views to be considered are modernization, which assumes that later developing countries will follow

paths once traveled by today's advanced countries; and dependency and world system theories, which view the integration of less developed countries into the world market as problematic and, under certain conditions, even disadvantageous. We will test these theories by applying them to specific cases. A major part of the course will focus on the economic 'miracle' of East Asian countries, as well as cases that have not been so successful. Other important topics to be studied include the influence of states, markets, and multinational corporations in economic development; the relationship between different modes of development and income distribution; and political development and the prospects for democratization. Open to all classes.

Cross-Listed as: SOCY 022

Degree Requirement Attributes: Dist:INT

MES 12.08 - Theories of Democratization and the Case of Iran

Instructor: Parsa

Theories of democratization generally examine the nature of the state, economy, social structure, class, culture and religion. This course will begin with an examination of various theories of democracy and democratization. It will then apply these theories to the specific case of Iran. Despite two major revolutions and two movements, Iran is still facing problems democratizing. The latter part of the course relies on documentary films that contain actual footages of Iran's nationalist movement in the 1950s and the revolutionary struggles in 1979.

Cross-Listed as: SOCY 49.02

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 12.09 - Politics of Israel and Palestine

Instructor: Avishai

This course explores the century-old conflict as seen from the political structures and changing narratives of Israelis and Palestinians, including the Zionist movement and the responses of the Palestinian Arab community to it; the formation of the Arab national movement as a whole—and within this, the claims of Palestinians before and after the British Mandate; the founding of the state of Israel and the formation of the post-1948 Palestinian national movement; the aftermath of the 1967 war; the start of the Israeli occupation and the latter's impact on Israeli institutions, economy, and political parties; and the Palestine Liberation Organization and the founding of Hamas. We will explore contemporary political and economic developments in light of the global forces operating on the region, and consider the plausibility of a two-state solution.

Cross-Listed as: GOVT 40.09 JWST 40.01

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 12.12 - Cold War Arab Culture

This course purports to study the effects and strategies of the cold war on Arab writing, education, arts and translation, and the counter movement in Arab culture to have its own identities. As the cold war functioned and still functions on a global scale, thematic and methodological comparisons are drawn with cultures in Latin America, India and Africa.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 12.13 - Modern Iran

Instructor: Nikpour

This course examines the history of Iran from the early modern to the contemporary period. We will start in the era of the Islamicate empires then move through European imperialism, the rise of modern nationalism, the Constitutional Revolution (1905-1911), the formation of Pahlavi state institutions, the 1953 coup, the 1979 revolutionary movement, the establishment of the Islamic Republic, the Iran-Iraq War, and more. Students will learn to think through Iranian history in domestic and global contexts.

Cross-Listed as: HIST 70.02

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 12.14 - The Intellectual History of Racism: Europe, the Middle East, and the Americas

When was the concept of race born? Why was it invented, and how did it change the way that we think about politics? This seminar explores the forgotten "ism" of intellectual history — racism. We will survey ideas of racial difference across history and look at how they have been used to justify inequalities of power. Readings will be a mix of primary source materials and scholarly research in classics, history, Middle Eastern studies, religion, and philosophy.

Cross-Listed as: GOVT 86.43

Degree Requirement Attributes: Dist:TMV; WCult:CI

MES 12.15 - History and Culture of the Arab-Jews

This course examines the history, social characteristics, and cultural identity of the Arab Jews. One of the goals of the course is to examine the question "who is an Arab Jew?" What perceptions and definitions relate to the differences between Sephardi, Mizrahi, and Arab Jews? What is Arab Jewish history and what is its place in Jewish, Middle Eastern, and Israeli historiography? An examination of these questions requires an understanding

of the history of the Arab Jews in different periods and different geographical and cultural spaces, against the background of transitions in imperial, colonial, and national rule.

Cross-Listed as: JWST 11.02

Degree Requirement Attributes: Dist:INT or SOC

MES 12.16 - Post-War Art from the Middle East: The Case of the Lebanese Civil War

What is the function of art after a long and devastating conflict like the Lebanese Civil War (1975-1990)? When cities are destroyed and people are displaced, radical ruptures occur at the physical level but also at the level of people's understanding of their own history and identity. Much like Adorno's questioning of the possibility of poetry after Auschwitz, Lina Majdalani and Rabih Mroue have put in question what art could represent after the catastrophic event. These two artists investigate through their art the work of memory, the representation of the body, and the possibility of dialogue through image and performance.

Cross-Listed as: ARTH 42.02

Degree Requirement Attributes: Dist:INT or ART; WCult:NW

MES 12.17 - 1967: The War That Never Ended

Instructor: Heschel and Smolin

The June 1967 War was perhaps the single most important event in the history of the modern Middle East, fundamentally altering not only the geo-politics and ideologies of the region but also the lives of its peoples and their religious convictions. This interdisciplinary course will examine the war and its aftermath from the perspectives of Israelis, Palestinians, and Arabs with attention to the ways in which the war altered the Cold War and the self-understanding of Jews outside the State of Israel. How did post-World War II politics produce the march to war? How was the war experienced by the various actors? Why was it such a euphoric victory for the Israelis and a shattering defeat for the Arabs? How has its legacy haunted the politics, history, and culture of the region in the decades since? This course will examine a wide variety of source material, including films, fiction, memoirs, and historical accounts, to seek to answer some of these questions. Some background in the history of the modern Middle East and in modern Jewish history and religion would be helpful but is not required for this course.

Cross-Listed as: JWST 67.03

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

MES 12.18 - Difficult Conversations on the Middle East

Instructor: Fishere and Smolin

This seminar is designed to equip students with essential skills for engaging in meaningful dialogue across differences. By exploring some of the most controversial topics in the Middle East today, students will learn how to navigate complex, often emotionally charged conversations with empathy and intellectual rigor. The course provides a framework for understanding diverse perspectives, fostering a respectful exchange of ideas, and developing the ability to engage constructively in difficult discussions. Through a combination of case studies, guest speakers, and guided debates, students will enhance their ability to communicate effectively on issues that are both globally significant and deeply personal. Participants will also develop active listening skills and learn how to identify shared values even in polarized contexts, making them more capable of contributing to constructive solutions. By the end of the course, students will have gained valuable insights into the dynamics of conflict and dialogue, skills that are applicable across various fields and contexts.

Cross-Listed as: JWST 42.12

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:NW

MES 13.12 - Magic, Miracles, and the Prophet Muhammad

Do you believe in miracles? What are they, anyway? And how did the Middle East's long history of miracle-working influence expectations of what Islam and the Prophet Muhammad would be like? Do modern Muslims still believe in and work miracles? In this course students will explore these questions through sources related to the prophetic history of the Middle East, the miraculous events of Muhammad's lifetime and the role of miracles in the Islamic world today.

Not open to students who have received credit for REL 19.35

Cross-Listed as: REL 16.09

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 13.14 - Shi'i Islam

Instructor: Silkaitis

This course will explore the history, doctrines, and practices of Shi'i Islam, focusing on the Twelver Shi'i faith in particular. The Twelvers are the largest of today's three Shi'i faiths and comprise the majority of modern Iran's population, majorities in a number of Arab countries, and substantial minorities in others such as in India and Pakistan. Translated materials will be offered to allow students direct access to key Shi'i writings composed over

the centuries. The issue of sectarianism conflict in Sunni/Shi'i history will be one of the course's subthemes.

Not open to students who have received credit for REL 28.05

Cross-Listed as: REL 16.08

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 15.08 - The Art of the Novel: A Masterclass with Hoda Barakat

Instructor: Barakat

Each novel has its own "secret of fabrication." This course introduces students to the processes, techniques, and themes involved in writing the novel. The approach will be personal, engaging author Hoda Barakat's own experience as a novelist who had to confront in her writing war, exile, tribalism, violence, and love. Each week will focus on a particular set of questions, starting with the idea of the novel and the development of characters, and moving to questions of gender, sexuality, and voice. The course will focus on the fears, obsessions, excitement, and euphoria involved in the writing process, and on the social and political contexts from which works arise or that novels have to critique in today's world. The students will engage Barakat's writings and work to develop their own writing by workshopping their pieces throughout the term. *This course will be taught in Arabic.*

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 15.09 - Language and Rebellion: Arabic Literature in a Comparative Context

Instructor: Barakat

This course focuses on rebellion in modern Arabic literature. Rebellion could be a political act (an uprising against a colonial power or an authoritarian regime), a psychological act (rebellion against the father), and an artistic act (rebellion against a system of values and traditions). These realms are interconnected and it's precisely their intersection that the students will analyze by engaging works by modern Arab authors. Exploring this theme in a comparative context, the students will explore the politics of language, the relation to personal and national identity, and the implications of writing in the language of the other (French, Hebrew, English, etc.). Each week focuses on one Arab author, situating his/her work in the appropriate historical and social context, and doing close readings of his/her work. All books are translated into English.

Cross-Listed as: COLT 51.04

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 15.10 - Film, Fiction and the Arab-Israeli Conflict

Instructor: Glinert

This course explores Israeli cinema in the context of the social and historical backdrop of the Arab-Israeli conflict and the painful emergence of a new Jewish-Israeli identity in the shadow of the Holocaust and constant warfare. We will study a dozen films in depth, situate them in the evolution of an Israeli cinema, and consider the problems of turning fiction into film.

Cross-Listed as: JWST 042

Degree Requirement Attributes: Dist:LIT; WCult:CI

MES 15.11 - The Middle East in Film: Picturing the Past and Present

Instructor: Simon

How may films serve as a starting point for revisiting the past and rethinking the present? In what ways may representations of the Middle East differ over time and across places? And why do the stories told by filmmakers in documentaries, historical dramas, and other cinematic productions matter? Movies depicting the Middle East routinely draw mass audiences and consequently shape popular perceptions of the region the world over. The very same films, however, are all too often understood by many people as mere entertainment. In this class, we will consider what movies, if treated critically, may teach us about Middle East history. Beginning with a brief introduction to film and media studies, we will contemplate where the Middle East fits into this field of inquiry. Once establishing how we will approach movies and the Middle East throughout the term, we will navigate a number of key themes together, from war, memory, and migration to (mis)information, revolution, and representation. Along the way, we will watch everything from indie films to big budget blockbusters. Regardless of the exact form these projects assume, all of the pictures we explore will generate debate and discussion around the past and present. Among the topics we will cover are the Israeli-Palestinian conflict, European colonialism, and America's legacy in the Arab world. To assist us on this journey across the Middle East and well beyond its boundaries, we will engage several primary sources, with motion pictures at the forefront. These thought-provoking items will empower us to partake in conversations that traverse languages, national borders, historical eras, and artistic genres, enabling us to view the Middle East in an entirely new way.

Cross-Listed as: FILM 42.19 JWST 44.01

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 15.12 - History of the Arabic Language

In this course, we will survey the history of the Arabic language and the current linguistic situation across the Arabic speaking world. We will learn about the foundations of Arabic grammatical and philological tradition, and compare these with modern linguistic perspectives. We will also engage with the ideologies surrounding the multiple dialectal varieties, which serve as both liturgical and administrative languages, as well as languages of thought, conversation, and artistic expression.

Cross-Listed as: LING 11.18

Degree Requirement Attributes: Dist:SOC; Lang:LRP

MES 15.13 - Sufism as World Literature

Instructor: Morsi

In his book, *What is World literature?*, David Damroch argues that world literature is not a canon of texts but rather a mode of circulation and reading that gains in translation. Sufism, often referred to in English as “Islamic mysticism”, has long appealed to many literary traditions and informed multiple aesthetic projects around the globe –evolving in significance as it circulated through translation. This course offers an introduction to Sufism *as* world literature. It explores its universal appeal (in such languages as Arabic, English, Persian, Spanish, Turkish, Urdu etc.) and its many aesthetic manifestations and transformations around the world. In addition to the thematic, the course offers an extensive and diverse (but not exhaustive) survey of Sufism’s impact on literary genres.

Advanced reading ability in a second language is preferred but not required as all class materials are available in English.

Cross-Listed as: COLT 35.06 ENGL 55.26

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 16.05 - Introduction to Arabic Culture

This course will provide a broad introduction to the historical, literary, artistic, and popular cultures of the Middle East, from pre-and early Islamic times to the present. The aim of the course is to give students an appreciation of Arab and Arabo-Islamic culture, but also to examine ways in which prevailing historical, political, economic, and social conditions have impacted cultural production and expression in the Middle East. Sources and texts will include, but not be limited to, selections from the Quran, hadith, Arabic poetry and literature, historical chronicles, and film. Required for the FSP, major and minor.

Degree Requirement Attributes: Dist:LIT; WCult:CI

MES 16.06 - Middle Eastern Cultures in the Americas

Instructor: Morsi

This is an introductory diaspora studies course that covers the history of the main immigration waves from the Middle East to the Americas since the 19th century. It examines some of the key issues faced by these varied communities in the process of integration. And it looks at the cultural impact of these communities’ settlements in the Americas.

Cross-Listed as: COLT 35.03

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 16.07 - The Arabian Nights East and West

Instructor: Kadhim

An introduction to Arabo-Islamic culture through its most accessible and popular exponent, *One Thousand and One Nights*. The course takes this masterpiece of world literature as the focal point for a multidisciplinary literary study. It covers the genesis of the text from Indian and Mediterranean antecedents, its Arabic recensions, its reception in the West, and its influence on world literature. The course will be taught in English in its entirety. No prior knowledge of Arab culture, the Middle East or Islam is required.

Cross-Listed as: ARAB 62.02

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 16.08 - Women and War in Modern Literature and Film

Instructor: Morsi

This course examines literary, artistic, and cinematic narratives about war created by women to reflect on the meaning of femininity and womanhood in times of armed conflict. Gender is a social construct and the gender binary seems to become profoundly entrenched during war. Some of the questions that will be explored are: how does violence perpetuated by instances of armed aggression overlap with the violence perpetuated by already existing power structures (such as patriarchy)? How does violence redefine our understanding of gender difference in general and the category of “woman” in specific?

Cross-Listed as: ARAB 61.10 COLT 62.10 WGSS 49.06

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

MES 16.10 - Special Topics in Arabic Studies

Instructor: FSP, RABAT Local (Instructor)

Special Topics in Arabic Studies

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 16.11 - From Genesis to Seinfeld: Jewish Humor and its Roots

Instructor: Glinert

What is Jewish humor, what are its roots, and what can it begin to tell us about Jewish society, its values and its self-image? Using Freudian and other humor theory, we examine 2000 years of Hebrew comedy and satire, from the Bible to contemporary Israel, in such genres as short stories, jokes, and strip cartoons, and its relationship to American Jewish humor.

Offered: Summer, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

MES 16.12 - Language, Politics and Power in the Middle East

Instructor: Glinert

This course explores the sociopolitical dimensions of language at the macro level in the Middle East, past and present. How have political, ideological and social forces affected the fate of Arabic, Hebrew, Persian, Turkish, Ancient Greek, and other major regional languages such as Kurdish and Berber? How does language affect and reflect heritage, ethnicity, religion and nationhood, with their linguistic ideologies? What, objectively and subjectively, are "languages" and "dialects" What are the causes of language conflict or repression? Is 'one state one language' an economically or politically rational policy? How and why might language and literacy be planned and managed? No prior knowledge of a particular language or culture is assumed.

Cross-Listed as: GOVT 40.30

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

MES 16.15 - History and Culture of the Jews I: The Classical Period

Instructor: Greenblatt

A survey of the history and culture of the Jews from the post-Biblical period to the Middle Ages.

Cross-Listed as: HIST 94.08 JWST 010

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

MES 16.22 - Arabic as a Cultural System

Examines the historical and cultural factors and forces that have molded and continue to mold colloquial Moroccan

Arabic. This course includes an appreciation of the nonverbal aspects-gestures and body language-of communication and identity in the Moroccan setting. It also offers a minimal functional mastery of practical communicative skills-the sound system, basic sentence patterns, and everyday vocabulary of colloquial Moroccan Arabic-as well as a knowledge of the Arabic script, a key element of Islamic civilization and identity.

Degree Requirement Attributes: WCult:NW

MES 16.23 - Discovering an Islamic City

This course analyzes the historical and contemporary urban life of a traditional Islamic city as seen through the eyes of the town's scholars, planners, educators, writers, and crafts people, as well as scholarly readings that have shaped discussions in anthropology, history, and the history of religions. Fez is the locus of classical discussions of urbanism, public space, and civic life in the Muslim world. Participating in the life of the city, students have an opportunity to experience first hand its educational, economic, religious, kinship, and political institutions.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 16.24 - Jerusalem: A Cultural History

One of the main points of contention in the Israeli-Palestinian conflict is the status of Jerusalem. For more than 3,000 years, ever since Jerusalem first appeared on the stage of history as a Holy City and the City of the Kingdom, it has been enveloped in political and theological struggles, served as a locus for intense cultural interactions, and loomed large in collective imaginaries across the world.

Cross-Listed as: JWST 40.06

Degree Requirement Attributes: Dist:INT; WCult:NW

MES 16.30 - Modern Arabic Fiction

Instructor: Smolin

This course is an introduction to twentieth-century fiction across the Arab world. Looking at works from North Africa to the Middle East, we will examine how Arab writers and filmmakers have dealt with such themes as nationalism, immigration, freedom, sexuality, war, violence, and religion. Authors include Tayyib Salih, Mohamed Choukri, Ghassan Kanafani, Tahar Wattar, and Hanah al-Shaykh, among others.

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 16.31 - Palestinian Literature and Cinema

This course explores various aspects of Palestinian existence through literature and cinema. What does it mean to be "Palestinian"? What unifies a cultural output produced not only in Arabic, but also in Hebrew and English, by people who carry a variety of citizenships (or none at all)? How have Palestinian authors and filmmakers

grappled with issues such as collective identity, the “Other,” and internal social problems? How have these issues influenced their use of literature and film as art forms?

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 16.32 - Themes in Arabic Literature and Culture

Arabic literature is widely regarded as the foremost intellectual and artistic accomplishment of the Arabs. In the course of over fourteen centuries of vigorous literary activity, Arab poets and writers have elaborated a set of themes that inform Arabo-Islamic culture in profound ways. Offerings of this course might range from the examination of a particular theme to broader comparative studies.

Courses numbered 61 - 63 are literature-in-translation courses, and do not require knowledge of the Arabic language. There are no prerequisites and courses are open to students of all classes. They may be repeated for credit if the topic varies.

MES 16.35 - Modern Arabic Literature in Translation: Narrating Tradition, Change and Identity

Instructor: Kadhim

This course is an introduction to the modern Arabic narrative tradition through the close reading of a number of key texts by leading twentieth and twenty-first centuries Arab authors. It takes as its focus a critical examination of representations of identity and change in modern Arabic discourses. Blending lectures and class discussions, the course will also explore the ways in which literary forms and narrative strategies tend to reinforce or contest normative power structures. Examination of motifs, literary styles, and assumptions pertaining to gender, sexuality, and class and socio-religious affiliation will also be undertaken.

The course will further examine the profound ways in which the colonial encounter has impacted (narratives of) identity with a particular emphasis on constructions of the Arab Self in relation to a Western “Other”

Readings for the course will be drawn from the works of Naguib Mahfouz (Egypt), Tayyib Salih (Sudan), Ghassan Kanafani (Palestine), Hanan Al Shaykh (Lebanon), Mohamed Berrada (Morocco), and others. The course will be taught in English.

Cross-Listed as: ARAB 61.07 COLT 53.01

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 16.36 - Rogues, Riddlers, Lovers, Liars: Love and Death in the Mediterranean

Instructor: Elhariry

This course examines the intertwined relationship between the languages and representations of love and death in the Mediterranean, focusing in particular on the Arab world and diaspora in the modern period. It examines cinematic, literary, and philosophical questions about the complex relationships between love and death. It provides students with critical tools in comparison, world and global literature, translation studies, and critical and literary theory. We will study the thematic, structural, and rhetorical constructions of love and death across languages and artistic traditions.

Cross-Listed as: COLT 53.04

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 16.40 - Mediterranean Poetics

Focusing largely on what in the West has traditionally been called the Middle Ages, this course will engage with a series of cultural artifacts produced throughout the Mediterranean basin beginning in Roman antiquity, and extending into Muslim Spain, Occitania, northern France, Italy, and the contemporary Arab world. ‘Poetics’ – as both a practice of and a conceptual framework for the imagination – will here encompass not only literary texts but also their avatars in earlier oral traditions and subsequent performative ones as well as their translation into material objects. Among questions to be addressed are the porousness of territorial boundaries in the Mediterranean region before the consolidation of modern nation-states; the circulation and transmission of literary conventions within such a fluid reality; and the relationship of cultural production to structures of political, social, and religious power. The eclectic materials taken into consideration here come from widely diverse – but nevertheless interconnected – linguistic and cultural ecologies, and they move across a long temporal arc. Through their encounter with these resources, students will come to understand the Mediterranean as a space that can be defined beyond established geo-political barriers as a world that has been constructed through historical contingencies and in imaginative – sometimes contentious, often kinetic – engagement with them.

Cross-Listed as: COLT 53.05

Degree Requirement Attributes: Dist:LIT; WCult:W

MES 16.41 - The Art of Ancient Egypt and the Ancient Near East

A study of architecture, sculpture, and painting in the Near East and Egypt from prehistory through approximately the first millennium B.C.E. The course aims at a parallel treatment of the Egyptian and various Near Eastern civilizations, especially those that developed in or around modern Turkey, Israel, and Iraq. Special attention will be paid to the cultural contacts among different ancient centers at key moments in history, as conjured up by individual monuments.

Open to all classes.

May be taken in partial fulfillment of the major in Classical Archaeology and the major in Classical Studies.

Cross-Listed as: ARTH 10.01

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 16.42 - Art in Egypt

Instructor: Kangas

Mummies, pyramids, curses and death, these are some of the images and associations that one conjures up with the mention of ancient Egypt today. Ancient Egyptian civilization is an endlessly fascinating field for intellectual inquiry and debate, the subject of spectacular museum displays, as well as a source of inspiration for various reenactments in literature and film. The modern attraction for Egypt has its origins in Napoleon's invasion of the country in 1798, and later, and more profoundly, in the 1922 discovery of the tomb of king Tutankhamen in the Valley of the Kings. However, already in the ancient world, the Greeks and Romans expressed fascination for the monuments and the civilization of Egypt, primarily as they experienced its material culture through travel and other cultural exchanges. In this course we will study key works of art and architecture in ancient Egypt as well as explore some important instances in the subsequent reception of Egyptian monuments, history, and mythology.

Cross-Listed as: ARTH 10.03

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 16.43 - The Thousand and One Nights at the Movies: The History of Film Adaptations of the Arabian Nights

This course examines the history and evolution of screen adaptations of the Thousand and One Nights from the early twentieth century to the present. We will consider the complex exchanges between stories and their adaptations as stories move across media, genres, and cultural moments. Topics include authorship in film adaptation, the question of fidelity, and the dynamics of reception.

Degree Requirement Attributes: DIST:ART or INT

MES 17.07 - Radical Islam: Jihadis, Salafis, and Radical Reformists in the 20th and 21st Century

Many academics, including Muslim academics, assert that Jihadism is "not religious" or "not really Islamic." Nonetheless, members of these movements see themselves sincerely as the vanguard of the "real" Islam. This course is about how violent reformists fit into the Islamic heritage, and, as importantly, how they fit into global sociological, religious, and political tendencies characteristic of the modern world. Are these movements' "Islamic;" are they

"modern?" Why are they simply irrelevant to most Muslims?

Cross-Listed as: REL 16.04

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 17.08 - The Jewish Jesus

It is certain that Jesus of Nazareth lived in the first century C.E. and that his followers interpreted his life and death as harbingers of a new age. However, recent scholarship has made clear that Jesus was fully embedded in the Judaism of his time: the Jewish diversity of the period and Jewish resistance to the Roman Empire. This course examines the life of Jesus the Jew prior to the early Church's interpretation of Jesus as Christ; modern Jewish and Islamic views of Jesus, as well as his portrayal in contemporary film and art, will also be explored.

Cross-Listed as: JWST 74.01 REL 57.02

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:W

MES 17.09 - Modern Islam

In all the attention focused on Islam at present, a newspaper reader could be forgiven for supposing that between Muhammad and Usamah bin Laden, there has been no change in Islam. This course surveys developments in Islamic religious history, thought, and practice since 1800, with special emphasis on topics of current controversy, including the status of women, the nature of government, and the place of Islamic law. Readings will be mostly from primary texts written by contemporary Muslims, both modernists and Islamists.

Not open to students who have received credit for REL 16.

Cross-Listed as: REL 16.02

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 17.10 - Topics in the Study of Islam

This course will focus on a particular topic in Islamic studies, with an emphasis on the most recent research in that field. The topic will vary with each offering, so the course may be taken more than once. Sample topics include: "The Islam of Morocco," "Shi'ism," and "Problems in Popular Islam."

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 17.14 - Jews and Arabs in Israel-Palestine: Past and Present

The course will cover more than hundred years of struggle between the Jewish national movement, aka the Zionist movement, and the Arab-Palestinian national movement, through exploration of the belief systems, political and military practices, perceptions of justice, and narratives of

both movements and of political and religious factions within each of them.

Cross-Listed as: GOVT 40.18 HIST 94.10 JWST 40.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

MES 17.15 - The Middle East in the United States: Jews and Arabs in American Society

Instructor: Fishere and Milich

The complex identities of Jews and Arabs alike are affected by religion, culture, language, history, and politics, all in their own terms and with the fault lines running both between and within the two communities. Despite their internal and mutual conflicts, the two groups share similar experiences of hostility when trying to integrate into American society with fierce antisemitism and Islamophobia against the backdrop of increasing right-wing ethno-nationalism. Concomitantly, both groups share deep ambivalences about assimilating to American culture vs. retaining discrete cultural identities. If Jews and Arabs play decisive roles in US politics, both as effective actors and as imagined targets of opposition, the United States in turn acted not only as mediator in the international relationship between the two groups; the Israeli-Palestinian conflict, post-9/11 politics, anti-terrorist actions, or the Trump administration's travel ban on five Muslim-dominated countries have also influenced the relationship between Jewish and Arab communities within the United States. Instead of equating the experiences of Jews and Arabs viz-a-viz America, this course examines the multifaceted encounters in what has to be considered a complex Jewish-Arab-American triangular. The ways in which Jews and Arabs interact in the US, will be as central to the course as examples of hybrid cultural experiences of Arab Jews and artefacts such as the numerous American synagogues built in the style of Moorish architecture. We will examine cultural representations of Jews and Arabs in American literature, movies, documentaries, memoirs, art, popular culture and political analyses with attention to aspects of class, race and gender. Finally, the course will focus on the political expressions of Jewish- and Arab-Americans and their relations to the Middle East, and here in particular to the Israeli-Palestinian conflict.

Cross-Listed as: JWST 66.03

Degree Requirement Attributes: Dist:SOC

MES 17.17 - Arab Jewish Culture in the Modern Middle East

Who are the Arab Jews? Is the controversial notion of such a group really that oxymoronic? How do they self-identify, what modes of writing do they establish to represent their experience and how are they represented by others? This course will examine the stories of Jews of Arab descent with particular emphasis on their anomalous place in the cultural production of the Middle East that spanned over a

century and a half. We will consider the transformation of Arab Jewish experience in various historical configurations and analyze the various media and literary genres with which this group expresses itself. Discussion will also draw on interdisciplinary scholarship to address questions of memory and self-narration, hybridity and cosmopolitanism, literature and identity politics.

Alternative views will be afforded of both Arab and Jewish historiographies, political movements and collective myths. We will read works by Jacqueline Kahanoff, Samir Naqqash, Sami Michael, Shimon Balas, Ronny Somek, and Ronit Matalon and scholarship by Lital Levy, Hannan Hever, Orit Bashkin, and Yehuda Shenav. We will also see and hear films and music created by and about Arab Jews.

Cross-Listed as: JWST 66.04

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 17.18 - Jewish Views of Islam

Instructor: Heschel

This course will examine Jewish views of Islam by reviewing the history of medieval and modern Jewish experience under Muslim rule, Jewish theological understandings of Islam, and modern Jewish historiographical interpretations of Islamic origins within Judaism. We will study Jewish understandings of Islam: the articulated differences between Jewish and Muslim beliefs, particularly in relation to prophecy, revelation, scripture, and messianism; the ways that Islam served as a template for presenting Judaism to modern Christian Europe; the alliance forged between Jewish scholars and their imagined Islam as a polemical tool against Christianity; the rise of Oriental Studies and Religious Studies in Europe and the role played within that field by Jewish scholars; Jewish-authored travelogues to Muslim countries; and individual cases of conversions from Judaism to Islam. We will examine Arab-Jewish intellectual and literary creativity and how Orientalism has shaped other cultural phenomena, specifically early psychoanalytic writings.

Cross-Listed as: JWST 058

Degree Requirement Attributes: Dist:TMV; WCult:CI

MES 17.19 - The Arab, the Jew, and the Construction of Modernity

Instructor: El-Ariss, Heschel

This course uncovers a lost chapter in the history of modernity, engaging the Middle East in a global context both as object of representation and experimentation but also as incubator of new models of community, literary genres, and historical narratives. From Zionism to Baathism, the 20th century has witnessed the implementation of national projects that can be traced to revivalist movements in the 18th and 19th centuries in Europe and the Ottoman Empire, intellectual and poets

writing in Paris, Vienna, Alexandria, and Beirut, imagining new national identities and literary canons. These essays, novels, manifestos, films, paintings, and poems had transformative effects on the Middle East, redrawing its political and cultural map, and redefining what it means to be a Jew or an Arab in the modern age. Examining this map requires a historical and literary inquiry based in comparative models of analysis and case studies.

Cross-Listed as: COLT 53.07 HUM 03.06 JWST 42.11

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

MES 17.20 - The Qur'an and the Prophet

Instructor: Silkaitis

This course introduces students to the Qur'an through diverse perspectives, including through its revelation, assembly as a text, its interpreters, and the Qur'an as a material object. Students will learn about the life of the Prophet Muhammad in conjunction with the revelation of the Qur'an as well as the importance of the Prophet's own sayings and example in Islamic law and practice. We will examine interpretations of the Qur'an from different chronological, geographical, and gendered perspectives. Students will leave the class with an understanding of the role of the Qur'an for Muslims and Islam historically and in contemporary times, as well as debates surrounding it. We will also examine contemporary expressions of Islamophobia, considering how misunderstandings of the Qur'an and its contents contribute to fears of the text and Islam. Open to all.

Not open to students who have received credit for REL 27

Cross-Listed as: REL 16.05

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 17.21 - Sufism: The Mystical Tradition of Islam

This course examines Sufism or what is often called the mystical tradition in Islam. In Western media and popular discourse, Sufism is often portrayed as the “soft-side” of Islam that is uninterested in rituals, norms, the law, or politics—in contrast to the harsh “legalism” of the Shari‘a, or Islamic law. In this course, we will investigate this portrayal through a rigorous textual and conceptual study, using both primary Sufi texts and secondary sources. The course explores multiple aspects of Sufism including its institutional and intellectual history, metaphysics and cosmology, meditation and disciplinary practices, poetry and literature, modern debates over the limits of normative Sufism, and orientalist and neo-imperialist representations of Sufism. A major focus of this course will be on close readings of primary texts, all in translation.

Not open to students who have received credit for REL 25.

Cross-Listed as: REL 16.06

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 17.22 - The Qur'an in Europe from the Middle Ages to the Twentieth Century

Instructor: Ben-Tov

Since the dramatic emergence of the Arab Empire in the seventh century, Byzantium and the emerging Europe were engaged in warfare, polemics, trade and a fruitful cultural exchange with Muslim polities and societies. This course is dedicated to Christian Europeans' engagement with the Qur'an from the twelfth century to the twentieth. The reasons Europeans read the “Alcoran” or “Turkish Bible” and the consequences of this perusal were as varied as their political, commercial, military and cultural encounters with the Muslim world. From the despised object of heated polemics, to a storehouse of philosophical and religious wisdom and a masterpiece of world literature, Europe's centuries-long engagement with and re-assessment of the Qur'an is a fascinating chapter in the history of Western thought. In addition to its pivotal importance for understanding the history of Christian-Muslim relations, it offers us a unique vantage-point to study several developments in the religious and intellectual history of Christian Europe and both its pre-modern and modern approaches to religion, culture and non-Christians in Europe and beyond.

Cross-Listed as: JWST 36.04 REL 28.08

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

MES 18.01 - Unmaking HIStory: Contemporary Art in the Middle East

Instructor: Elias

This course focuses primarily on the work of contemporary artists who make work in or about the so-called Middle East. It includes recent works by artists from nations as diverse as Algeria, Iran, Israel, Lebanon, Morocco, Syria, Turkey and the UAE. One of the main objectives of the course is to look at art practices that attempt to deepen our understanding of the varied cultures, ethnicities and societies that are found in this part of the world. The geographic focus of the course—mostly the Muslim nations of the Arabian peninsula and North Africa—is not meant to perpetuate the assumptions about this region as a monolithic geopolitical entity, nor to blindly label its production according to existing ethnic, religious or national

categories. Against media stereotypes of the region, the artists studied in this course have made work that function as a critical platform for rethinking traditional identity formations and extending the space of cultural encounter across borders (territorial, political, linguistic). In many cases these artists may not be living and working in their country of birth but their ethnicity, religion or citizenship continues to inform both their own sense of identity and the terms of their art practice. Some of the topics to be discussed include: artistic responses to the Arab-Israeli conflict, representations of everyday life in times of war, the movement and obstruction of people, goods and information across borders, the rise of new art markets in the Middle East, the politics of gender and sexuality in the Arab world, and the use of archival documents to rethink the meaning of evidence, truth and testimony.

Cross-Listed as: ARTH 42.01 ARTH 63.22

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 18.02 - Mobility in the Early Modern Mediterranean

Instructor: Kassler-Taub

In early modernity, innovations in art and architecture moved freely between the Italian and Islamic worlds, creating a shared language that crossed cultural and geographical boundaries in the Mediterranean. This introductory course will focus on exchanges between urban centers such as Venice, Florence, and Pisa and the Mamluk Sultanate, the Safavid Empire, and the Ottoman Empire in the fifteenth and sixteenth centuries. We will consider a wide range of case studies, from traveling artists and architects in foreign courts to the appropriation of objects, monuments, and histories. Throughout, we will question how transcultural mobility developed against a backdrop of military strife, political rivalry, and religious tension. The course includes frequent visits to the Hood Museum of Art.

Cross-Listed as: ARTH 28.09

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

MES 18.03 - Islamic Architecture

This course examines the architecture of Islamic cultures from the seventh-century rise of the Umayyad dynasty to the modern centers of Dubai and Doha. By studying the historical contexts within which Islamic architecture developed, we will consider major themes, chronological developments and regional variations in both religious and secular architecture. Additionally, by examining instances of cross-cultural influence, we will explore pivotal

interactions between Islamic and non-Islamic architectural traditions.

Cross-Listed as: ARTH 62.71

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 18.04 - Arts of Islam

Instructor: Agarwala

This course is intended to introduce the arts of Islam during a period of dynamic cultural and political change in the Islamic world. It attempts to instill in the student a broad awareness of the diversity and the main achievements of Islamic architecture from the beginnings of Islam to the present day. It begins with a basic outline of Islamic material culture in its early and 'Classical' periods, from ca. 650 through to the art of the nation-state in the twentieth century. This period saw the initial formation of an Arab empire stretching from the Atlantic to the Indian Ocean, a decline in centralized authority, and the rise to political prominence of various North African, Iberian, Iranian, Central Asian, and South Asian dynasties. These political developments are reflected in the increasingly diverse and dynamic nature of Islamic material culture over this period. The topics have been chosen to stress a dialectic between continuity with earlier artistic traditions and the dynamics of transformation and innovation that led to the creation of distinctive regional and transregional visual vocabularies.

Cross-Listed as: ARTH 31.03

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 18.05 - Collecting Islamic Art

Recent interest in the historiography of Islamic art has been on scholarship, museums, and collecting from the mid-nineteenth through the mid-twentieth century, the formative period for this field. Exploring a diverse range of collecting practices, this course aims to elaborate on key questions that inform our understanding of Islamic art and its peoples - How and why did these objects enter museums and private collections? What circumstances of this particular period engendered such an interest in Islamic art? What kind and quality of objects entered collections? Who were some of the individuals who played a role in the collecting, exhibiting, and framing Islamic art in the Western world? In short, what or who were these early tastemakers, and what taste did they mold? The approach to examining collections, collecting patterns, and special exhibitions will be comparative, drawing on collecting practices in both modern museums and precolonial collections in Europe and within the Muslim world.

Cross-Listed as: ARTH 31.04

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 19.02 - Muslim Feminism

Instructor: Ayubi

This course introduces students to the diversity of feminist approaches on a transnational scale, by examining the movements, activism, media, literature, and Islamic debates produced in predominantly Muslim countries and beyond. We will interrogate concepts of transnationalism, feminism and modernity in terms of historical developments, theoretical usage, the context of colonialism, Islamic theologies, and the modern Muslim nation states. We will explore similarities and differences in women's experiences and feminist methodologies across global Muslim contexts. Course materials will be made up of several primary sources in translation that deal with intersectional issues such as religious and cultural practices, educational systems, politics, race and racism, socioeconomic class, legal rights for men and women, and marriage and the family.

Cross-Listed as: REL 28.03 WGSS 41.04

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

MES 19.03 - Arab Feminisms

Instructor: Morsi

This course is an introduction to the history of feminism in the Arab world from the 19th century to the present. It examines some of the most important socioeconomic and political issues as well as aesthetic trends that were or continue to be central to feminist activism and cultural production in the region. Throughout the term students will engage with a wide range of primary sources (newspaper articles and op-eds, memoirs, novels, poems, photographs and films) that will help them develop a nuanced and critical understanding of the diverse and dynamic experiences of women in the Arab world.

Cross-Listed as: COLT 53.06 WGSS 24.01

Offered: Spring.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

MES 19.04 - Gender and The Modern Middle East and North Africa

Instructor: Nikpour

In this course, we will study histories of the modern Middle East and North Africa and examine the ways that issues relating to gender and sexuality have affected the politics and social worlds of the region over the course of the past several centuries. This course begins with the medieval Islamicate Empires — Mughal, Safavid, and Ottoman — and then moves through the end of empire, the colonial era, the establishment of the nation state, and the emergence of modern cultural, political, and religious

movements. In doing so, we will situate the histories and social worlds of the region in a global frame, asking how global political and economic transformations have affected the region. At the same time that we attend closely to these histories, we will also examine the ways in which the category of “woman” has been mobilized in popular and political discourses in the 18th-21th centuries, paying particular attention to how Muslim and Middle Eastern women have been represented in various political discourses, as well as how they have represented themselves. Through close readings of both primary sources (in translation) and secondary literature — including historiographical, theoretical, and literary texts as well as film and music— we will also tackle the questions, controversies, and stereotypes that have animated debates in both scholarly and popular literature on such topics as the veil, feminism, revolution, human rights, LGBT issues, masculinity, and war.

Cross-Listed as: HIST 070; WGSS 24.02

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:NW

MES 19.05 - Gender in Islam

Instructor: Ayubi

“Is Islam sexist?” “What does Islam really say about women?” This course seeks to dismantle the premises of these questions by asking who speaks for Islam, what makes something Islamic, and how are gender and gender roles constructed in Islamic texts and Muslim thought. We will make critical study of the constructions of gender, femininity, masculinity, sexuality, gender relations, marriage and divorce in classical and modern Islamic texts. In asking how Islamic notions of gender are constructed, we will examine both the roles religious texts have played in shaping Muslim life and how Muslim life in its cultural diversity affects readings of religious texts. We will read works of Muslim thought on gender relations in their historical contexts and in relation to one another. Through in-class discussions, critical reading exercises, and short essay assignments, students will strengthen their literacy on global gender issues, study religio-historical ideas on gender, analyze the role of texts in shaping gender in society, and vice versa.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:NW

MES 81.01 - Arab Theatre

Instructor: Morsi

This class is a survey of the main trends and themes in Arab theatre from the mid-19th century to contemporary times. Students will be introduced to some of the main playwrights, actors and directors who helped define the art in the Arab world over the last century and a half.

Cross-Listed as: COLT 35.07 THEA 10.45

Degree Requirement Attributes: Dist:ART; WCult:NW

MES 81.02 - The New Arabic Novel

Instructor: Smolin

In this seminar, we will read Arabic novels in translation published across the Middle East during the past decade. How have the authors of these texts grappled with recent transformations in post-9/11 Arab society, such as globalization, terrorism, gender relations, and war? How have old themes—including the clash between tradition and modernity, East-West relations, and the Israeli-Palestinian conflict—become renewed for the contemporary era? We will examine exciting recent novels from Egypt, Saudi Arabia, Iraq, Libya, Lebanon, and Palestine to answer these questions. This course has no prerequisites but familiarity with the history of the Middle East in the twentieth century and trends in contemporary Arabic prose during this period would be helpful.

Degree Requirement Attributes: Dist:LIT; WCult:NW

MES 81.03 - Images of the West in the Arabic Novel

Instructor: Fishere

This course analyzes the ways Arabic novelists have constructed the image the “West” and the socio-political function this image has served in Arab society. We will read ten representative works by writers from Egypt, Lebanon, Algeria, Sudan, Palestine, and Iraq. Written over more than half a century, these novels present different—sometimes contradictory—perspectives on the “West.” Some of these novels are focused primarily on East-West relations while others represent the West in the context of large-scale sociocultural transformations in the Middle East and broader global political dynamics. To anchor our discussion of the topic and to broaden our knowledge of the ways Arabic literature has depicted the “West,” we will also read a variety of critical texts that explore the image of the West in the Arab world.

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

MES 81.04 - Curses, Compliments, and Secrets: Verbal Behavior in the Middle East

Instructor: Glinert

This course in anthropology and ethnography of language illustrates how Middle Eastern cultures employ language to construct and reflect values, identities and institutions, to create relationships and project personal status, and to perform actions (such as ending a phone call, apologizing, paying compliments and negotiating business deals). Particular attention will be paid to the language of health and healing. No prior knowledge of a particular language or culture is assumed. NOT OPEN TO STUDENTS WHO HAVE RECEIVED CREDIT FOR MES 16.03

Cross-Listed as: LING 11.03

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
Lang:LRP; WCult:CI

MES 85 - Independent Research

Instructor: Smolin

Under the direction of members of the faculty, subject to faculty availability. Students should consult with a member of the faculty in the term preceding the term in which the independent work is to be done. A research proposal must be submitted to the Department for approval.

Offered: Fall, Spring, Summer, Winter.

MES 88 - Senior Honors Thesis part 1

Instructor: Smolin

Students are awarded one course credit for successful completion of this course upon completion of MES 089. Students register for MES 089 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for MES 089 the subsequent term to complete their coursework. A final grade will replace the "ON" upon completion of MES 089.

Offered: Winter.

MES 89 - Senior Honors Thesis part 2

Instructor: Smolin

Students are awarded one course credit for successful completion of this course. Students who have registered for MES 088 register for MES 089 to complete the coursework. A final grade will replace the "ON" for MES 088 upon completion of this course for a total of 2 credits for MES 088 and MES 089.

Offered: Spring.

Music - Undergraduate

Chair: William Cheng

Professors M. A. Casey, W. Cheng, K. Dong, T. C. Levin, S. Pinkas, S. R. Swayne; **Associate Professor** R. A. Beaudoin, A. R. Fure (Director, Graduate Program in Sonic Practice); **Assistant Professors** C. Alvarez, A. Martin; **Senior Lecturers** R. L. Braude, L. G. Burkot, M. L. Cassidy (Assistant Conductor, Dartmouth Symphony Orchestra), J. P. Ennis, A. R. Garapic, J. Halloran, E. C. Mellinger (Assistant Conductor for Choral Ensembles), R. Moseley, S. W. Nam, J. E. Polk, M. E. Zsoldos; **Lecturers** N. M. Browne, T. H. Bynum (Director, Coast Jazz Orchestra at Dartmouth), P. Chin, F. Ciabatti (Director of Orchestral and Choral Programs), S. Felix, S. Fulginiti, A.R. Gray, O. Guey, P. J. Kennelly, A. J. Lakota, B. E. Messier (Director of Bands), S. Rogers, S. Sanchez, B.

Selby, T. D. Sessions, S. Sinha, H. Sinno, J. Taitt, B. Younge.

To view Music Undergraduate courses, click here (p. 600).

To view Music Graduate requirements, click here. (p. 994)

To view Music Graduate courses, click here. (p. 995)

Music Major

The Music major functions on an open course count model. Students craft a curricular plan, in close consultation with a faculty advisor, that draws on three key areas of study: 1) critical engagement with the roots and lineages of multiple music traditions, 2) creative practice with the tools and techniques that structure sounds into forms, and 3) performance via individual instruction and/or ensemble participation. This framework centers student agency, maximizes curricular flexibility, and offers major and minor pathways as vibrant and varied as the students we serve.

Requirements:

Students must take **MUS 99: Proseminar** (which fulfills the Culminating Experience*) **plus ten additional music courses** that cover critical engagement, creative practice, and performance.

*If a student is unable to take MUS 99 due to an unavoidable scheduling conflict (e.g., they are away on an off-campus program during the term MUS 99 is offered), the student must fulfill their Culminating Experience by enrolling in MUS 86: Other Special Studies during a term in their senior year. To complete MUS 86, the student will choose an existing upper-level music course in consultation with (and with approval of) both the department chair and the course instructor. The student will attend all meetings for this course and complete all its assignments; the student may also be asked, at the instructor's discretion, to complete modified or additional assignments to raise the coursework to the level of a Culminating Experience/MUS 99.

Modified Major

Requirements:

If Music is the primary department, students must take MUS 99 (Proseminar) plus seven additional music courses that cover critical engagement, creative practice, and performance. If Music is the secondary department,

students must take four music courses that cover critical engagement, creative practice, and performance. Modified majors must be approved by the Chair.

Music Minor

Requirements:

Students must take seven music courses that cover critical engagement, creative practice, and performance.

Honors Program

The Honors thesis requirement (MUS 88) may be fulfilled by any of the following:

1. A written Honors thesis
2. An Honors recital and supporting paper
3. An Honors creative project and supporting paper

A written Honors thesis should demonstrate a high standard of artistic, analytical, and/or research skill. A paper submitted in support of an Honors performance or an Honors creative project should be regarded as the equivalent of a term paper or artistic statement, with an analytical, historical, narrative, or interpretive focus related to the project. The student is responsible for obtaining the department's Honors guidelines, seeking advisors, and meeting all criteria and deadlines.

To qualify for Honors, the student must have at least a 3.3 grade average in music, in addition to the college G.P.A. requirement.

Foreign Study Program

The Music Foreign Study Program (FSP) provides a unique opportunity for students to combine the study of music abroad with an intensive experience around music performance. Students will be selected by the FSP leader based on an application process. The program is designed to encourage and broaden each student's interest in the study and creation of music.

Example Major Concentration Pathways

The course plans below approach critical engagement, creative practice, and performance from various hypothetical vantage points. They act not as roadmaps but as idea generators conveying the flexible rigor of the music major.

A jazz musician, for example, might pursue:

- MUS 5 (p. 600) – Jazz: Black Creative Music and American Culture

- MUS 18.02 (p. 603) – Hip-Hop in the United States
- MUS 21.01 (p. 603) – Creative Music Theory I
- MUS 32 (p. 605) – Improvisation
- MUS 35 (p. 606) – The Jazz Language
- MUS 38 (p. 607) – Noise: Exploring Liberation in Sound
- MUS 45.04 (p. 607) – Music and Social Justice
- MUS 50.31 (p. 609), 50.32, 50.33 – Jazz Improvisation
- MUS 58.01 (p. 617), 58.02, 58.03 – Percussion Individual Instruction
- MUS 59.11 (p. 617), 59.12, 59.13 – Coast Jazz Orchestra
- MUS 99 (p. 620) Proseminar

A DJ might pursue:

- MUS 3.02 (p. 600) – American Music: Covers, Theft, and Musical Borrowing
- MUS 16.02 (p. 602) – Music and Media in Everyday Life
- MUS 18.01 (p. 603) – Pop Music: Past, Present, Future
- MUS 25 (p. 604) – Sonic Arts I: Machine Music
- MUS 26 (p. 604) – Sonic Arts II: Sound Is Alive
- MUS 28 (p. 605) – Sonic Space and Form
- MUS 35 (p. 606) – The Jazz Language
- MUS 36 (p. 606) – Songwriting I
- MUS 46 (p. 608) – Video Games and the Meaning of Life
- MUS 52.01 (p. 610) Conducting and Artistic Direction
- MUS 99 (p. 620) – Proseminar

A classical instrumentalist might pursue:

- MUS 11 (p. 601) – Introduction to Opera
- MUS 21.01 (p. 603) – Creative Music Theory I
- MUS 22 (p. 604) – Creative Music Theory II
- MUS 23 (p. 604) – Timbre and Form
- MUS 32 (p. 605) – Improvisation
- MUS 42 (p. 607) – Early Classical Music (From Plato to Mozart)
- MUS 43 (p. 607) – Modern Classical Music (From Beethoven to Now)
- MUS 45.03 (p. 607) – The Music of Central Asia

- MUS 54.11 (p. 612), 54.12, 54.13 – Flute Individual Instruction
- MUS 59.61 (p. 618), 59.62, 59.63 – Dartmouth College Wind Ensemble
- MUS 99 (p. 620) – Proseminar

A singer/songwriter might pursue:

- MUS 2 (p. 600) – The Music of Today
- MUS 27.01 (p. 605) – Emerging Musical Theater
- MUS 28 (p. 605) – Sonic Space and Form
- MUS 30.02 (p. 605) – Film Scoring
- MUS 35 (p. 606) – The Jazz Language
- MUS 36 (p. 606) – Songwriting I
- MUS 37 (p. 606) – Songwriting II
- MUS 45.05 (p. 608) – Polyphony
- MUS 56.11 (p. 614)/21 (p. 615), 56.12/22, 56.13/23 – Guitar Individual Instruction
- MUS 57.11 (p. 616), 57.12, 57.13 – Voice Individual Instruction
- MUS 99 (p. 620) – Proseminar

A technologist/sound engineer might pursue:

- MUS 1 (p. 600) – Beginning Music Theory
- MUS 8 (p. 601) – Programming for Interactive Audio-Visual Art
- MUS 14.01 (p. 602) – Music, Mind, Invention
- MUS 16.02 (p. 602) – Music and Media in Everyday Life
- MUS 25 (p. 604) – Sonic Arts I: Machine Music
- MUS 26 (p. 604) – Sonic Arts II: Sound is Alive
- MUS 28 (p. 605) – Sonic Space and Form
- MUS 30.02 (p. 605) – Film Scoring
- MUS 34.01 (p. 606) – Sound Art Practice
- MUS 59.21 (p. 618), 59.22, 59.23 – Dartmouth College Glee Club
- MUS 99 (p. 620) – Proseminar

A writer/scholar/journalist might pursue:

- MUS 18.02 (p. 603) – Hip-Hop in the United States
- MUS 20.01 (p. 603) – Melody and Rhythm

- MUS 25 (p. 604) – Sonic Arts I: Machine Music
- MUS 42 (p. 607) – Early Classical Music (From Plato to Mozart)
- MUS 43 (p. 607) – Modern Classical Music (From Beethoven to Now)
- MUS 45.13 (p. 608) – Global Sounds
- MUS 59.51 (p. 618), 59.52, 59.53 – Dartmouth Symphony Orchestra
- MUS 70 (p. 619) – (London FSP) – Perspectives in Music Performance
- MUS 71 (p. 619) – (London FSP) – The History of Music in England
- MUS 87 (p. 620) – (London FSP) – Special Studies in Music Abroad: Piano Individual Instruction
- MUS 99 (p. 620) – Proseminar

MUS - Music - Undergraduate Courses

To view Music Undergraduate requirements, click here (p. 597).

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MUS 1 - MUS 19

MUS 1 - Beginning Music Theory

Instructor: Zsoldos

A course intended for students with little or no knowledge of music theory. Among topics covered are musical notation, intervals, scales, rhythm and meter, and general musical terminology. Concepts will be directly related to music literature in class and through assignments. Students will have the opportunity to compose simple pieces and work on ear training.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART

MUS 2 - The Music of Today

Instructor: Dong

From Sonic Youth, They Might Be Giants, Battles, Peter Schickele/PDQ Bach, John Zorn, Philip Glass, Arvo Pärt, Ligeti, Xenakis, Tan Dun, Christian Wolff, to Indonesian Quran Reciter Maria Ulfah, this course investigates the sound and ideas of punk/alternative/experimental rock bands, the avant-garde Jazz phenomenon, comic music parody, American and European minimalism, experimentalism, complexity, and ethnic fusion in contemporary classical music.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 3.02 - American Music: Covers, Theft, and Musical Borrowing

Instructor: Beaudoin

Nearly every genre of American music is marked by its re-invention, adaptation, or outright theft of music from other cultures. We will study a wide cross-section of American music through the prism of musical borrowing. Our perspective includes songwriters, composers, and sound artists in rap, pop, rock, jazz, film, and the avant-garde. Readings on the aesthetics of cover songs, quotations, and plunderphonics will inform our engagement with American music and its sources.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 3.09 - Mestizaje: Music in Latin America

Instructor: Chin

This course will introduce and explore the music of Latin America from both historical and analytical perspectives. It will study the music of Latin America as the result of a complex process of constant merging and amalgamation of cultures, experiences, ideologies, and practices. Throughout this course, students will become familiar with popular music genres, autochthonous instruments, significant pieces and composers, cosmologies and ideologies reflected in various musics, and general aspects of the local cultures.

Cross-Listed as: LACS 35.15

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

MUS 5 - Jazz: Black Creative Music and American Culture

Instructor: Bynum

The music known as ‘jazz’ has been one of the most revolutionary and influential artistic movements of the past century. *Jazz: Black Creative Music and American Culture* will provide a basic historical overview of the music, with major themes including the relationship between composition and improvisation; the reinvention of traditional roles of performer, composer, bandleader, and collective ensemble; and the music’s connection to African-American history and the civil rights movement. Not open to students who have received credit for MUS 05.01, MUS 05.02, AAAS 39.01, or AAAS 39.02.

Cross-Listed as: AAAS 039

Degree Requirement Attributes: Dist:ART

MUS 7 - First-Year Seminar

Instructor: Moseley

Offered: Winter.

MUS 8 - Programming for Interactive Audio-Visual Arts

Instructor: Casey

This course presents topics related to interactive visual art generated on a computer. Although it briefly covers computer-generated media art, the course focuses on the programming skills required for creating interactive works. Rather than using commercial software, students write their own programs, using the Processing language, to create interactive visuals and compositions. The course introduces fundamental concepts of how to represent and manipulate color, two-dimensional shapes, images, motion, and video. Coursework includes short programming assignments to practice the concepts introduced during lectures and projects to explore visual compositions. The course assumes no prior knowledge of programming. This course is not open to students who have passed COSC 1 or ENGS 20 or who have received credit for one of these courses via the Advanced Placement exam or the local placement exam.

Cross-Listed as: COSC 002

Degree Requirement Attributes: Dist:TLA

MUS 9.01 - Introductory Guitar

Instructor: Ennis

This course is an introduction to the guitar for students with little to no formal training on the instrument. The goal is to establish a broad set of basic musical skills and effective practice techniques. Repertoire is drawn from diverse musical genres, including blues, Western classical music, American folk music, jazz, and funk. Assessment is based solely on the student's proficiency with skills studied. The course culminates with a public performance.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 9.02 - Creativity Through Percussion

Instructor: Garapic

An introduction to percussion and creativity for students with little to no formal training. Students explore global percussive traditions from regions in African, South America, Japan, and Indonesia alongside contemporary percussion. Through hands-on drumming, deep listening, and creative collaboration, students gain new insights into their imaginative and musical potential. Engaging with text scores and group improvisation, the class fosters a communal and exploratory approach to music, reflecting

the drum's historical role as a tool for communication and connection.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 11 - Introduction to Opera

Instructor: Swayne

The term 'opera' encompasses a vast range of music-dramatic forms and involves the extra-musical domains of literature, mythology, the visual arts, religion, philosophy, and social commentary. From its origins in late Renaissance Italy to the present, opera has been a most complex and compelling performing art, as well as a mirror of Western culture. This course will survey the development of opera, focusing on representative works by such composers as Monteverdi, Handel, Purcell, Mozart, Verdi, Wagner, Bizet, R. Strauss, Berg, and Britten. Special attention will be given to music as it relates to libretto and dramatic structure.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 12 - Intro to Music Technology

Instructor: Younge

This Introduction to Music Technology course provides a hands-on exploration of digital audio production, sound design, and recording techniques. Students will develop foundational skills in Ableton Live, learning to manipulate audio and MIDI, apply effects, and craft original compositions. Through practical exercises, they will gain an understanding of the physics of sound, synthesis, microphone techniques, and signal processing, while also experimenting with live performance tools and interactive media. Critical listening and analysis will sharpen their ear for production quality, and collaborative projects will encourage creative expression. By the end of the course, students will be equipped with the technical and artistic skills to confidently create, record, and manipulate sound in a digital environment.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 13 - Literature and Music

Instructor: Sanders

The affinities between literature and music have always held a special fascination for poets, writers, musicians, and critics. By studying the two arts as comparable media of expression, this course will test the legitimacy of interart parallels. An introduction to the major aspects, aesthetic implications, and interpretive methods comparing the two arts. Topics for lectures and discussion will include: musical structures as literary form; verbal music, word music, and program music; word-tone synthesis in the Lied; music and drama in opera; music in fiction; and the

writer as music critic. Music-related poetry and prose examples, complemented by musical illustrations and ranging from the German and English Romantics through the French symbolists and the Dadaists to contemporary writing, will be selected from texts by Goethe, Brentano, Hoffmann, DeQuincey, Poe, Baudelaire, Mallarmé, Proust, Thomas Mann, Joyce, Eliot, Huxley, Shaw, and Pound. No particular musical background or technical knowledge of music required.

Prerequisite: No particular musical background or technical knowledge of music required.

Cross-Listed as: COLT 60.01

Degree Requirement Attributes: Dist:INT or LIT; WCult:W

MUS 14.01 - Music, Mind, Invention

Instructor: Casey

This course explores how the brain represents, learns, and reacts to music, covering musical ability, preference, reward, emotion, and creativity. Drawing from new results in neuroscience, music cognition, and music informatics, topics include: neural codes for pitch, rhythm, timbre, structure, and style; measuring musical performance, listening, and imagination with EEG and fMRI; brain-computer interfaces for music; and music composition and performance using biofeedback.

Offered: Spring.

Degree Requirement Attributes: TAS

MUS 14.04 - Music and Healing in Cross-Cultural Perspective

This course explores from different disciplinary and cultural perspectives how music affects the body and the brain, and how culturally-rooted music therapies have leveraged the power of community in the service of socially inclusive health equity as a cultural practice. Case studies are drawn from a range of therapeutic practices that include sound and music as a therapeutic agent among Indigenous peoples in Siberia, healing rituals and sound yoga in India and Pakistan, the theory and practice of music therapy in China, and new technologies of sound and music-based healing that work across race, class, and gender to provide access to health and wellness. Guest presenters, including musicians and clinical practitioners, will participate in many class sessions.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 14.05 - Music and Artificial Intelligence

Instructor: Casey

This course explores artificial intelligence (AI) for creating and consuming music. Through weekly readings and exercises, students will create music and art with AI-based systems and develop the critical skills to evaluate the

outputs of creative AI. Starting with the history of algorithmic art and music, students will explore issues of digital music representation, generative music, computational creativity, and AI-based music production. The goal is to generate original works using algorithms, such as neural networks.

Cross-Listed as: COSC 89.29

Offered: Spring.

Degree Requirement Attributes: Dist:TAS; WCult:W

MUS 14.06 - Foundations of Sonic Practice: Embodiment, Listening, and Vibration

Instructor: Sinha

This course will focus on practices of embodiment, listening, and sensing vibration. Our own bodies and voices, individual and collective, will be our primary sites of research and learning. The sonic practices we will do together are rooted in non-western, primarily South Asian traditions and philosophies of the voice and body, which, with my guidance, we will bring into a contemporary, living, and experimental shared space of inquiry and possibility.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 16.01 - Genre: History of Visual Music

Instructor: Mack

This course introduces the history of visual music, the exploration of the relationship between music and abstract imagery. Students will investigate this subject from its predecessors to current day-tracing the constantly expanding practices of visual music through painting, cinema, performance, and installation-form intuitive sketch films to complex algorithmic works.

Cross-Listed as: FILM 41.11

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 16.02 - Music and Media in Everyday Life

Instructor: Cheng

This course lends an ear to the roles and power of musical media in the new millennium. Prominent themes include: new media's purported democratizing effects on the production, circulation, and consumption of sound; the changing roles, responsibilities, and relevance of musicians and media artists in the digital age; and the potential for musical and social media to redraw the boundaries human experience, ethics, memory, and identity at large.

Cross-Listed as: FILM 41.21

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 17.06 - The Language-Music Connection

Instructor: Levin, McPherson, Diabate

Language and music are universal components of human experience, so integral that they are often considered part of what defines us as humans. While we treat them as distinct phenomena, the overlap between the two is immense, structurally, neurologically, and culturally. Such connections have long been recognized, but recent research from diverse fields like linguistics, (ethno)musicology, cognitive psychology, anthropology, and neuroscience continues to reveal just how intertwined the two faculties are. Drawing on this body of research and our respective specialties, we explore the language-music connection from the basic ingredients (pitch, timbre, rhythm, syntax), to cultural expression, to evolution and origins. Running through the course is a hands-on case study of a West African xylophone tradition where language and music are so intimately related that they cannot be separated. Students will be taught by a master of the tradition, Mamadou Diabaté, to feel for themselves what it means to speak through an instrument.

Cross-Listed as: COCO 023 LING 11.13

Offered: Fall.

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

MUS 17.07 - Entrepreneurship and the Arts

Instructor: Messier

Presented in collaboration with the Magnuson Center for Entrepreneurship, this is a portfolio based course intended to apply entrepreneurial thinking to your liberal arts education at Dartmouth. Your idea, based on your own personal interests, experiences, and aspirations, will be developed through the application of entrepreneurial and business strategies scaffolded and presented by a curated series of guest-speakers including artists and educators from the Hopkins Center, Tuck faculty, and prominent alumni.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 18.01 - Pop Music: Past, Present, Future

Instructor: Cheng

This course explores the developments, meanings, and performances of pop music *across* Western art traditions. What was the pervasive “Gangnam Style” of Renaissance Europe? Was Joseph Haydn the grandfather of the rickroll? And how did the equivalent of “Single Ladies” go viral in the 1920s United States? Tackling these questions seriously enables students to understand pop’s broader historical terrain, and to engage consequently in debates

about artistic taste, accessibility, leisure, spreadability, appropriation, and innovation.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 18.02 - Hip-Hop in the United States

Instructor: Martin

This course is an introduction to hip-hop music and culture, intended to offer interdisciplinary perspectives on what is one of the most popular genres in the United States. From its humble origins in New York to now, hip-hop and rap music have changed the sonic landscape of the US and the world. We will examine rap music and hip-hop culture as artistic and sociological phenomena with emphasis on historical, cultural, economic and political contexts. Discussions will include the coexistence of various hip-hop styles, their appropriation by the music industry, and controversies resulting from the exploitation of hip-hop music and culture as a commodity for national and global consumption.

Cross-Listed as: AAAS 39.06

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:CI

MUS 18.03 - Verzuz: A History of Black Popular Music

Instructor: Martin

During the Covid-19 pandemic, superproducers Swizz Beatz and Timbaland created “Verzuz,” an event that matches artists with their contemporaries as they trade songs back and forth for nostalgia, competition, and celebration. In this class, we will use Verzuz battles to study Black popular music beginning in the mid 20th century. Drawing on music and materials pertaining to broader social and cultural contexts, we will analyze Black popular music from a sonic and cultural perspective.

Cross-Listed as: AAAS 39.07

Degree Requirement Attributes: Dist:ART; WCult:CI

MUS 20 - MUS 39**MUS 20.01 - Melody and Rhythm**

Instructor: Moseley

Explores the art of organizing musical thoughts in time. Drawing from music of five continents and using class performance (singing, body percussion, playing instruments) as a primary vehicle, this course unlocks the structures and strategies employed by effective melodies and rhythms. Students will compose their own music, develop their skills in music analysis, and engage critically with literature on music cognition. Incorporates work on musicianship.

May not be taken by students who received credit for MUS 21 prior to academic year 2025–2026.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 21.01 - Creative Music Theory I

Instructor: Moseley

Explores ways to make, and think creatively about, music built on diatonic and pulsed foundations. Prior knowledge of music theory fundamentals is recommended but all concepts are defined from the ground up. A varied repertoire of music is studied. Topics include staff notation, key, mode, interval, phrase rhythm, form, triads and seventh chords, chord labels, arranging, harmonic syntax including secondary dominants, and style considerations. Incorporates work on musicianship.

May not be taken by students who received credit for MUS 20 prior to academic year 2025–2026.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

MUS 22 - Creative Music Theory II

Instructor: Moseley

Builds expertise in harmony and engages with two creative problems: how to apply tonal principles adventurously in classical textures and forms, and how to break or adapt tonal principles for 20th- and 21st-century styles. Topics include chordal syntax, texture, voice leading, small forms, piano writing, compositional rhetoric, and schemas in two through five parts. Students will compose original music modeled on historical styles while advancing their proficiency in written harmony, score analysis, keyboard performance, and aural skills. Incorporates work on musicianship.

Prerequisite: Creative Music Theory I (MUS 21.01 as of Fall 2025, previously MUS 20) or instructor approval

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 23 - Timbre and Form

Instructor: Moseley

An exploration of instrumentation and principles of musical form in Western music. Through weekly analysis and scoring exercises, students learn to read scores, understand musical structure, and write for combinations of instruments with attention to timbre, range, performance techniques, and orchestral idioms. Assignments include arrangements, for small and large ensemble, and formal analyses of several musical works whose aim is to show how composers shape melody, harmony and timbre to create large-scale musical structures.

Prerequisite: MUS 21.01 or permission of the instructor

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 24.01 - Black Sound Studies

Instructor: Martin

This upper-level reading and writing intensive seminar explores the field of Black sound studies. We will explore Black music, sound technologies, performance styles, aesthetics, and sonic epistemologies, all the while asking what might Black sound studies be and why. Each week, we will engage a text and an album together, moving through the sound sources of both pieces to generate moments of connection and silence between the two.

Cross-Listed as: AAAS 39.08

Degree Requirement Attributes: Dist:ART; WCult:CI

MUS 25 - Sonic Arts I: Machine Music

Instructor: Fure

This course explores the impact of music technology on a century of sonic innovators. From room-sized synthesizers to backpack drum machines, from military vocoders to turntable science, we track how electronic tools have scrambled cultural hierarchies on their path from state-funded radio stations to present-day microchips. Both sites of radical Black resistance and tools of a Eurocentric elite, electronic instruments have shaped auditory cultures in myriad, divergent ways. Tracing these threads, we'll touch on the birth of Hip-Hop, Italian Futurists, Afrofuturism, Musique Concrète, American minimalism, Detroit Techno, and much more.

Class sessions move from theory to practice, merging group discussions of repertoire and readings with hands-on sonic experimentation in *Audacity* and *Ableton Live*. Students are lent a home studio kit (with an audio interface, midi keyboard, microphone, and headphones) to compose three sonic art projects throughout the term. Weekly X-hour meetings foster studio-based ear-training skills. Music 25 aims to empower the sonic intelligence in everyone. No previous musical training is required.

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

MUS 26 - Sonic Arts II: Sound is Alive

Instructor: Fure

Mus 26 is an upper-level sonic arts studio course. Students will expand their technical and creative capacity with Ableton Live and be introduced to software tools for sound synthesis and generative music (Max/MSP, Spear). Though technically focused, the goals of this course are creative in nature: to broaden each student's sonic palette through increased facility with software tools; to stretch

each student's aesthetic imagination through exposure to repertoire and invited artists; and to strengthen each student's creative work habits through weekly course projects and crits.

Prerequisite: Mus 25 or permission of the instructor

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 27.01 - Musical Theater Writing

Instructor: Alvarez

A musical tells a story with words and music. Beyond those basic parameters, any limitations around what a musical can and cannot be are up for debate. This multi-disciplinary class is open to composers, lyricists, songwriters, playwrights, directors, actors, singers, poets and musicians of any background. The objective is to investigate music theater by making it ourselves. In addition to looking at the past present and future of American musical theater we will engage a broad exploration musical storytelling, across many aesthetic sensibilities and time periods. The class requires weekly creative output in addition to reading and listening outside of class. Students must be willing to work across the boundaries of their own disciplines to generate lyrics, songs and scenes. The class will establish a generous inter-disciplinary working environment which values creative risks, collaboration and inventiveness.

Cross-Listed as: THEA 10.28

Degree Requirement Attributes: Dist:ART

MUS 28 - Sonic Space and Form

Instructor: Nam

An exploration of mixing, shaping, and controlling sound and form in notated, produced, recorded, and live audio. Through weekly analysis and production exercises, students learn to read and manipulate mixes, filters, phase, convolution, and more advanced spectral techniques to apply these principles to musical structure, and write for combinations of sounds with attention to timbre, range, spatialization/imaging, and production idioms. Assignments include three "orchestration" assignments, ranging from elementary to complex—the aim of which is to show how composers and producers shape sound, density, and timbre to create vibrant sonic forms.

Prerequisite: MUS 25 or permission of the instructor

Offered: Winter.

Degree Requirement Attributes: ART

MUS 30.01 - Composition Seminar

Instructor: Chin

This course is for students seeking to pursue compositional studies of any genre, style, or type of music at any level (basic, intermediate, or advanced levels). Students will engage in extended creative projects as they receive intensive private instruction and participate in composition seminars. Projects may be undertaken in any musical domain that suits the student's creative interest, including but not limited to: acoustic, avant-garde, culturally-grounded, experimental, folk, inter- or multi-media, jazz, popular, rock, and traditional. In-class analysis exercises will emphasize 20th and 21st century composers of the Western classical traditions. Additional work will include analysis of literature pertinent to the current session, and writing short compositions and essays on the aesthetic, creative, and technical issues at hand.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 30.02 - Film Scoring

Instructor: Dong

From music to image, this creative writing course explores the fundamental craftsmanship and aesthetic aspects of composing for film and media. We investigate and analyze the intersection of film, music and sound over the term. The course is structured in five modules, in which students are assigned to create original music and sound for four films (an animation, documentary, feature and experimental film) with acoustic, or a combination of electronic and acoustic instruments. The final project will be read and recorded with a chamber ensemble of professional musicians.

Prerequisite: MUS 21.01; An interest in creating music and permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

MUS 30.03 - Writing for Musical Theatre

This course will cover the principles of musical theatre writing for book writers and lyricists from plot, storyline, character, character arcs, utilizing the anatomy of the American Musical structure. The course will be part lecture (Chalk Talk), part incubator (Lab) and will combine theory and practice and engage modern musical theatre writing collaborative methodologies towards the creation of an adaptation for a musical theatre outline/treatment.

Cross-Listed as: THEA 053

Degree Requirement Attributes: Dist:ART

MUS 32 - Improvisation

Instructor: Dong

“Improvisation” describes a wide variety of musical practices around the world through which musicians at least partially extemporize a musical performance. This course aims to develop skills in improvisatory music-making both through practical experimentation and exercises, and by analyzing approaches to improvisation in selected musical styles, traditions, and works, with a focus on pieces by contemporary composers and avant-garde free improvisation. For a final project, students will prepare and present a concert of improvised works.

Prerequisite: MUS 1 or exemption from MUS 1.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 34.01 - Sound Art Practice

The past half-century has witnessed a “sonic turn” in the visual arts. From installation to sonic sculptures, performance-based and participatory practices, artists have increasingly explored sound as a cultural, political, and corporeal phenomenon. This course is a studio introduction to the development of sound art as a social, sculptural, and environmental medium. Exploring repertoire at the nexus of experimental music, sculpture, installation, architecture and relational art, students will develop conceptual tools and practical skills that enable independent intermedial work. Collaborative projects across diverse skill sets will be encouraged, and those with backgrounds in music, architecture, art, engineering, science, CS, dance and theater are encouraged to apply. Not open to students who have received credit for MUS 034.

Degree Requirement Attributes: Dist:TAS; WCult:W

MUS 34.02 - Autonomous Musical Bodies

Can we build our way out of anthropocentrism as artists? In this course, we will explore musical bodies—human and otherwise—and their potential for autonomy. Through analysis of instruments as actants and a focus on corporeal vulnerability, we will examine how design can challenge distinctions between composer, performer, human, non-human, musical, and non-musical. Collaboratively, we will brainstorm ways to create instruments and sonic objects using Arduino, sensors, and motors that reimagine these relationships.

Degree Requirement Attributes: Dist:ART

MUS 35 - The Jazz Language

Instructor: Zsoldos

This course will present the essential elements of the “jazz vocabulary” to instrumentalists and vocalists. The language of jazz consists of the common melodic phrases, rhythms, harmonies, song forms and timbres that are employed by jazz musicians in jazz compositions and improvisations. Students will learn to use this language by applying it to a variety of compositions from the standard jazz repertoire

including Blues, 16 measure forms, AABA and ABAC song forms as well as non-traditional and freer forms. Time in and out of class will be a balance of listening to and studying jazz recordings and playing jazz compositions with other members of the class. Watching jazz videos, practicing ear training, transcribing and analyzing melodies and solos as well as playing songs, solo transcriptions and jazz exercises. In-class rehearsals, individual practice outside of class and working through the process of preparation for a final performance will be the primary focus of this course. The development of each student's creativity will be an integral part of the work in this class.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 36 - Songwriting 1

Instructor: Sinno

The practice of animating language with music shows up in nearly every culture in the world. Throughout time, songs have been a medium for emotion, story, survival, cultural memory, spiritual practice, celebration, mourning, commerce and more. In this course students will explore the technical, sonic, formal, poetic and metaphysical dimensions of songs through a rigorous weekly practice of songwriting, listening, sharing and critique. We will look broadly at songwriting techniques from many genres and traditions, and we will acquire powerful tools for unlocking and understanding the musicality that exists in language, and the meaning that can unfold from harmonic, melodic and sonic gestures. This course is open to students with any level of musical training or ability, but comfort with singing in front of others is recommended. Not open to students who have received credit for MUS 031.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

MUS 37 - Songwriting 2: Making the Album

Instructor: Sinno

This course will focus on the process of composing and recording a collection of original songs. We will look at the emergence of the “album” as relates to the evolution of recording technologies and the craft of songwriting while each student will hone in on their own compositional voice. Over the course of the term students will explore albums across multiple platforms, time periods and genres, while composing and recording their own collection of original songs. We will also study recording fundamentals including mic placement, tracking, editing, mixing, equalization, compression, reverb and delay. The final project of this course will be a three to five song EP created by each student as a solo project or collaboration. The course is open to music makers of all genres and aesthetic sensibilities.

Prerequisite: MUS 25 or MUS 36 or permission of the instructor. Previous experience in a Digital Audio Workstation (DAW) such as Ableton, ProTools or Logic is necessary for this course.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

MUS 38 - Noise: Exploring Liberation in Sound

Instructor: Sinno

Music, as the organization of sound, is a borderless practice that expands across boundaries of discipline, culture, aesthetic category and social hierarchy. How can we enter into a sonic practice with that cosmic lens? Our musical educations have given us well-lit lanes for music making, but the objective of this course is to run our musical thinking off the road. Through weekly creative provocations we will venture into the wilderness of our most urgent spiritual, political, philosophical and ontological concerns. Through an engagement with critical theory, listening, embodied vocal work, social and creative practice, this course will approach music making in opposition to discipline. We will examine the musical (and non-musical) systems in which we participate, and seek to devise a co-created liberatory space for our musical impulses. This course is open to music makers and thinkers of all backgrounds and skill levels, regardless of musical training.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

MUS 39 - A Critical Inquiry of Sound: Experimental Ethnographic Field Methods

Instructor: Lai

This course critically inquires methodological challenges and theoretical concerns that confront the ethnographer of sound during ethnomusicological/anthropological fieldwork. How can we approach writing about our ethnographic project without silencing the voices of those who should be heard? What institutional infrastructures do we face in designing our ethnographic projects? What possibilities, moreover, do recent developments in sensory and experimental ethnography open for us? A set of readings will suggest some practical answers to these questions.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

MUS 40 - MUS 49

MUS 41.01 - Debussy the Innovator

Instructor: Beaudoin

Debussy's music acted as a fulcrum between the 19th and 20th centuries and remains an active influence on musicians today. This course investigates the composer's innovative approach to harmony, color, rhythm, and form. Via analytic and creative projects, we connect Debussy's instrumental and vocal music to concurrent movements in literature, painting, and politics. We encounter the composer as performer, investigating his 1913 recordings on the Welte-Mignon reproducing piano. Reading primary sources sheds light on his personal life and alter-identity as Monsieur Croche. Across the term, we gauge Debussy's profound influence on modernism, film scoring, jazz, and popular music.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 42 - Early Classical Music (From Plato to Mozart)

Instructor: Beaudoin

This course introduces the composers and repertoires of Western classical music from ancient civilizations to ca. 1800. Our study emphasizes the development of musical instruments, the origins of written notation, and the constant search for new ways to organize sound. Examining numerous instrumental and vocal works, we will reflect on critical issues of history, virtuosity, class, gender, religion, censorship, and humor.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 43 - Modern Classical Music (From Beethoven to Now)

Instructor: Beaudoin

This course introduces the composers and repertoires of Western classical music since 1800. Our study spans the monumentalities of Romanticism, the upheavals of Modernism, and the innovations, digital technologies, and multiplicities of today. Examining numerous instrumental and vocal works, we will consider how compositional, societal, and economic change has destabilized the very definability of classical music, leading to its vibrant and variegated present.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 45.03 - The Music of Central Asia

Instructor: Levin

The course will focus on music in Central Eurasia—the core region of the historical Silk Road—and on musical connections between Central Asia and regions to which it has been historically linked by trade and cultural exchange. Course work includes reading and critical writing as well as listening and viewing assignments. No prerequisite.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 45.04 - Music and Social Justice

Instructor: Cheng

This course asks what we can do for music and what music can do for the world. Our research and discussions lead us not simply to concrete examples of music functioning as an agent of change, but furthermore to contested notions of what it even means (and takes) to claim that something—society, art, people, culture, values—has undergone notable transformation. How do we think and talk about change via discourses of reform, revolution, rehabilitation, activism, innovation, progress, and productivity? What are some distinguishing features of music and sound that might enable them to serve as flashpoints or vehicles for change? And how might you—in this class and beyond—engage with music and its technologies to fulfill causes most meaningful to you?

Cross-Listed as: AAAS 39.09

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:CI

MUS 45.05 - Polyphony

Instructor: Levin

Drawing from the world's rich and diverse musical traditions, each MUS 45 course focuses on music and musical life in a particular geographic region or on a specific topic addressed from a cross-cultural and/or interdisciplinary perspective. In this course, the focus is on polyphony--music composed or improvised by combining two or more distinct melodic lines. Examples will be drawn from contemporary and historical musical traditions of West Africa, Sardinia, Georgia, Tuva, and Western Europe. No prior musical experience is required.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 45.06 - Music from the Lands of the Silk Road

Instructor: Levin

The Silk Road, the trans-Eurasian network of trade routes that stretched from Europe to Japan, and from South Siberia to South Asia, was not only a conduit for trade in luxury goods, but also for technological innovation and cultural exchange, including in the domain of music. This course addresses selected musical styles, genres, and repertoires from the lands of the Silk Road and the way they have been shaped by contact and interaction with other cultures. Examples are drawn from contemporary and historical musical traditions of the Middle East, Central Asia, the Caucasus, India, Tuva and Mongolia, China, Korea, and Japan. Where possible, guest artists are invited to offer live musical demonstrations. No prior musical experience is required.

Cross-Listed as: ASCL 70.10

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 45.12 - Advanced Studies in Jazz History: A Century of Jazz at Dartmouth

Instructor: Bynum

Advanced Studies in Jazz History offers students the opportunity for in-depth research into specific topics pertaining to Black Creative Music. This term we will be turning our gaze inward, exploring Dartmouth's own history with jazz and other forms of Black music over the past century. Through a combination of primary source research, interviews and oral history, and creative storytelling and writing, the goal of this course is to generate lasting, honest, insightful, and engaging documentation of the complicated history of jazz at Dartmouth.

Cross-Listed as: AAAS 39.03

Degree Requirement Attributes: Dist:ART

MUS 45.13 - Global Sounds

Instructor: Levin

Global Sounds explores world music, focusing each term on selected regions, countries, and cultures, and on how music has moved between East and West, past and present, and "roots" and popular styles. Course work includes critical listening/viewing, reading, and short weekly writing assignments as well as a final creative project or research paper. Where possible, guest artists are invited to offer live musical demonstrations. No prior musical experience is required. Not open to students who have received credit for MUS 004.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

MUS 45.14 - American Music: Roots and Revolutionaries

Instructor: Levin

This course explores diverse forms of American "roots" music—from country blues and Appalachian stringbands to ballads, shape-note singing, and the expressive culture of Arctic indigenous peoples—with the aim of understanding these musical practices on their own terms as well as their profound influence on American musical revolutionaries of the 20th and 21st centuries. Live music is central to the course, and attendance at musical events outside of regular class meetings is expected. Not open to students who have received credit for MUS 03.03.

Offered: Summer.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 46 - Video Games and the Meaning of Life

Instructor: Cheng

Video Games and the Meaning of Life is an interdisciplinary course that explores the modern human condition through the stories, designs, and soundscapes of digital games—from the perils of obedience (Hannah Arendt and *The Stanley Parable*) to the metaphors of illness (Susan Sontag and *That Dragon, Cancer*), from the deathless dreams of pacifism (*Undertale*) to the transnational rise of today's billion-dollar e-Sports industry (*League of Legends*). All students are welcome; no gaming or musical experience needed.

Cross-Listed as: COLT 40.07 FILM 50.04

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:CI

MUS 50 - MUS 52

MUS 50 - Performance Laboratories

Performance Laboratories provide weekly coaching and instruction in diverse forms of music making and are open by audition to all Dartmouth students. Course work centers on musical readings and informal performance of selected repertoire chosen both for its intrinsic interest and for its relevance to the contents of course syllabi within the Department of Music. Performance laboratories may be taken for credit (three terms equals one credit) or on a not-for-credit basis. Subject to space availability, students may enroll in different laboratories during different terms. Terms of enrollment need not be consecutive.

Degree Requirement Attributes: ART

MUS 50.11 - Chamber Music I

Instructor: Cassidy

Depending on enrollment and distribution of instruments, this laboratory may be broken down into several configurations, e.g., quartet, piano quintet, wind octet, string trio, etc. Repertoire focuses on chamber music from the eighteenth century through the first half of the twentieth.

Offered: Fall, Spring, Summer, Winter.

MUS 50.12 - Chamber Music II

Instructor: Cassidy

Depending on enrollment and distribution of instruments, this laboratory may be broken down into several configurations, e.g., quartet, piano quintet, wind octet, string trio, etc. Repertoire focuses on chamber music from the eighteenth century through the first half of the twentieth.

Prerequisite: MUS 50.11

Offered: Fall, Spring, Summer, Winter.

MUS 50.13 - Chamber Music III

Instructor: Cassidy

Depending on enrollment and distribution of instruments, this laboratory may be broken down into several configurations, e.g., quartet, piano quintet, wind octet, string trio, etc. Repertoire focuses on chamber music from the eighteenth century through the first half of the twentieth.

Prerequisite: MUS 50.12

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 50.21 - Contemporary Music I

Instructor: Garapic

The contemporary music laboratory will read through and study works appropriate to the participants' skill level, and where possible, collaborate with Dartmouth's compositional community in informal performances of newly-composed works.

Offered: Fall, Spring, Winter.

MUS 50.22 - Contemporary Music II

Instructor: Garapic

The contemporary music laboratory will read through and study works appropriate to the participants' skill level, and where possible, collaborate with Dartmouth's compositional community in informal performances of newly-composed works.

Prerequisite: MUS 50.21

Offered: Fall, Spring, Winter.

MUS 50.23 - Contemporary Music III

Instructor: Garapic

The contemporary music laboratory will read through and study works appropriate to the participants' skill level, and where possible, collaborate with Dartmouth's compositional community in informal performances of newly-composed works.

Prerequisite: MUS 50.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 50.31 - Jazz Improvisation I

Instructor: Zsoldos

This course serves as a laboratory for students with some preparation in jazz to develop skills in composition, arranging, and performance. Ensemble configurations will be determined each term on the basis of enrollment.

Offered: Fall, Spring, Winter.

MUS 50.32 - Jazz Improvisation II

Instructor: Zsoldos

This course serves as a laboratory for students with some preparation in jazz to develop skills in composition, arranging, and performance. Ensemble configurations will be determined each term on the basis of enrollment.

Prerequisite: MUS 50.31

Offered: Fall, Spring, Winter.

MUS 50.33 - Jazz Improvisation III

Instructor: Zsoldos

This course serves as a laboratory for students with some preparation in jazz to develop skills in composition, arranging, and performance. Ensemble configurations will be determined each term on the basis of enrollment.

Prerequisite: MUS 50.32

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 52.01 - Conducting and Artistic Direction

Instructor: Ciabatti

This course provides a practical introduction and the theoretical underpinnings for the art of conducting and study of the musical score. At the center of this endeavor is the analysis of music through the lens of the conductor-scholar, which develops in the expression of music through gesture. Students will be required to attend weekly workshops in the art of conducting, as well as in the study and analysis of three major works of contrasting styles. The course culminates in a final conducting workshop with professional musicians.

Prerequisite: Two courses from MUS 21-23, and one course from MUS 6, 10, 11, or 40-44, or permission of the instructor

Degree Requirement Attributes: Dist:ART

MUS 52.02 - Applied Conducting

Instructor: Messier

This is a practical, movement based course. The conducting curriculum will focus on score study and physical movement, tested through conducting labs with live musicians. The conducting curriculum will be supplemented by readings, projects, and seminar-style discussions of musical entrepreneurship, music business, and music-making in the 21st century.

Prerequisite: MUS 21.01, or permission of the instructor.

Degree Requirement Attributes: Dist:ART

MUS 52.03 - The Art of Conducting: An Introduction to Choral and Orchestral Conducting

Instructor: Ciabatti

This course provides a practical introduction and the theoretical underpinnings for the art of conducting and study of the musical score. At the center of this endeavor is the analysis of music through the lens of the conductor-scholar, which develops in the expression of music through gesture. Students will be required to attend weekly workshops in the art of conducting, as well as in the study and analysis of three major works from the choral and orchestral repertoire. In this course, the students will have the opportunity to conduct Dartmouth's choral and orchestral ensembles (Glee Club, Handel Society, and Dartmouth Symphony Orchestra).

Prerequisite: MUS 21.01 or permission of the instructor.

Degree Requirement Attributes: Dist:ART

MUS 52.04 - The Modern Conductor: An Introduction to Wind and Chamber Conducting

Instructor: Messier

This is a practical, movement based course. The conducting curriculum will focus on score study and physical movement, tested through conducting labs, practicums, and exams with live musicians. Students will have the opportunity to conduct the Dartmouth College Wind Ensemble, the Hanover High School Band, and various chamber ensembles in rehearsal and/or performance.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

MUS 53 - MUS 69

Courses within the Individual Instruction Program (IIP: MUS 53–58) consist of three terms of weekly private instruction, for which the student receives one course credit. The following objectives may be addressed: improving sound production, technical facility, phrasing, and articulation; broadening repertory; advancing sight reading skills; gaining new understanding of music studied in the broader context of its history, its theoretical construction, and its socio-cultural dimensions. Students are encouraged to engage in critical self-awareness and to perform at least once per term.

- Prior to the initial term, prospective students contact and audition for the instructor and receive permission from the instructor to enroll for the course.
- Students enroll for each term of the three-term IIP courses during the normal course registration periods. At the end of the first and

second terms of enrollment, students receive the grade of "ON", indicating that the student is in the process of completing a three-term IIP course ("ON" grades remain on the transcript). Upon successful completion of the third term, students receive one course credit and a final grade.

- The course will count in the course load of the third term. Students will be reminded to monitor their course load accordingly. The course must be completed during consecutive terms in which the student is enrolled on campus, bearing in mind that IIP courses are not offered during summer term. It is expected that an IIP course sequence will be completed within two calendar years of the course's initiation. Exceptions are rare and require the instructor's approval.

Students will receive a "W" on their transcript if they drop an IIP course following the normal course withdrawal regulations for each term.

Students may take courses within the Individual Instruction Program more than once. To initiate a new three-course sequence, they must again receive instructor permission.

No more than four course credits from the following courses may be counted by any student toward the Dartmouth degree: MUS 050, MUS 053, MUS 054, MUS 055, MUS 056, MUS 057, MUS 058, MUS 059.

MUS 53.11 - Classical Piano Individual Instruction I

Instructor: Pinkas, Rogers

This is the first course in the Individual Instruction Program sequence for classical piano. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-53.12 Classical Piano Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 53.12 - Classical Piano Individual Instruction II

Instructor: Pinkas, Rogers

This is the second course in the Individual Instruction Program sequence for classical piano. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-53.13 Classical Piano Individual Instruction III.

Prerequisite: MUS 53.11

Offered: Fall, Spring, Winter.

MUS 53.13 - Classical Piano Individual Instruction III

Instructor: Pinkas, Rogers

This is the third and final course in the Individual Instruction Program sequence for classical piano. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 53.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 53.21 - Jazz Piano Individual Instruction I

Instructor: Taitt

This is the first course in the Individual Instruction Program sequence for jazz piano. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-53.22 Jazz Piano Individual Instruction II

Offered: Fall, Spring, Winter.

MUS 53.22 - Jazz Piano Individual Instruction II

Instructor: Taitt

This is the second course in the Individual Instruction Program sequence for jazz piano. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-53.23 Jazz Piano Individual Instruction III.

Prerequisite: MUS 53.21

Offered: Fall, Spring, Winter.

MUS 53.23 - Jazz Piano Individual Instruction III

Instructor: Taitt

This is the third and final course in the Individual Instruction Program sequence for jazz piano. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 53.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 53.31 - Organ Individual Instruction I

This is the first course in the Individual Instruction Program sequence for organ. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-53.32 Organ Individual Instruction II.

MUS 53.32 - Organ Individual Instruction II

This is the second course in the Individual Instruction Program sequence for organ. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-53.33 Organ Individual Instruction III.

Prerequisite: MUS 53.31

MUS 53.33 - Organ Individual Instruction III

This is the third and final course in the Individual Instruction Program sequence for organ. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 53.32

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 54.11 - Flute Individual Instruction I

Instructor: Braude

This is the first course in the Individual Instruction Program sequence for flute. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-54.12 Flute Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.12 - Flute Individual Instruction II

Instructor: Braude

This is the second course in the Individual Instruction Program sequence for flute. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.13 Flute Individual Instruction III.

Prerequisite: MUS 54.11

Offered: Fall, Spring, Winter.

MUS 54.13 - Flute Individual Instruction III

Instructor: Braude

This is the third and final course in the Individual Instruction Program sequence for flute. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 54.21 - Oboe Individual Instruction I

Instructor: Lakota

This is the first course in the Individual Instruction Program sequence for oboe. This course carries no credit and awards an Ongoing "ON" grade. After completing this

course, students register for the second course in the sequence, MUS-54.22 Oboe Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.22 - Oboe Individual Instruction II

Instructor: Lakota

This is the second course in the Individual Instruction Program sequence for oboe. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.23 Oboe Individual Instruction III.

Prerequisite: MUS 54.21

Offered: Fall, Spring, Winter.

MUS 54.23 - Oboe Individual Instruction III

Instructor: Lakota

This is the third and final course in the Individual Instruction Program sequence for oboe. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 54.31 - Clarinet Individual Instruction I

Instructor: Halloran

This is the first course in the Individual Instruction Program sequence for clarinet. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-54.32 Clarinet Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.32 - Clarinet Individual Instruction II

Instructor: Halloran

This is the second course in the Individual Instruction Program sequence for clarinet. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.33 Clarinet Individual Instruction III.

Prerequisite: MUS 54.31

Offered: Fall, Spring, Winter.

MUS 54.33 - Clarinet Individual Instruction III

Instructor: Halloran

This is the third and final course in the Individual Instruction Program sequence for clarinet. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.32

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 54.41 - Basson Individual Instruction I

Instructor: Polk

This is the first course in the Individual Instruction Program sequence for bassoon. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-54.42 Bassoon Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.42 - Basson Individual Instruction II

Instructor: Polk

This is the second course in the Individual Instruction Program sequence for bassoon. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.43 Bassoon Individual Instruction III.

Prerequisite: MUS 54.41

Offered: Fall, Spring, Winter.

MUS 54.43 - Basson Individual Instruction III

Instructor: Polk

This is the third and final course in the Individual Instruction Program sequence for bassoon. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.42

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 54.51 - Classical Saxophone Individual Instruction I

Instructor: Zsoldos

This is the first course in the Individual Instruction Program sequence for classical saxophone. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-54.52 Classical Saxophone Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.52 - Classical Saxophone Individual Instruction II

Instructor: Zsoldos

This is the second course in the Individual Instruction Program sequence for classical saxophone. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.53 Classical Saxophone Individual Instruction III.

Prerequisite: MUS 54.51

Offered: Fall, Spring, Winter.

MUS 54.53 - Classical Saxophone Individual Instruction III

Instructor: Zsoldos

This is the third and final course in the Individual Instruction Program sequence for classical saxophone. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.52

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 54.61 - Jazz Saxophone Individual Instruction I

Instructor: Zsoldos

This is the first course in the Individual Instruction Program sequence for jazz saxophone. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-54.62 Jazz Saxophone Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 54.62 - Jazz Saxophone Individual Instruction II

Instructor: Zsoldos

This is the second course in the Individual Instruction Program sequence for jazz saxophone. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-54.63 Jazz Saxophone Individual Instruction III.

Prerequisite: MUS 54.61

Offered: Fall, Spring, Winter.

MUS 54.63 - Jazz Saxophone Individual Instruction III

Instructor: Zsoldos

This is the third and final course in the Individual Instruction Program sequence for jazz saxophone. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 54.62

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 55.11 - Horn Individual Instruction I

Instructor: Kennelly

This is the first course in the Individual Instruction Program sequence for horn. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-55.12 Horn Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 55.12 - Horn Individual Instruction II

Instructor: Kennelly

This is the second course in the Individual Instruction Program sequence for horn. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-55.13 Horn Individual Instruction III.

Prerequisite: MUS 55.11

Offered: Fall, Spring, Winter.

MUS 55.13 - Horn Individual Instruction III

Instructor: Kennelly

This is the third and final course in the Individual Instruction Program sequence for horn. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 55.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 55.21 - Trumpet Individual Instruction I

Instructor: Felix

This is the first course in the Individual Instruction Program sequence for trumpet. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-55.22 Trumpet Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 55.22 - Trumpet Individual Instruction II

Instructor: Felix

This is the second course in the Individual Instruction Program sequence for trumpet. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-55.23 Trumpet Individual Instruction III.

Prerequisite: MUS 55.21

Offered: Fall, Spring, Winter.

MUS 55.23 - Trumpet Individual Instruction III

Instructor: Felix

This is the third and final course in the Individual Instruction Program sequence for trumpet. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 55.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 55.31 - Low Brass Individual Instruction I

Instructor: Sessions, Fulginiti

This is the first course in the Individual Instruction Program sequence for low brass. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-55.32 Low Brass Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 55.32 - Low Brass Individual Instruction II

Instructor: Sessions, Fulginiti

This is the second course in the Individual Instruction Program sequence for low brass. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-55.33 Low Brass Individual Instruction III.

Prerequisite: MUS 55.31

Offered: Fall, Spring, Winter.

MUS 55.33 - Low Brass Individual Instruction III

Instructor: Sessions, Fulginiti

This is the third and final course in the Individual Instruction Program sequence for low brass. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 55.32

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.11 - Classical Guitar Individual Instruction I

Instructor: Sanchez

This is the first course in the Individual Instruction Program sequence for classical guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.12 Classical Guitar Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.12 - Classical Guitar Individual Instruction II

Instructor: Sanchez

This is the second course in the Individual Instruction Program sequence for classical guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.13 Classical Guitar Individual Instruction III.

Prerequisite: MUS 56.11

Offered: Fall, Spring, Winter.

MUS 56.13 - Classical Guitar Individual Instruction III

Instructor: Sanchez

This is the third and final course in the Individual Instruction Program sequence for classical guitar. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.21 - Jazz and Popular Styles Guitar Individual Instruction I

Instructor: Ennis

This is the first course in the Individual Instruction Program sequence for jazz and popular styles guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.22 Jazz and Popular Styles Guitar Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.22 - Jazz and Popular Styles Guitar Individual Instruction II

Instructor: Ennis

This is the second course in the Individual Instruction Program sequence for jazz and popular styles guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.23 Jazz and Popular Styles Guitar Individual Instruction III.

Prerequisite: MUS 56.21

Offered: Fall, Spring, Winter.

MUS 56.23 - Jazz and Popular Styles Guitar Individual Instruction III

Instructor: Ennis

This is the third and final course in the Individual Instruction Program sequence for jazz and popular styles

guitar. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.31 - Harp Individual Instruction I

Instructor: Gray

This is the first course in the Individual Instruction Program sequence for harp. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.32 Harp Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.32 - Harp Individual Instruction II

Instructor: Gray

This is the second course in the Individual Instruction Program sequence for harp. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.33 Harp Individual Instruction III.

Prerequisite: MUS 56.31

Offered: Fall, Spring, Winter.

MUS 56.33 - Harp Individual Instruction III

Instructor: Gray

This is the third and final course in the Individual Instruction Program sequence for harp. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.32

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.41 - Violin Individual Instruction I

Instructor: Guey, Cassidy

This is the first course in the Individual Instruction Program sequence for violin. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.42 Violin Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.42 - Violin Individual Instruction II

Instructor: Guey, Cassidy

This is the second course in the Individual Instruction Program sequence for violin. This course carries no credit and awards an Ongoing "ON" grade. After completing this

course, students register for the final course in the sequence, MUS-56.43 Violin Individual Instruction III.

Prerequisite: MUS 56.41

Offered: Fall, Spring, Winter.

MUS 56.43 - Violin Individual Instruction III

Instructor: Guey, Cassidy

This is the third and final course in the Individual Instruction Program sequence for violin. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.42

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.51 - Viola Individual Instruction I

Instructor: Cassidy

This is the first course in the Individual Instruction Program sequence for viola. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.52 Viola Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.52 - Viola Individual Instruction II

Instructor: Cassidy

This is the second course in the Individual Instruction Program sequence for viola. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.53 Viola Individual Instruction III.

Prerequisite: MUS 56.51

Offered: Fall, Spring, Winter.

MUS 56.53 - Viola Individual Instruction III

Instructor: Cassidy

This is the third and final course in the Individual Instruction Program sequence for viola. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.52

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.61 - Cello Individual Instruction I

Instructor: Selby

This is the first course in the Individual Instruction Program sequence for cello. This course carries no credit and awards an Ongoing "ON" grade. After completing this

course, students register for the second course in the sequence, MUS-56.62 Cello Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 56.62 - Cello Individual Instruction II

Instructor: Selby

This is the second course in the Individual Instruction Program sequence for cello. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.63 Cello Individual Instruction III.

Prerequisite: MUS 56.61

Offered: Fall, Spring, Winter.

MUS 56.63 - Cello Individual Instruction III

Instructor: Selby

This is the third and final course in the Individual Instruction Program sequence for cello. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.62

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 56.71 - Double Bass and Bass Guitar Individual Instruction I

Instructor: Browne

This is the first course in the Individual Instruction Program sequence for double bass and bass guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-56.72 Double Bass and Bass Guitar II.

Offered: Fall, Spring, Winter.

MUS 56.72 - Double Bass and Bass Guitar Individual Instruction II

Instructor: Browne

This is the second course in the Individual Instruction Program sequence for double bass and bass guitar. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-56.73 Double Bass and Bass Guitar III.

Prerequisite: MUS 56.71

Offered: Fall, Spring, Winter.

MUS 56.73 - Double Bass and Bass Guitar Individual Instruction III

Instructor: Browne

This is the third and final course in the Individual Instruction Program sequence for double bass and bass guitar. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 56.72

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 57.11 - Voice Individual Instruction I

Instructor: Burkot, Mellinger

This is the first course in the Individual Instruction Program sequence for voice. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the second course in the sequence, MUS-57.12 Voice Individual Instruction II.

Offered: Fall, Spring, Winter.

MUS 57.12 - Voice Individual Instruction II

Instructor: Burkot, Mellinger

This is the second course in the Individual Instruction Program sequence for voice. This course carries no credit and awards an Ongoing "ON" grade. After completing this course, students register for the final course in the sequence, MUS-57.13 Voice Individual Instruction III.

Prerequisite: MUS 57.11

Offered: Fall, Spring, Winter.

MUS 57.13 - Voice Individual Instruction III

Instructor: Burkot, Mellinger

This is the third and final course in the Individual Instruction Program sequence for voice. This course awards one (1) credit and a final letter grade.

Prerequisite: MUS 57.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 58.01 - Percussion Individual Instruction

Instructor: Garapic

Offered: Fall, Spring, Winter.

MUS 58.02 - Percussion Individual Instruction

Instructor: Garapic

Prerequisite: MUS 58.01

Offered: Fall, Spring, Winter.

MUS 58.03 - Percussion Individual Instruction

Instructor: Garapic

Prerequisite: MUS 58.02

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 58.11 - Sound Engineering I

Instructor: Nam

Students seeking advanced sound-engineering learning may enroll in this three-term course. Through weekly meetings, students will explore recording, mixing, and mastering processes tailored to the genre of music that they wish to work on. As a result of the course, students will create and release an original EP album. The final grade will be based on demonstrated individual achievement throughout each term and in a final project.

Offered: Fall, Spring, Winter.

MUS 58.12 - Sound Engineering II

Instructor: Nam

Students seeking advanced sound-engineering learning may enroll in this three-term course. Through weekly meetings, students will explore recording, mixing, and mastering processes tailored to the genre of music that they wish to work on. As a result of the course, students will create and release an original EP album. The final grade will be based on demonstrated individual achievement throughout each term and in a final project.

Prerequisite: MUS 58.11

Offered: Fall, Spring, Winter.

MUS 58.13 - Sound Engineering III

Instructor: Nam

Students seeking advanced sound-engineering learning may enroll in this three-term course. Through weekly meetings, students will explore recording, mixing, and mastering processes tailored to the genre of music that they wish to work on. As a result of the course, students will create and release an original EP album. The final grade will be based on demonstrated individual achievement throughout each term and in a final project.

Prerequisite: MUS 58.12

Offered: Fall, Spring, Winter.

MUS 59 - Ensemble Performance and Leadership

Students participating in Hopkins Center music ensembles may enroll in this three-term course to develop additional knowledge and skills in ensemble performance, music history and theory, and organization. Students will work with their ensemble director to create an individual portfolio consisting of musicianship topics taken over three terms of ensemble study (see assessment below). The final grade will be based on demonstrated individual achievement in the chosen topics and in a final project or performance.

MUS 59.11 - Coast Jazz Orchestra I

Instructor: Bynum

This topic is for Ensemble Performance and Leadership for students in the Coast Jazz Orchestra.

Offered: Fall, Spring, Winter.

MUS 59.12 - Coast Jazz Orchestra II

Instructor: Bynum

This topic is for Ensemble Performance and Leadership for students in the Coast Jazz Orchestra.

Prerequisite: MUS 59.11

Offered: Fall, Spring, Winter.

MUS 59.13 - Coast Jazz Orchestra III

Instructor: Bynum

This topic is for Ensemble Performance and Leadership for students in the Coast Jazz Orchestra.

Prerequisite: MUS 59.12

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.21 - Dartmouth College Glee Club I

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Glee Club.

Offered: Fall, Spring, Winter.

MUS 59.22 - Dartmouth College Glee Club II

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Glee Club.

Prerequisite: MUS 59.21

Offered: Fall, Spring, Winter.

MUS 59.23 - Dartmouth College Glee Club III

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Glee Club.

Prerequisite: MUS 59.22

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.41 - Handel Society of Dartmouth College I

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Handel Society of Dartmouth College.

Offered: Fall, Spring, Winter.

MUS 59.42 - Handel Society of Dartmouth College II

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Handel Society of Dartmouth College.

Prerequisite: MUS 59.41

Offered: Fall, Spring, Winter.

MUS 59.43 - Handel Society of Dartmouth College III

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Handel Society of Dartmouth College.

Prerequisite: MUS 59.42

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.51 - Dartmouth Symphony Orchestra I

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth Symphony Orchestra.

Offered: Fall, Spring, Winter.

MUS 59.52 - Dartmouth Symphony Orchestra II

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth Symphony Orchestra.

Prerequisite: MUS 59.51

Offered: Fall, Spring, Winter.

MUS 59.53 - Dartmouth Symphony Orchestra III

Instructor: Ciabatti

This topic is for Ensemble Performance and Leadership for students in the Dartmouth Symphony Orchestra.

Prerequisite: MUS 59.52

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.61 - Dartmouth College Wind Ensemble I

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Wind Ensemble.

Offered: Fall, Spring, Winter.

MUS 59.62 - Dartmouth College Wind Ensemble II

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Wind Ensemble.

Prerequisite: MUS 59.61

Offered: Fall, Spring, Winter.

MUS 59.63 - Dartmouth College Wind Ensemble III

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Wind Ensemble.

Prerequisite: MUS 59.62

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.71 - Dartmouth College Marching Band I

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Marching Band.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.72 - Dartmouth College Marching Band II

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Marching Band.

Prerequisite: 59.71

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 59.73 - Dartmouth College Marching Band III

Instructor: Messier

This topic is for Ensemble Performance and Leadership for students in the Dartmouth College Marching Band.

Prerequisite: MUS 59.72

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

MUS 60 - Studies in Musical Performance: Keyboard

Instructor: Pinkas, Rogers, Taitt

This course consists of the intensive private study of a small number of selected works through their performance. Beyond technical mastery of the instrument, emphasis is placed upon the relation between performance problems (dynamics, phrasing, rubato) and multi-level analysis (harmonic, structural, stylistic). In addition to private instruction for one ninety-minute period each week, the student will be required to present a one-hour recital and to provide either written or oral program notes.

Prerequisite: MUS 53 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 61 - Studies in Musical Performance: Woodwinds

Instructor: Braude, Halloran, Lakota, Polk, Zsoldos

(see details under MUS 60)

Prerequisite: MUS 54 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 62 - Studies in Musical Performance: Brass

Instructor: Felix, Fulginiti, Kennelly, Sessions

(see details under MUS 60)

Prerequisite: MUS 55 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 63 - Studies in Musical Performance: Strings

Instructor: Browne, Cassidy, Ennis, Gray, Guey, Sanchez, Selby

(see details under MUS 60)

Prerequisite: MUS 56 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 64 - Studies in Musical Performance: Voice

Instructor: Burkot, Mellinger

(see details under MUS 60)

Prerequisite: MUS 57 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 65 - Studies in Musical Performance: Percussion

Instructor: Garapic

(see details under MUS 60)

Prerequisite: MUS 58 and permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: ART

MUS 70 - MUS 79 (Foreign Study Courses)

MUS 70 - Perspectives in Music Performance

Instructor: Beaudoin

This course combines the study of music with an intensive exposure to musical performance. Students attend concerts, examine works selected from the repertoire, and keep a journal of concert observations. Performance practices of various historical style periods are reviewed in their historical context, including such factors as the circumstances of composition, the place of the work within a composer's total output, and the contribution of individual works to the development of musical form and style.

Prerequisite: MUS 21.01

Offered: Spring.

Degree Requirement Attributes: ART

MUS 71 - The History of Music in England

A close examination of the circumstances in which music has been composed and performed in England from early times to the present. Course topics include the effects of ruling monarchs and changing religious affiliations on musical life, the rise of music societies, and the influence of music from Continental Europe such as opera and the Italian madrigal. Students will study works by Dunstable, Tallis, Dowland, Byrd, Purcell, Handel, Elgar, Walton, Britten, and Tippett.

Prerequisite: MUS 21.01

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 74 - The History of Music in Central Europe

Instructor: Beaudoin

This course takes advantage of our study in Vienna to explore the sites and environs where many of the composers and performers we will study were born, worked and died. Reading and listening assignments will be augmented by day trips and overnight excursions to Salzburg, Prague and other locales. Local guest lecturers who are experts on various aspects of Central European musical and intellectual history will join us throughout the course.

Prerequisite: MUS 21.01

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

MUS 80 - MUS 99

MUS 82 - Special Study in History, Musicology, Ethnomusicology

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: ART.

MUS 83 - Special Study in Composition and Theory

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: ART.

MUS 84 - Special Study in Performance

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: ART.

MUS 86 - Other Special Studies

Offered: Fall, Spring, Summer, Winter.

MUS 87 - Special Studies in Music Abroad (Individual Instruction on Music FSP)

MUS 87 may count as an elective but may not be used as a substitute for the Individual Instruction Program.

Offered: Spring.

Degree Requirement Attributes: ART

MUS 88 - Honors

The Honors Program provides an opportunity for work of greater scope and depth than the Music Department's standard course offerings. Honors projects typically take the form of independent work that is undertaken over at least two terms, and supervised by one or more members of the music faculty. Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for MUS-088 and receive a grade of "ON" (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace the "ON" at the end of the subsequent term at which time the coursework must be completed.

Offered: Spring, Winter.

MUS 99 - Proseminar

Instructor: Beaudoin

Fulfilling the Music Major Culminating Experience, this advanced seminar (offered once a year, during the fall term) calls on senior music majors to apply the knowledge they have acquired throughout their Dartmouth education. Each year, the course will be organized around a broad theme that relates to the instructor's specialization, placing students in dialogue with contemporary developments that are shaping our field.

Prerequisite: Permission of the instructor

Offered: Fall.

Degree Requirement Attributes: Dist:ART

Neuroscience

MAJOR IN NEUROSCIENCE

Neuroscience is a broad interdisciplinary field requiring a rigorous preparation in basic science. Students in this discipline are expected to understand basic principles of neuroscience, cell biology and statistics. They are also expected to gain competency in calculus, chemistry, physics or computer science. These prerequisites are fundamental to understanding contemporary experimental methods in neuroscience.

Required courses are intended to provide a strong background for the broad spectrum of neuroscience, which spans molecular, cellular, systems, behavioral, and cognitive components. Then, students are expected to choose a set of electives that will lead them towards a broad understanding of the neuroscience field, as well as techniques used by neuroscientists to study the brain. With this background students are encouraged to engage in a research project with a specific emphasis in neuroscience. Many of the elective courses are offered through the Department of Psychological and Brain Sciences, but courses can be taken through other departments depending upon the area of specialization. For example electives in Computer Science and Mathematics could be selected that emphasize computational methods. Alternatively, a student might choose electives, including advanced seminars or independent research, that emphasize cell or molecular biology. A list of approved electives is available on the PBS website, and with permission of the Neuroscience Steering Committee, other courses that are appropriate given the student's area of specialization may be taken for elective credit.

A central mission of the major is to encourage students to work closely with sponsoring faculty to learn experimental methods in neuroscience. Students fulfill their culminating experience by either conducting research in neuroscience under the direction of a faculty advisor or taking an upper level seminar with an emphasis in neuroscience. Faculty in the Department of Psychological and Brain Sciences provide a core resource for research opportunities for students; however, neuroscience research opportunities for undergraduate majors also involve faculty in the School of Medicine, the Thayer Engineering School, and other departments within the College of Arts and Sciences, subject to approval by the Neuroscience Steering Committee.

Potential majors are encouraged to begin planning their course of study by the end of their first year. Information concerning course requirements, transfer credit, checklists, along with a worksheet to help in planning your schedule can be viewed on the PBS website. Sign-up for courses requiring permission is also handled through the PBS department website starting in May of the prior academic year in which the course will be taught.

MINOR IN NEUROSCIENCE

The Minor in Neuroscience is sponsored by the Department of Psychological and Brain Sciences. It is intended to provide formal recognition for students who have concentrated some of their academic work in the interdisciplinary area of Neuroscience. The minor requires six courses: one prerequisite, two required courses, and three electives. Many of the courses may require permission of the instructor in addition to prerequisite courses.

HONORS PROGRAM

Qualified students majoring in Neuroscience have the opportunity to participate in an Honors Program that provides individualized advanced instruction and research experience in neuroscience.

Individuals may apply for honors work as early as the spring term of their junior year, but not later than the end of the first week of fall term of their senior year. Eligibility for honors is a 3.30 average in the major and a 3.0 average overall. Students interested in doing honors work should consult the Department web page for additional information.

To begin thesis work and to enroll in PSYC 91:

1. Students must have a minimum grade point average (GPA) of 3.30 in the major and 3.00 overall and have successfully completed PSYC 6 and PSYC 10 or BIOL 29.
2. Students must identify a two-person thesis committee (one of which is the research advisor) that will evaluate the thesis. The thesis committee must include a regular faculty member of the Department of Psychological and Brain Sciences (PBS). The other individual must have an active academic appointment at Dartmouth. The thesis committee must be approved by the Chair of the Neuroscience Steering Committee.
3. Intent to pursue honors research must be declared by the end of the first week of the fall term of their senior year. A completed Permission Checklist for Enrolling in Neuroscience Thesis Research (PSYC 91) should be submitted to the PBS Department office (see Department website for form). The Neuroscience Steering Committee will evaluate and approve the application. Instructor Permission to enroll in PSYC 91 will then be granted. **To be awarded Honors at graduation the student must fulfill the following requirements:**

1. Satisfactorily fulfill all course requirements of the major. Complete two terms of PSYC 91 (PSYC 91.01 and 91.02).
2. By the mid-Winter term date specified on the checklist, the student must submit a prospectus of the thesis work to the Chair of the Neuroscience Steering Committee. The prospectus should include a brief description of the rationale for the research, methods being used, analyses to be employed, and implications of the expected results.
3. An acceptable thesis must be written based upon at least two terms of laboratory or field research that is carried out under the auspices of PSYC 91 and is under the supervision of a PBS department faculty member. The thesis will entail an independent and individual project. Furthermore, the thesis must be read by, orally defended to, and approved by the thesis committee. The defense must be attended by at least one member of the Neuroscience Steering Committee. The thesis committee will make a recommendation to the Neuroscience Steering Committee regarding the potential awarding of honors.
4. Students will present their research to department faculty and interested others during the latter part of the Spring term of their senior year.

2. Requirements: Eight additional philosophy courses, at least seven of which are beyond the introductory level (i.e., courses numbered PHIL 11 or higher), including:
 - a. Two from: PHIL 11, PHIL 12, PHIL 13, PHIL 16, PHIL 19
 - b. One advanced seminar in Philosophy, PHIL 50
 - c. One culminating experience seminar in Philosophy, PHIL 80

The Modified Major: Eligible for Class Years 2025 and Earlier, only (those class years should review regulations in the archived ORC of the year they matriculated).

The Minor in Philosophy for Class Years 2023 and Later (Class Years 2022 and Earlier should review regulations in the archived ORC of the year they matriculated).

1. Prerequisites:

- a. One course from: PHIL 1, PHIL 3, PHIL 4, PHIL 5, PHIL 6, PHIL 8, PHIL 9

2. Requirements: Five additional philosophy courses, at least four of which are beyond the introductory level (i.e., courses numbered PHIL 11 or higher), including:

- a. One advanced seminar in Philosophy, PHIL 50
- b. One culminating experience seminar in Philosophy, PHIL 80

Philosophy

Chair: Peter Lewis

Professors S. J. Brison, J. V. Kulvicki, S. S. Levey, P. Lewis, D. Plunkett, A. Thomasson; Associate Professors S. Hesni, T. Rosenkoetter, C. J. Thomas, K. Walden; Affiliated Assistant Professor J. S. Phillips (Cognitive Science); Senior Lecturers J. Binkoski, A. E. Bumpus; Lecturer C. Kendrick; Postdoctoral Fellows: S. Mackereth, T. Rosenqvist, K. Sankaran, Y. Washington.

To view Philosophy courses, click here (p. 623).

For up-to-date Philosophy course schedules, topics course descriptions, syllabi, and Philosophy event listings, go to the Philosophy Department website, click here.

The Major

1. Prerequisites:

- a. One course from: PHIL 1, PHIL 4, PHIL 5, PHIL 8, PHIL 9
- b. PHIL 3 or PHIL 6

Transfer Credit

At most, two transfer credits may be counted toward the major, modified major, or minor; subject to approval by the Chair and the Registrar. Transfer credit cannot be used to satisfy the advanced topics and culminating experience seminar requirements.

Foreign Study

The Department of Philosophy offers a biennial study abroad program in fall term (of even-numbered years) at the University of Edinburgh, Scotland. While there, students will take a course in philosophy taught by a Dartmouth faculty member (PHIL 50). In addition, each student takes two university courses (PHIL 60, PHIL 61). Students will receive at most three course credits in this term. Students participating in the program must have completed two courses in philosophy prior to their participation, but not necessarily prior to their application for admission to the program. Preference will be given, however, to those students who have completed more philosophy courses. Application for admission to the program should be made during the fall term prior to the contemplated term in Edinburgh. There will be an opportunity for eligible students to participate in the Junior Honors Seminar while in Edinburgh.

Philosophy Honors Program

The Honors Program is designed for qualified students interested in doing intensive and individualized work in philosophy. Only those students who have successfully completed the Honors Program are eligible to receive major standings of Honors or High Honors.

The program is divided into three stages: the Junior Honors Seminar, preparation and submission of a thesis proposal, and thesis writing. All students who register for the Philosophy Major and who expect to have the necessary cumulative averages (3.50 in Philosophy and 3.33 overall) are invited to join the Junior Honors Seminars. In order to be accepted for thesis writing, a student must successfully complete a Junior Honors Seminar, maintain or attain by the end of the Junior year the required averages, and have a thesis proposal approved by the Philosophy Department by the end of the seventh week of spring term in the junior year.

Junior Honors Seminars. Honors students are required to complete a Junior Honors Seminar by the end of the spring term of their junior year and prior to submission of a thesis proposal for departmental approval. These small, not-for-credit seminars meet four or five times per term. Students engage in independent research and writing, discuss their research with participants in the seminar, and produce a sample senior thesis proposal. The proposal produced need not be the proposal ultimately submitted to the department.

Students may take the seminar in any or all terms of their junior year. In spring term, the junior honors seminar ends in the sixth week, so students have time to revise any proposals for final submission to the department (see below).

Preparation and Submission of Thesis Proposal. During the junior year, students should consult with faculty members who might serve as advisors in the preparation and submission of a thesis proposal. Senior thesis proposals must be submitted to the Chair of the department by the end of the seventh week of spring term in the junior year. These proposals may be the result of work in the Junior Honors Seminar, but they may also be on a different topic, or significantly modified versions of the junior honors work. Students are strongly encouraged to complete and to submit their proposals before the spring term deadline, since the department may ask for modifications before allowing students to proceed with thesis writing. All proposals will be approved or denied by the Philosophy Department before the start of fall term in the senior year, and typically soon after they are submitted. Once proposals are approved by the Philosophy Department, the Chair of the department appoints a thesis supervisor for each student. Typically, this will be the faculty member with whom the student has been working to produce a proposal. In some cases, however, another supervisor may be appointed, especially if a single faculty member has been in consultation with multiple students.

Thesis Writing. Students writing a senior thesis are strongly encouraged to be in residence for the entirety of their senior year. Students writing theses are enrolled in PHIL 89 for the fall term and PHIL 90 for the winter term of their senior year. Only one term of the Honors Program may count towards satisfying the major requirements. In extraordinary cases, a student may be permitted to write a winter-spring or fall-spring thesis. In such cases, students are expected to consult with the Chair of the department during the junior year and to request special accommodations when submitting their senior thesis proposals.

Thesis students and their supervisors work together to prepare a research and writing plan, and meet regularly throughout the fall and winter terms. Thesis writers also attend a Senior Honors Seminar two times in the fall term and two in the winter, at which they read and discuss one another's thesis work.

Students must submit a full draft of the thesis by the sixth Monday of the winter term. This draft is read by two faculty members, appointed by the Chair, who are not the student's thesis supervisor. The student and these external readers meet by the ninth week of winter term to discuss the thesis. The external readers can insist on significant revisions before submission of the final product. Final versions of theses are submitted to the supervisor and external readers on the second Monday of spring term. Public defenses are scheduled for the last few weeks of the spring term. Thesis grades are determined by supervisors and external readers.

The final version of the thesis should be between 20,000 and 30,000 words long. Students must submit four bound copies of the thesis, one of which is printed on acid-free bond paper, to the department administrator by the last Monday of the spring term.

PHIL - Philosophy Courses

To view Philosophy requirements, [click here](#) (p. 622).

PHIL 1 - Introduction to Philosophical Topics

Students will engage with central topics, debates and methods in philosophical inquiry. Emphasis is placed on developing critical reading and analytical writing skills. Readings may draw on both historical and contemporary sources.

Degree Requirement Attributes: TMV

PHIL 1.01 - The Problems of Philosophy

Instructor: Plunkett

This course acquaints the student with some of the fundamental problems in at least three main areas of Philosophy: Theory of Knowledge, Metaphysics, and Ethics. Questions treated in lectures normally include: Can

we know anything, and, if so, how? Does God exist? What is the relation between mind and body? Are our actions free or determined? What makes an act morally right or wrong? Some attention will be paid to the ways in which answers to these questions can be combined to create philosophical systems or total world views. The readings might include both contemporary essays and classic works by such philosophers as Plato, Descartes, and Hume.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV

PHIL 1.02 - Existentialist Ethics

Inescapable freedom – this is what the existentialists held to be the mark of the human condition. Despite this shared view, however, they each proposed distinct and novel ways of understanding this freedom and its ethical import. To uncover the richness of their analyses of the human condition, the class will explore the complexity of freedom through the lens of core existentialist topics such as radical responsibility, transcendence, nothingness, alterity, inter-subjectivity, finitude, and the absurd.

Degree Requirement Attributes: DIST: TMV

PHIL 1.03 - Philosophy and Economics

What makes an economic system fair or unfair? What does it mean to be economically rational? How should we evaluate public policy? How do we know when things go better or worse for a person? This course will explore a range of fundamental issues in ethics and political philosophy that have deep implications for economic analysis including distributive justice, well-being, and rationality. It will also examine philosophical perspectives on economic efficiency and social choice theory.

Degree Requirement Attributes: Dist:TMV

PHIL 1.04 - God, Darwin, and the Cosmos

This course will examine the relation between science and religion. The course will consider evolution, creationism, and intelligent design. Topics will include the compatibility of Darwinism and theism, and the question whether “Intelligent Design” is a scientific theory. The course will consider questions such as ‘Is the Big Bang evidence for or against the existence of God?’ and ‘Is the fact that the universe is life-permitting evidence for the existence of God?’

Degree Requirement Attributes: TMV

PHIL 1.05 - Reasons, Values, Persons

Instructor: Thomas

We will consider such questions as: What makes a life worth living? What makes a life a good life? What, if anything, makes a life a meaningful life? What, if anything, are the grounds of values? What is a person? What relation, exactly, do you bear to the person who first

enrolled in this course? What is freedom? Are you free? What, if anything, do personhood, freedom and morality have to do with one another?

Offered: Fall, Winter.

Degree Requirement Attributes: TMV

PHIL 1.06 - Classic and Experimental Philosophy

What is God and does she exist? What can we know and what should we believe? Do we have free will? What action is the morally right action? Who or what deserves our care and concern? These fundamental questions about human existence have gripped deep thinkers, from bearded sages to college students, for centuries. What makes this course unique is that we explore these questions and others through readings from traditional philosophical texts and experimental approaches, to see how these questions can be approached by both philosophical and psychological perspectives.

Degree Requirement Attributes: TMV

PHIL 1.07 - Life, Death, Relationships, and Meaning

Instructor: Rosenkoetter

In this course we will philosophize about what is valuable and how to live a life, asking how our answers to those questions are affected by the fact that lives don't go on forever.

Offered: Spring.

Degree Requirement Attributes: TMV

PHIL 1.08 - Philosophy of Time & Time Travel

Instructor: Binkoski

On the one hand, time is completely familiar. On the other, it is a total mystery. As you might expect, the combination makes for good philosophy. In this course, we will study a variety of philosophical puzzles concerning the nature of time. Is time an illusion? Does time pass? Is the present special? Is time travel possible? Do the past and future exist? Does time have a direction? What is spacetime? What are the special and general theories of relativity? What do they imply about the nature of time?

Offered: Winter.

Degree Requirement Attributes: TMV

PHIL 1.09 - Science, Superstition, and Skepticism

Instructor: Binkoski

Most of us believe that matter is made up of atoms, that smoking causes emphysema, and that the universe is billions of years old. Few believe that Virgos are hot-tempered, that you can see the future through a crystal ball, or that baking soda cures AIDS. We often hear that the difference between such beliefs is that one sort is based on science and the other isn't. But what makes a method of

inquiring into the world distinctively scientific? And what makes us justified in believing on the basis of these methods? This course is an introduction to the philosophical theory of knowledge that focuses on the knowledge that science is purported to offer. Possible topics include competing theories of justification, scientific induction, the nature of explanation, probability, scientific ‘revolutions’, the goals of science, trust in scientific authority, and skepticism.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 1.10 - Minds, Meanings, and Images

Instructor: Kendrick

Most things don’t mean anything. How is it that the contents of language and mental states can mean something? How do images represent or depict their objects? What do different answers to such questions tell us about the nature of minds, consciousness, and representation? What do different answers presuppose about reality and our capacity to know it? This course will focus on historical answers to such questions with an eye toward comparing common reference points in contemporary philosophy.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 1.11 - True, Beautiful, Nasty: Philosophy and The Arts

Art is often cast as a pleasant distraction, but artists are lionized, ostracized, imprisoned, and even killed. Devotion to sub-genres of music, video games, literature, and street art builds and divides communities. What explains the role of the arts, and artists, in society, and what should their role be? How do positive (nice!) and negative (nasty!) aesthetic responses affect art’s function? Might art be an important, yet non-scientific, approach to understanding our world?

Degree Requirement Attributes: TMV

PHIL 1.12 - Philosophy and Tragedy

Since antiquity philosophers have concerned themselves with tragic drama and its world-view. Why is this powerful and peculiar art-form regarded as both a rival to philosophy and also a site of significant philosophical activity? What philosophical insights or ethical developments are made possible through the depiction of suffering and grief? How does tragedy impact our understanding of human agency and the place of fate and chance in human life? Authors considered may include Homer, Sophocles, Euripides, Plato, Aristotle, Shakespeare, Racine, Beuchner, Hegel, Schopenhauer, Nietzsche, Camus, Miller, Nussbaum, Williams.

Degree Requirement Attributes: Dist:TMV

PHIL 1.13 - The Historical Philosophy of W.E.B. Du Bois

This course will examine the historical philosophy of the towering Black scholar and great freedom fighter of the 20th Century. We shall engage in close readings of Du Bois’ classic work, “The Souls of Black Folk” (1903) as well as subsequent essays in his magisterial corpus, especially his classic autobiography, “Dusk of Dawn” (1940).

Cross-Listed as: AAAS 80.10 ENGL 53.40

PHIL 1.14 - Knowledge, Truth, and Power

How does and how should social position – race, gender, class – affect our beliefs? What roles does trust play, and ought it to play, in knowledge? How is power implicated in what we can know and in who can be epistemic authorities? Are some agents unjustly epistemically disadvantaged, and if so, how? How ought we to shape our communal interpretive resources? Social epistemology is the study of socially shared beliefs. Some of its core concerns include testimony, disagreement, and the nature of group commitment.

Degree Requirement Attributes: Dist:TMV

PHIL 1.15 - Selves and Stories

Instructor: Washington

Humans are narrators, making sense of themselves and their world. But what are narratives and how do they function? How do narratives engage emotions, desires, and imagination? What sorts of elements belong to narratives? What role does narration play in self-construction? Is it important to have ‘a life-story’? Are narratives an important part of authentic or ethical living? How do narratives differ from other forms of communicative or literary expression? How do individual narratives and social narratives interact? Can narratives serve as arguments or reasons or justifications or explanations? How do narratives figure in human inquiry, human agency, and moral responsibility?

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 1.16 - Morality, Freedom, and the Mind

Instructor: Thomasson

In this course, we will focus on classic philosophical questions about morality, freedom, and the mind. We all have to address moral questions in our everyday lives, but how should we go about answering them? What makes actions right and wrong—is it the consequences of the action, or the principle followed, or something else? We all feel like we are free when we make important decisions. But does it make sense to think we might have free will,

given that we are natural creatures, in a world governed by deterministic physical and biological laws? If we don't have free will, can we be held morally responsible for our actions? Finally, we all think of ourselves not just as physical beings, but as thinking things—as beings who are aware of our world, who have beliefs, thoughts, and hopes. But what is the mind—and what are beliefs, thoughts, hopes? Can the mind be understood as identical with the brain, or mental events as events in the brain? If not, how can talk about the mental be understood? We will examine a variety of approaches to these three central topics through both historical and contemporary philosophical texts.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 1.17 - Race and Modernity: W.E.B. DuBois, James Baldwin, Lorraine Hansberry

This course will examine the classical works of three towering modern intellectuals: W.E.B. Du Bois, James Baldwin, and Lorraine Hansberry. We will wrestle with the rich formulations, subtle arguments, and courageous visions of three Black thinkers who continue to speak with power and passion to our turbulent times.

Cross-Listed as: AAAS 21.10 ENGL 53.43

Degree Requirement Attributes: Dist:LIT; WCult:W

PHIL 1.18 - The Self in Philosophy, Psychology, and Neuroscience

What makes you, YOU? Is it the sum of your memories, or your brain, or perhaps an immortal soul? In this course, we will cross the centuries together to examine ancient and modern theories of personal identity in philosophy and consider also current empirical perspectives from the cognitive sciences. You will discover canonical readings from historical and contemporary sources in multiple philosophical traditions and discuss how famous clinical cases challenge our thinking about the self.

Degree Requirement Attributes: Dist:TMV

PHIL 1.19 - Identity, Liberalism, and Democracy

What would a just form of democracy look like in a pluralistic society that involves people with diverse identities and values? What policies and laws should the state adopt to counter discrimination and social inequality, and how do they fit (or conflict) with ideals of liberalism? What are social identities, and how do they operate? How are social identities mobilized in different social movements, such as forms of fascism and populism? In this interdisciplinary course, we will examine these and other questions about social identity and its relation to ideals of liberalism, democracy, and justice.

Cross-Listed as: GOVT 30.15

Degree Requirement Attributes: Dist:SOC

PHIL 1.20 - Buddhist Philosophy

Instructor: Seton

Buddhists see philosophy not just as a study of reality or the meaning of life, but as a useful step in overcoming all forms of suffering and realizing the existential happiness of a buddha. This course will survey the four main Buddhist philosophical schools; highlight the differences in their phenomenology, onto-epistemology, and ethics; and explore their views on the nature of consciousness, identity, perception, wisdom, and happiness. It will also touch upon Buddhist dialectical reasoning and analytical meditations aimed at developing insight into the nature of mind and its lifeworld.

Cross-Listed as: ASCL 51.08 REL 41.08

Offered: Spring.

Degree Requirement Attributes: DIST:TMV; WCult:NW

PHIL 1.21 - Philosophy Through Literature

Instructor: Hesni

Literature has long looked to philosophy for ideas, and philosophy has returned the favor by using on literature as a forum to explore those same ideas. In the spirit of this relationship, this course introduces traditional philosophical questions through literature. These include the demands of morality, the conditions of love, the existence of God, the possibility of knowing other minds, the existence of moral dilemmas, and the authority of tradition. Each will be introduced through a work of literature—a novel, a short story, a play, a film, an opera—and then expounded on in a work of philosophy. We will be interested in both better understanding these issues and assessing the possibilities of symbiosis between philosophy and art.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 1.22 - Africana Philosophy

Africana Philosophy is an area of philosophical inquiry that addresses problems faced and raised by the African diaspora. This course delves into arguments by thinkers who are responding to experiences of colonization, slavery, and other forms of racial injustice. By exploring the contributions of thinkers across the African diaspora within this introductory course, students will engage with the concepts, principles, and arguments that define this field.

Degree Requirement Attributes: Dist:TMV

PHIL 1.23 - Cross-Cultural Perspectives on Knowledge

Instructor: Rosenqvist

You probably think you have some knowledge—like $5-3=2$, that you slept badly, or that your friends are on their way. But how do you know? What if you're dreaming or hallucinating? And what is knowledge, anyway? This course introduces epistemology—the study of knowledge and related questions—through a cross-cultural lens, engaging with philosophical texts and ideas from around the world.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PHIL 3 - Reason and Argument

Instructor: Bumpus

An introduction to informal logic with special attention to the analysis of actual arguments as they arise in daily life as well as in legal, scientific, and moral reasoning. Along with the analysis and criticism of arguments, the course will also consider the methods for constructing arguments that are both logically correct and persuasive. Open to all classes.

Offered: Fall, Spring.

Degree Requirement Attributes: TMV

PHIL 4 - Philosophy and Gender

This course will focus primarily on the following questions: What is feminism? What is sexism? What is oppression? What is gender? Is knowledge gendered? Is value gendered? What is a (gendered) self? What would liberation be? In exploring these issues, we will examine the ways feminist theorists have rethought basic concepts in core areas of philosophy such as ethics, social and political philosophy, metaphysics, epistemology, philosophy of law, and philosophy of mind. Open to all classes.

Cross-Listed as: WGSS 46.01

Degree Requirement Attributes: Dist:TMV; WCult:CI

PHIL 4.01 - Feminist Perspectives on Reproductive Ethics

This class focuses on ethical issues concerning human reproduction. Some of these issues are familiar: Is abortion moral? Is sex-selection ethical? Other issues may be less familiar: Does prenatal testing express a negative message about living with disability? Is there anything wrong with aiming to have a deaf child? Yet other issues have arisen with the commercialization and globalization of reproduction: Is there anything wrong with selling one's reproductive labor? Is it ethical to 'outsource' pregnancy to Indian surrogates? We will start by looking backward to ethical issues around the introduction of contraception; we will end by looking forward, to the promise of same-sex reproduction through in vitro-gametogenesis, and reproduction via artificial gestation. While we will

consider numerous perspectives on each issue, special consideration will be given to feminist viewpoints.

Cross-Listed as: WGSS 61.06

Degree Requirement Attributes: Dist:TMV

PHIL 5 - Philosophy and Medicine

Instructor: Bumpus

An examination of some philosophical issues in the field of medicine. Primary focus will be on the moral issues that arise in dealing with individual patients, e.g., paternalism, informed consent, euthanasia, and abortion. There will also be an attempt to clarify such important concepts as death, illness, and disease. Open to all.

Offered: Summer.

Degree Requirement Attributes: TMV

PHIL 6 - Logic and Language

Instructor: Rosenkoetter

This course introduces contemporary sentential logic and predicate logic. Both the theory of logic and its application to ordinary language are developed. Topics include symbolization, truth tables, truth trees, interpretations, and derivations. Each week one lecture, three quiz days, and three afternoon individualized discussion sessions are offered (normally MWF 4:45-5:15pm). The individual discussion sessions allow students to pursue their questions and obtain feedback on quizzes on a one-on-one basis. The self-pacing aspect of the course allows students who have difficulty to receive more assistance and those who do not need as much assistance to move ahead more quickly. Open to all classes.

Offered: Spring, Winter.

Degree Requirement Attributes: QDS

PHIL 7 - First-Year Seminars in Philosophy

Instructor: Bumpus

Offered: Winter.

PHIL 8 - Introduction to Moral Philosophy

Instructor: Sankaran

An introduction to the foundations and nature of ethics. Questions may include: What is the good life? What is it for something to have value? Are there acts that ought never to be done, no matter the consequences? Is ethics objective or relative to different perspectives? We inevitably make assumptions whenever we offer ethical verdicts about particular cases. This course aims to think systematically about those assumptions. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 9 - Applied Ethics

An examination of the ethical dimensions of some contemporary controversies. Topics will vary from year to year but may include: business, death, discrimination, the environment, gender, law, media, race, sex, technology, and war. The course may be taken more than once for credit with permission of the instructor. Open to all classes. No prerequisites.

Degree Requirement Attributes: TMV

PHIL 9.01 - Reproductive Ethics

What do we owe human life, once it has begun to develop? Is a woman morally required to continue gestating a fetus, once it has begun developing? Does the answer depend upon whether or not the fetus is a person? Some forms of assisted reproduction yield a surplus of human embryos. Is using these embryos for research moral? Is it moral to dispose of them? What may we do in the interest of creating human life? We tend to grant people broad procreative liberty. Should deaf couples be allowed to select for deafness? And what about choosing enhanced traits for our children? Some people worry we are facing a future where the rich can design their babies – choosing to create a musical prodigy or a baby Einstein – but the poor cannot. If so, is distributive justice the only concern about such a future?

Degree Requirement Attributes: TMV

PHIL 9.02 - Environmental Ethics

Instructor: Binkoski

This course provides a general introduction to ethical problems concerning the environment. The course will cover some standard positions in the field, including biocentrism (the thesis that all living organisms have intrinsic moral worth) and ecocentrism (the thesis that entire natural systems have intrinsic moral worth). Topics considered may include: the ethics of food; the ethics of climate change; the moral status of non-human animals; population, consumption, and sustainability; GMOs and organic food; our duties to other persons, including future persons; and the difficulty of formulating comprehensive climate policy.

Offered: Spring.

Degree Requirement Attributes: TMV

PHIL 9.04 - The Ethics of Food Choice and Food Policy

In this course, we will consider ethical questions for food production, food consumption and food policy. How do ethical values interact with our food choices? Should we support the production of local and organic food? If so, why? If not, why not? Are there compelling moral reasons

to adopt a vegetarian or vegan diet? Is it possible to be an ethical omnivore? Do current production practices or food policies have a disproportionately negative impact on some populations? How, if at all, should practices or conditions in the food industry influence our behavior as consumers? In the course of our discussions, we will consider the ethics of harm, distributive justice, complicity, death and obligations to future generations.

Degree Requirement Attributes: Dist:TMV

PHIL 9.06 - Friends, Lovers, and Comrades: Ethical Issues of Special Relationships

This course will investigate philosophical issues that arise in our relationships with other people. What kind of attitude is love? What makes someone a genuine friend? Is partiality to one's friends and family morally justifiable? Is patriotism? What are the moral responsibilities of sex? Readings from classic and contemporary sources, including Plato, Aristotle, Pufendorf, Hume, Kant, Freud, and Beauvoir.

Degree Requirement Attributes: TMV

PHIL 9.07 - Ethics of Freedom, Paternalism, and Intervention

We will begin by considering foundational issues in the morality of attempts to steer actors (people as well as states) towards better outcomes. We apply the resulting theories to concrete issues such as speech, health, drugs, guns, dangerous pursuits, incarceration, and intervention in the affairs of other nations.

Degree Requirement Attributes: TMV

PHIL 9.08 - Ethics and Information Technology

How do we understand moral agency and moral responsibility in the context of the internet? What rights, protections, and obligations govern, or should govern, social media? Readings and discussions will include: privacy, harm, surveillance, consent, pornography, freedom of expression, accountability, anonymity, games, violence, and activism.

Degree Requirement Attributes: Dist:TMV

PHIL 11 - Ancient Greek and Roman Philosophy

Instructor: Thomas

Students will study the origins of Western philosophical thought as it emerges in classical Greece and Rome from 6th century BCE through the 4th century CE. Topics may include: the methods and value of philosophy; the fundamental nature of reality; the possibility of knowledge; the roles of logic and mathematics in inquiry; philosophy of biology; philosophy of medicine; moral psychology and human action; virtue and human flourishing; political philosophy; fatalism; death.

Prerequisite: One Philosophy course, or CLST 3, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 12 - Medieval and Renaissance Philosophy

Inspired by classical philosophy, Jewish and Islamic thought, and Christian doctrine, medieval philosophy (from, roughly, the 4th-15th centuries) strives to reconcile its various influences while making creative contributions and great strides in philosophy of religion, logic, natural philosophy, philosophy of mind and metaphysics. The late medieval period paves the way for intellectual revolutions in the philosophy of science, philosophy of religion and political theory of the Renaissance period (roughly the 14th – 16th centuries).

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 12.01 - Medieval Philosophy of Language and Reality

Does language mirror reality? Are linguistic expressions reliable guides to truth? If not, why not? If so, how can we best approach the study of reality through language? Medieval philosophers make great strides in logic, semantics and metaphysics in their attempts to answer such questions. Topics considered in the course may include signification, the logic of predication, the nature and number of categories, analogy, substance and accident, existence and essence, universals, and the status of relations.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 13 - Early Modern Philosophy

Early modern philosophy is western European philosophy mostly of the 17th and 18th centuries, sometimes indicated as spanning from the early writings of Descartes (c. 1619) to the publication of Kant's *Critique of Pure Reason* (1781). It encapsulates the break from prior Scholastic and Renaissance traditions in philosophy and science and becomes hugely influential in setting the agenda of western philosophy—in epistemology, metaphysics, philosophy of mind, ethics, political philosophy, etc.—through the 20th century and up to today.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 13.01 - 17th Century Rationalists

Instructor: Levey

A study of central themes in the works of the three most celebrated philosophers of the seventeenth century: Descartes, Spinoza and Leibniz. Metaphysics and epistemology will be our focus, and the topics we'll explore include mind, matter, necessity, contingency, truth, causation, space, time, knowledge, reason and the existence of God. We'll approach their philosophy through a variety of their texts, in English translation, including treatises, papers, dialogues, letters and unpublished drafts and notes.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 13.02 - British Empiricism

The Empiricists believed that concepts and knowledge are sourced exclusively in the senses. This position found its most detailed presentation in John Locke (1632-1704), George Berkeley (1685-1753), and David Hume (1711-1776). It led to a picture of the mind, how it relates to the world, and how this leads to knowledge that is still influential today. This course develops that picture, with an eye to the philosophical context in which it came about and its influence on subsequent generations. In addition to Locke, Berkeley, and Hume, other (mainly British) writers considered might include Thomas Hobbes, Margaret Cavendish, Anne Conway, Catharine Cockburn, Gottfried Wilhelm Leibniz, Damaris Masham, Frances Hutcheson, Thomas Reid, and Mary Shepard.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 13.03 - The British Moralists

During the late Seventeenth and Eighteenth Centuries, Britain was the site of especially vigorous and fertile debates about some central issues in moral philosophy. This course explores those debates, including: the nature of moral judgment, the objectivity of moral principles, the dynamics of the moral sentiments, the motivational potential of moral responses, the freedom of the will, and the moral characteristics of the sexes.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 16 - Late Modern Philosophy

In this course students will engage with figures and topics from the period initiated by Kant's *Critique of Pure Reason* in 1781 and ending, roughly, with Nietzsche's last work in 1888. Figures may include: Kant, Herder, Schleiermacher, Reinhold, Schelling, Schlegel, Fichte, Hegel,

Schopenhauer, Kierkegaard, Feuerbach, Marx, Bolzano, Brentano, Meinong, Mill, and Nietzsche. Topics may include: idealism and realism, materialism, social and political philosophy, religion, value, existentialism, psychologism, logic, semantics, philosophy of cognition, and philosophical methodology.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 16.01 - Self-Consciousness in German Idealism

Our theories of action and knowledge are condemned to fail if they are not guided by a philosophically fundamental inquiry into the nature of self-consciousness. Kant maintains a modest version of this thesis. Fichte and Hegel make it the key to their ambitious systematic philosophies. This course aims to isolate and evaluate the basic insights that animate German Idealism.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 16.02 - Kant on Moral, Legal, and Political Philosophy

Instructor: Rosenkoetter

According to Kant's influential account of morality, how an agent understands her own actions determines their moral status. An act that is innocuous in its external guise might be morally problematic because of its internal principle. Kant supplements this with an account of how we ought to relate to other persons in external respects. This "doctrine of right" offers a compelling alternative to more widely known political and legal philosophies. This class will provide a unified introduction to both parts of Kant's attempt to understand the normative implications of agency.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 16.03 - Hegel and Marx

This course concerns two towering figures of the nineteenth century, Hegel and Marx. Our goal is to explore their contrasting views of modern society, especially the modern market economy. We begin with Hegel's *Philosophy of Right*, an attempt to show that modern society promotes human freedom. We then turn to Marx's *Paris Manuscripts* and *Capital*, considering his case for the revolutionary overthrow of this society. Topics discussed along the way may include private property, individual rights, human nature, alienation, exploitation, civil society, democracy, false consciousness, and ideology critique.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 16.04 - Kant's Theoretical Project

This is a course in the foundations of Kant's entire philosophical project, with special focus on themes that are central to the *Critique of Pure Reason*. Discussions may include the nature of reflexive critique, the role of faculties in such a project, Kant's response to skepticism, the nature and status of logic, Kant's philosophy of mathematics, transcendental idealism, Kant's identification and justification of the most basic categories of our thought, and the role of reason in inquiry.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19 - History of 19th/20th Century Philosophy

This course treats philosophical topics and figures in the rich and influential period that spans the 19th and 20th centuries. Topics may include: subjectivity, agency, power, atomism, idealism, positivism, critiques of metaphysics, ideology, psychologism, the unconscious, intentionality, consciousness, analysis, naturalism and modality.

Prerequisite: One course in philosophy or permission of the instructor.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19.01 - Wittgenstein

An investigation of Ludwig Wittgenstein's philosophy, its sources, and its enduring significance. The main line of the course traces the logical atomism of his early years through his rejection of it as dogmatic and the subsequent development of his thoughts about meaning, mind, language games, and rule-following. Other topics might include his philosophy of mathematics, his remarks on color, or his aesthetics and value theory.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19.02 - Transcendental Philosophy in Husserl and Heidegger

Instructor: Rosenkoetter

Transcendental philosophy seeks to uncover conditions for the possibility of experience. This course will study the ways in which Husserl and Heidegger develop and refine Kant's transcendental project in the course of their phenomenological investigations, in part by broadening the range of human experience that is subject to philosophical

scrutiny. Time will be one focus of the course, as we seek to reconstruct Heidegger's claim that different conceptions of time yield different understandings of what it is to be.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19.03 - Positivism and Ordinary Language Philosophy

As the natural sciences developed and branched off from philosophy, philosophers faced the question: What is left for philosophy to do? This crisis led philosophers in the positivist and ordinary language traditions to reexamine the role of philosophy, the boundaries between the meaningful and the nonsensical, and the possibility of metaphysics. In this class, we will study the motivations, methods, and results of each approach, as well as examining prominent criticisms raised against them.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19.04 - American Pragmatism

This course will be examination of the origins and development of Pragmatism as a distinctly American school of thought developing novel approaches to thinking about knowledge, truth, the role of metaphysics in philosophy, religion, and aesthetics. The course will cover such thinkers as W.E.B. Du Bois, William James, C.S. Pierce, John Dewey, and Jane Addams, and may also examine how these thinkers influenced future generations through more contemporary neo-Pragmatist thinkers.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 19.05 - Analytic Philosophy Post-1950

In this course we will engage key figures in the history of analytic philosophy in the latter half of the twentieth century, and their contributions to debates about essence, modality, identity, causation, and supervenience. Figures may include Quine, Marcus, Kripke, Putnam, Anscombe, Davidson, and Lewis.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 22 - Feminism and Philosophy

Instructor: Brison

This course examines the relationship between feminism and philosophy. The focus is on such questions as: Is the Western philosophical canon inherently sexist? How should feminist philosophers read the canon? Are Western

philosophical concepts such as objectivity, reason, and impartiality inherently masculinist concepts? The course may focus on either the ways in which feminists have interpreted great figures in the history of philosophy (e.g., Plato, Aristotle, Descartes, Hume, Kant, Nietzsche), or on the ways in which feminists have rethought basic concepts in core areas of philosophy (e.g., epistemology, ethics, metaphysics, political philosophy, philosophy of science), or both. Open to all classes.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:CI

PHIL 23 - Art and Aesthetics

Instructor: Kulvicki

What is art, and what's the point of it? Does it help us understand the world better or enjoy it more? Does art distract us from what is really important? What is beauty, and ought the arts aim at producing it? What are representation, expression, and realism, and how do they figure in different art forms? The course addresses combinations of these questions through both reading philosophy and engaging with artwork.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: ART

PHIL 23.01 - Ethics and the Arts

From novels, films, and television to painting, sculpture, and symphonies, the influence of art on our character, our values, and how we see the world is pervasive. This raises a number of important philosophical questions at the intersection of ethics and the philosophy of art. Do both moral properties like goodness and aesthetic properties like beauty exist only "in the eye of the beholder", or are one or both of them more objective? Can we learn things about what is good and right, or how to be better people from reading great literature or seeing important paintings? How might the moral character of a work of art affect its aesthetic merit? Is *Birth of a Nation*, for example, a worse film because of its racism?

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 23.02 - Philosophy and the Cinematic Arts

Instructor: Hesni

Moving images introduce new questions and problems in philosophy of art, and they offer new perspectives on old ones. How does film differ from the other arts? Do moving

images represent time, and if so, do they do it in a pictorial manner? In what critical, aesthetic, and representational respects does cinema differ from theater, painting, and the other mimetic arts? Did cinema introduce new possibilities for realism into artistic practice? How should we understand the tangled relationship between photography and cinema? How does the study of moving images relate to problems in other areas of philosophy, like the philosophy of mind and the philosophy of language?

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

PHIL 23.03 - Art and Its Nature

What is the nature of art? Can 'art' be defined, or do attempts at definition illegitimately constrain creative innovation in the arts? What sorts of things are paintings, songs, or works of literature? How are they related to things such as colored canvases, scores, the cultural context, artists, and audiences? Are there important differences in kind among arts like painting, literature, and music? This course will investigate these and other questions about the definition and ontology of art.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:ART

PHIL 24 - Law and Philosophy

Legal practice raises a wide range of questions of interest to philosophers. Some concern how best to understand central concepts invoked in laws: What are contracts? What is free speech? Other questions concern what kinds of laws and legal institutions we should have: What kinds of laws should regulate hate speech? When is the state justified in using coercion to enforce laws? Still other questions concern law itself: How are legal norms related to moral norms?

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 25 - Philosophy of Cognitive Science

Instructor: Kendrick

What is the mind and how can we model it? Cognitive science offers a distinctive approach to some of the great philosophical questions about the mind. But what does it tell us? This course will cover the classical foundations of cognitive science, and some of the more recent developments in the field. We will study the computational theory of the mind and its implications, connectionism, theories of embodiment, dynamical systems, and recent

statistical approaches to cognition. (Not open to students who received credit for PHIL 010/COGS 11.01.)

Prerequisite: One Philosophy course, or permission of the instructor.

Cross-Listed as: COGS 25

Offered: Winter.

Degree Requirement Attributes: Dist:TAS

PHIL 26 - Philosophy and Computers

Instructor: Brison

The accomplishments of artificial intelligence research and the widespread use of computers in our society confront us with many interesting philosophical questions. What are the limits of artificial intelligence? Could computers ever think or feel? Is the Turing test a good test? Are we really computers? Are there decisions computers should never make? Do computers threaten our privacy in special ways? This course will consider such issues in order to explore the philosophical implications of computing. Open to all classes.

Prerequisite: One Philosophy course, one Cognitive Science course, one Computer Science course, or permission of the instructor.

Cross-Listed as: COGS 026

Offered: Spring.

Degree Requirement Attributes: Dist:TAS

PHIL 27 - Philosophy of Science

In this course students examine the history, practices, methods and assumptions of the natural and social sciences. Topics may include: the objects and methods of scientific inquiry; causation and explanation; the structure and function of laws and theories; the role of mathematics and models in science; scientific representation; induction and probability; scientific revolutions; the intersections of science and value; and the sociology of science.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 28 - Phenomenology and Existentialism

This course examines the traditions of phenomenology and existentialism, primarily through a study of German, Austrian, and French philosophy from the first half of the twentieth century, but also including more recent work inspired by these traditions. Major historical figures covered in this course may include: Franz Brentano, Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty, Jean-Paul Sartre, Simone de Beauvoir, and Emmanuel Levinas. Special topics may include: the nature of subjectivity or consciousness; theories of intentionality;

phenomenology and post-phenomenology; historicity; freedom and responsibility; existentialist theories of oppression; and existentialist ethics.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 28.01 - Heidegger's Being and Time

This course will focus on Heidegger's Being and Time. Topics to be discussed include: the foundations of metaphysics, knowing-how vs. knowing-that, agency, practical reason, social identity, social ontology, philosophical methodology, and the phenomenology of everyday experience.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 28.02 - Phenomenology and the Mimetic Arts

Phenomenology offers a distinctive approach to philosophical problems because it is centered on unpacking the structure and content of experience. This course introduces students to phenomenological methods, and then focuses these techniques on the mimetic arts. The arts of imitation – figurative painting and sculpture, photography, film, theater, and so on – are particularly phenomenologically interesting. Experiences of them are complex because they involve awareness of the representations as well as what they represent, among other things. As such, they are both excellent candidates for phenomenological analysis, as well as test cases for phenomenological methods. This course will consider both classical and contemporary thinkers in the phenomenological tradition, as well as their critics.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 28.03 - 20th Century Existentialism

Instructor: Thomasson

This course studies the twentieth-century existentialist tradition of philosophy, focusing on questions about the nature of human existence, anxiety, authenticity, bad faith, freedom, responsibility, death, our relationship to others and to our own bodies, and features of our experience that arise in virtue of being racialized or gendered. Central philosophers in this tradition include Martin Heidegger, Jean-Paul Sartre, Simone de Beauvoir, and Franz Fanon, and we may also examine works of literature or film that illustrate these ideas.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 29 - Philosophy of Logic and Mathematics

Instructor: Mackereth

Logic and philosophy of mathematics are ancient fields of study and have also flowered in recent times. Courses in this rubric study principles, results and methods of logic (whether in 'classical' or 'non-classical' systems) or philosophical issues concerning the interpretation of logic and mathematics (e.g., what *justifies* the rules of inference? what is mathematics *about*? what is logical or mathematical *truth*? what does a proof *prove*?). Emphasis may be historical or contemporary.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: TMV

PHIL 29.01 - Of Time and Necessity: Philosophy of Logic

Often we reason about what is now, actually the case. But often we also reason about what was or will be. Or about what could or might or would have been; or about what must be, even if some things could have been otherwise. What are the correct rules for this? What, if anything, makes them correct? We shall develop some elementary parts of modal and temporal logic and consider their interpretation and philosophical significance.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 29.02 - The Infinite

Infinity is an indispensable concept for mathematics. Arithmetic deals with infinitely many natural numbers, geometry with infinitely long lines, calculus with infinitely small changes, and set theory with multiple levels of infinity. But the infinite raises distinctive philosophical problems. Just what is our concept of the infinite? A completed totality larger than any finite totality? Something that extends beyond all bounds? What justifies us in applying this concept? Are there larger and smaller levels of infinity? How many? Moreover, how are we to deal with the paradoxes that arise from the concept? The infinite also has a related, but arguably distinct use in certain philosophical debates where it is used to denote ideas of perfection or completeness, e.g. of the divine or human reason. What is the relationship between this notion of the infinite and its use in mathematics? Readings will include historical and contemporary sources, from Aristotle to Cantor to today.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 30 - Epistemology and Methodology

Instructor: Binkoski

This course deals with the nature of inquiry. Which methods of inquiry should we rely on? Can we know or understand anything? Of what value are knowledge and understanding? Topics covered may include skepticism, the methodologies of science, mathematics and philosophy, the social nature of knowledge, self-knowledge, the nature of memory and knowledge of the past.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring, Summer.

Degree Requirement Attributes: TMV

PHIL 31 - Metaphysics

This course will focus on one or more central topics in metaphysics, possibly including the existence and nature of the divine, the infinite, free will, personal identity, the self, actions and intentions, space and time, change, the nature of properties, truth, necessity and modality.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 31.01 - Space and Time

In this course, we will consider some historically significant questions about the nature of space, time and spacetime. How are space, time and change related? Is space some kind of substance or container for events? Or is space a relation between things? Is time mind-dependent? How, if at all, is motion or persistence through space and time possible? Are the past, present and future equally real? Is time travel possible?

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 31.04 - Realism and AntiRealism

Instructor: Plunkett

In this course, we will explore a portion of the complex web of debates between realists and antirealists. Questions we will consider include: What is realism? On what bases do we commit to the existence of something? To what extent, if any, are objects of experience and inquiry (e.g. colors, values, natural laws, numbers) independent of the mind? What role, if any, does the mind play in the construction or conception of meanings, properties or

things? What role does language play in determining ontological commitments? What is truth? What, if anything, do distinct conceptions of meaning, objectivity and truth suggest about the nature of reality or about the mind's capacity to determine or to know what is real?

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 31.05 - Time, Truth and Fate

If it's already true that I'll die in an avalanche tomorrow or else that I won't—logic says it's one or the other—is it pointless to take precautions? Is everything fated to happen as it does? Is the future open? Can we change the past? Is anything real apart from the present? Does the present exist? Does the truth about time require different rules of logic? We'll draw on sources from Aristotle to today.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 31.06 - Free Will, Agency and Responsibility

What sorts of agents are we? Do we have free will? Are we ever truly the authors of our actions? Does science—whether physics or psychology or neuroscience—promise to give us the answers? What are the consequences for moral responsibility? The metaphysical, scientific and social dimensions of these classic questions in philosophy run deep through their history and are focal points of contemporary discussion.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 31.07 - The Social World

Instructor: Thomasson

Our world is rife with social entities such as money, states, clubs, and corporations. But what are these things? They seem as real as trees or mountains, yet at least some seem to be constructed by our beliefs and practices in ways that other physical things are not. This course explores questions about what social objects and social groups are, how they differ from natural objects, and how we can acquire knowledge of them.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PHIL 31.08 - Puzzles of the Material World

Instructor: Thomasson

The world around us seems to be populated with familiar objects of all sorts: plants and animals, tables and chairs, rivers and mountains. Yet a range of puzzles and paradoxes have been raised to do with the vagueness of ordinary objects, their relationship to the matter that makes them up, and the apparent rivalry between scientific and everyday descriptions of the world. Might ordinary objects be an illusion? What does the material world truly contain? Can we save our common-sense view of the world?

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 31.09 - Metaphysics of Race

Instructor: Washington

Are human races social or biological? Do races have essences? Why does race have such a grip on our identities and on who holds power in society? This course examines the social construction of race as well as how racial categories interact with human biology and psychology. Racial categories, undoubtedly, impact people's lives. We shall investigate what these racial categories really are and whether we can (or should) eliminate them for a more just society.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 32 - Intermediate Logic

An investigation of three branches of symbolic logic: first-order predicate logic with identity, sentential modal logic, and predicate modal logic. Topics to be covered may include Russell's theory of definite descriptions; the treatment of non-denoting terms in logics known as "free logics;" investigations of various modalities, involving pairs of concepts such as necessity and possibility, being obligatory and being permitted, and being known and being believed; Kripke-style "possible world" semantics.

Prerequisite: PHIL 6, or MATH 39 or MATH 69, or permission of the instructor.

Degree Requirement Attributes: QDS

PHIL 34 - Language and Thought

Instructor: Thomas

Studies of language and cognition play central and defining roles in the history and development of philosophy. Students will investigate the nature of

language and its relations to logic, thought and reality. Specific topics may include theories of signs, meaning, reference, truth, and speech acts. Other possibilities include necessity, analyticity, tensed statements, counterfactual conditionals, indexicals, pragmatics, metaphor, intentionality and vagueness.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; Lang:LRP

PHIL 35 - Mind and Psychology

Instructor: Kulvicki

The mind is both a part of the world and the source of our perspectives on it. A variety of approaches to understanding the mind consider such questions as: What is consciousness? What is it to think about things? How does the world as we know it through the sciences allow for conscious, thinking creatures to exist? Are there unconscious thoughts and desires? Can psychology, neuroscience, philosophy and psychiatry help us answer these questions?

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: TMV

PHIL 35.01 - Theories of Consciousness

Instructor: Kendrick

Conscious experience is at once both completely familiar and utterly mysterious: how is it that electrical activity in a lump of grey matter – the brain – gives rise to the Technicolor phenomenology of our conscious experience? If human beings are just biological machines, then how is possible that we have a subjective point of view on the world? Why are we not just mindless robots, that produce behavior in light of stimulations from the environment, but lack any inner awareness or consciousness? In this class we will read, and bring together in conversation, cutting edge work from philosophy, psychology, and the neurosciences on the nature of consciousness.

Prerequisite: One Philosophy course, one cognitive science course, or permission of the instructor.

Cross-Listed as: COGS 50.04

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PHIL 36 - Metaethics

Instructor: Rosenkoetter

This course explores foundational questions about ethics. For instance: What, if anything, makes an ethical judgment correct? Are ethical facts created or discovered? Can ethical judgments ever be objectively true, or are they only true "from a point of view?" How are ethical judgments related to natural science and the picture of the world it offers us? How can we come to justified beliefs about ethics?

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 37 - Ethical Theory

This course is broadly concerned with questions about what is right, good and virtuous. Some instances of the course will treat abstract questions. For example: Are moral principles universal or relative to a particular group? Is an act right just in case it maximizes happiness? Do we have good reason to be moral? More focused instances might include: Do we have duties to non-humans? When is it morally permissible to kill a person?

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 37.01 - Consequences and Contracts

Ethical theory begins with questions about the foundations of morality: Why should I care about other people at all? It then asks very general questions about what shape our duties to self and others should take: Given that I owe something to other people, do I owe them pleasure? Happiness? To help them pursue their projects? To solicit their consent? This class is devoted to two systems of answers to these questions. The first, consequentialism, holds that the moral status of an action is primarily a matter of whether it brings about good or bad consequences. The second, contractualism, understands moral principles as grounded in a hypothetical contract between agents.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 37.02 - Morality Critics

Instructor: Walden

For most of its history morality has had vociferous critics. These critics argue that morality's claims are illusory, ungrounded, or corrosive to human happiness. This course will examine some relatively recent examples of these arguments, including classic critiques from Marx, Nietzsche, and Freud, the "anti-theory" movement represented by Anscombe, Foot, and Williams, as well as

recent work on evolution, error theory, the revision of normative concepts, and the possibility of ethics without ethical theory.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 38 - Social and Political Philosophy

Instructor: Hesni

Through the study of classical and contemporary texts in political and social theory, we will consider such issues as how and to what extent (if at all) political authority can be justified, what the criteria are for distributive justice, and how social and political inequalities (such as those based on race and gender) should be conceptualized and addressed.

Prerequisite: One Philosophy course, or permission of the instructor.

Offered: Spring, Winter.

Degree Requirement Attributes: TMV

PHIL 38.01 - Equality, Justice, and Democracy

What is the nature of equality? How much does equality matter in ethics and politics? And why (if at all) does equality matter in the first place? This course concerns these and related questions about the role of equality in evaluating the social and political world. One of our central concerns will be how equality relates to other (purportedly important) ethical and political values, including justice, democracy, and freedom.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 38.02 - Ethics, Politics, and the Law

Instructor: Plunkett

This interdisciplinary course will examine normative issues about ethics, politics, and the law. Specific questions studied might include the following: When is the state justified in using coercive force to secure compliance with the law? How should we proceed with those who disagree with us about normative questions within a democratic, pluralistic society? Are there correct answers to normative questions at all, and (if so) how might we improve in learning about them?

Prerequisite: One Philosophy course, or permission of the instructor.

Cross-Listed as: GOVT 86.41

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 38.03 - Race, Justice, and the Law

The last few years has seen increased calls for “racial justice” by a range of actors across the USA. How should we evaluate these calls? For example: what exactly is racial justice? What would it mean for our society to achieve more of it? And what methods for achieving it are (and are not) permissible in a pluralistic, democratic society? We will approach these and related questions by engaging with theories of racial justice, general theories of justice, and theories of race and racism. As part of our discussion, we will also engage with debates about more specific social/political issues tied to debates about racial justice, including such issues as mass incarceration, the foundations of criminal law, affirmative action, antidiscrimination law, propaganda, ideology critique, and political speech.

Prerequisite: One Philosophy course, or permission of the instructor.

Cross-Listed as: GOVT 86.45

Degree Requirement Attributes: Dist:TMV

PHIL 38.04 - Markets, Justice, and the State in the History of Political Thought

This course surveys the views of some important figures in the history of political philosophy and political economy about markets, justice, and the state. We will focus on Plato, David Hume, Adam Smith, Jean-Jacques Rousseau, and G.W.F. Hegel, though we will look at some contemporary work as well.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 38.05 - Black Political Theory

This class examines main ideas and key thinkers within African American, Black American, and Africana political theory. This course compares goals, viewpoints, and strategies of various African American political and social movements of resistance and social and political voices that helped to shape them. Rather than proceeding chronologically, the course is structured around thematic units designed to give a foundational understanding of the development of Africana, Black American, and African American thought on a series of major socio-political topics, such as class, nationality, race, white supremacy, gender, body politics, and culture. The course is structured to give students an understanding of these topics and the multiplicity of methods employed in Black socio-political theory and philosophy.

Prerequisite: One Philosophy course, or permission of the instructor.

Cross-Listed as: AAAS 21.76

Degree Requirement Attributes: Dist:TMV

PHIL 39 - Critical Theory and Post-Structuralism

This course examines themes in 20th and 21st century French and German philosophy, with a focus on critical social theory of the Frankfurt School and French post-structuralism, and contemporary work inspired by these traditions. Figures covered in this course may include: Adorno, Horkheimer, Habermas, Foucault, Deleuze, Derrida, and Honneth. Topics may include: the dialectic of enlightenment; the critique of power; the Frankfurt School; structuralism and post-structuralism; and the problem of modernity.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 39.01 - Foucault

This course will focus on the work of Michel Foucault. Foucault’s work, which combined historical and philosophical inquiry in innovative ways, helped shape many discussions across the humanities and social sciences in the second half of the twentieth century, and continues to be influential today. We will discuss Foucault’s thinking about a range of topics, including ones such as genealogy, power, discourse, sexuality, biopolitics, truth, knowledge, subjectivity, social identity, agency, and philosophical methodology.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:W

PHIL 40 - Race, Gender, Sexuality

This course focuses on the critical examination of race, gender, sexuality, and other intersecting categories of identity, oppression and resistance such as class, nationality, and dis/ability. Prerequisite: One course in philosophy or permission of the instructor

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV; WCult:CI

PHIL 45 - Special Topics in Philosophy

Instructor: Visiting Edinburgh Professor

The content of this course varies from term to term. See individual topic descriptions for details.

Prerequisite: One Philosophy course or permission of the instructor.

Prerequisite: One Philosophy course, or permission of the instructor.

PHIL 45.01 - Paradoxes and Puzzles

Paradoxes have played influential roles in philosophical investigations since antiquity. Paradoxes figure both in arguments for important philosophical theses and in (alleged) refutations of substantive positions. This course considers a selection of celebrated paradoxes along with important attempts to solve them. Students will consider topics in a variety of fields, possibly including philosophy of language, logic, ethics, decision theory, metaphysics, epistemology, and philosophical methodology.

Prerequisite: One Philosophy course, or permission of the instructor.

PHIL 45.02 - God, Belief, and Evil

God is supposed to be a perfect being: all-knowing, all-powerful, and perfectly good. Famously, there are 'proofs' of God's existence, and 'proofs' to show the opposite. What should we think? This class explores the question of God's nature and existence, and what it means for human belief and action. What are the divine attributes? How strong are the arguments for or against God's existence? Can religious belief be rational? How could a perfect God permit evil? Can there be morality without God?

Prerequisite: One Philosophy course, or permission of the instructor.

PHIL 45.03 - Consent in Philosophy and Law

What is consent? Despite its enormous moral and legal centrality, the idea of consent seems flawed in important ways. It is not obvious what counts as consent, or what makes it reasonable to believe in consent. Consent can be coerced, or unwilling. Ideally, consent and refusal are instantaneous powers conferring recognized permission or obligation on recipients. In real life, however, particularly for women, consent and refusal can be ignored, dismissed, misunderstood, or deemed irrelevant. We will examine the concept of consent in legal theory and moral philosophy to move towards a better understanding of it in sexual contexts.

Prerequisite: One Philosophy course, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 45.04 - Embodied Cognition

This course critically examines approaches in the philosophy of mind and cognitive science that see our psychological capacities as importantly dependent on our bodily form and abilities, and our environmental surroundings. We will examine how this view of mind as essentially 'embodied and embedded' arose in reaction to the classical 'cognitivist' paradigm in cognitive science that understands psychological capacities in terms of computational processes implemented by the brain, consider various ways in which the body and environment

might contribute to explanations of cognition, and look at the prospects and challenges for embodied cognitive science in various domains.

Prerequisite: One Philosophy course, or permission of the instructor.

PHIL 50 - Advanced Seminar in Philosophy

This course may be offered in any term and the content varies; see individual topic descriptions.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: TMV

PHIL 50.05 - Plato's Psychology

Instructor: Thomas

Plato's explorations of the structure and functions of *psychê* are rich and complex. The class will focus on texts from a variety of Plato's dialogues in order to examine selected themes: the nature of *psychê*, *psychê*-body relations, the nature of life and life functions (e.g. digestion, respiration), self-motion, perception, pleasure/pain, desire, memory, imagination, belief, and knowledge. Opportunities will arise to explore points of comparison and contrast with earlier and later views in antiquity, and with contemporary discussions in biology, philosophy of mind, psychology, and cognitive science.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 50.09 - Personal Identity and the Self

What sorts of beings are we? Embodied psychologies? Thinking animals? Moral agents? Narrative constructs? The metaphysical questions are abiding ones because of their intrinsic interest, and also because of their rich connections to developing theories of human biology, psychology, value, freedom, and agency. We will investigate which features, if any, are essential to the sorts of beings we are. We will ask after the grounds for existence and persistence of such beings across time (e.g. biological capacities, self-reflective capacities, rational agency). We will consider models of self-constitution, self-knowledge and self-deception. If time permits, the course will conclude with an exploration of the impact of psychological fragmentation on personhood, self-constitution and agency.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.14 - Property, Markets, and Capitalism

Property is a fundamental topic in political philosophy, legal theory and the social sciences. This course integrates philosophical theories of property rights with social scientific perspectives on social cooperation and economic perspectives on private law. It explores the implications of recent work in these areas for broader questions about economic inequality, the fairness of market outcomes, constitutional limitations on state authority, and the proper balance between private control and public regulation.

Prerequisite: Two Philosophy courses, or permission of the Instructor.

Degree Requirement Attributes: TMV

PHIL 50.15 - Neuroethics

The brain is the seat of who we are. This course will examine ethical issues that arise from our growing understanding of the brain, and our consequent ability to monitor and manipulate it. We will discuss timely issues such as cognitive enhancement, the ethics of brain interventions, drugs, and neural gene therapies, and the possibility of mindreading. Later in the course we will examine the ways in which our growing knowledge of the biological basis of moral cognition may or may not have effects on our moral theorizing.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 50.17 - Global Expressive Rights

Does the right to free speech have boundaries? Philosophical defenses of the right to free speech, developed in the context of the town square and the printing press, have yet to catch up with the revolution in communication brought about by the Internet. Technological innovations such as social media have made it possible to communicate instantaneously with hundreds of millions of people around the world and have, for purposes of regulating speech, rendered national boundaries virtually irrelevant. There is now an urgent need to determine how to assess and protect the values of free speech in this global context. Questions we will discuss include: Is there a universal human right to freedom of expression? If so, what is the philosophical basis for it? What are its limits? Does it protect racist hate speech as well as political dissent? How should the different free speech regimes currently in effect in different countries be reconciled in cases of conflict?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 50.18 - Animal Minds

This course focuses on questions about the minds of nonhuman animals. We will consider what kind of thought, if any, is possible for beings that lack language. Can animals have propositional thought? What limits are there on the contents of nonlinguistic thought? We will also consider other aspects of mentality: Can animals feel pain? Can they suffer? Are they conscious? Finally, we will consider the ethical implications of the answers we find to the above questions.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Cross-Listed as: COGS 50.01

Degree Requirement Attributes: Dist:TMV

PHIL 50.20 - The Social Mind

This course addresses the question of how we understand other people's behaviour. It examines contemporary philosophical theories concerning how we think about another's thoughts, and related questions such as whether this ability is unique humans, universal across cultures, and how it may develop. The course is strongly interdisciplinary, drawing on sources from developmental psychology, neuroscience and anthropology, to support philosophical arguments. However, no prior knowledge of these fields is required to take the course.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 50.21 - Current Research in Social/Political Philosophy

What kind of society should we aim to have? And *why* should we aim to have *that* kind of society as opposed to some other kind? And are there *objectively right* answers to these two previous questions, or are there ultimately only answers that are correct *relative to* a given social/historical framework? These three abstract questions have long been at the heart of social/political philosophy, from Aristotle and Plato to the present day. They are also questions that matter tremendously to a wide range of citizens in our increasingly globalized world: a world in which different societies, with different cultures, different social/political structures, and different moral values come into increased contact with other. This course will be focused on these three interconnected questions. It will be an advanced discussion-based seminar, and will involve multiple visiting speakers. All students will be expected to have at least two previous courses in philosophy or in political theory.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Cross-Listed as: GOVT 86.30

Degree Requirement Attributes: TMV

PHIL 50.22 - Value

Instructor: Walden

What is it for something to be valuable or disvaluable? Are there irreducible truths about value? Are knowledge and achievement per se valuable? Or can their value ultimately be explained by the value of happiness? Are persons valuable in a way that cannot be captured by the sum total of their happiness, knowledge, and the like? What role should truths about value play in ethics as a whole?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 50.23 - Virtue Ethics

Contemporary virtue ethics arises out of a long and illustrious history in which ethics focuses on moral character traits. Do virtues (e.g. honesty, courage) exist? If so, what are they? Are they dispositions grounded in nature, traits acquired by education and training, or some combination of both? How are virtues related to practical deliberation, action and emotions? How are virtues related to human flourishing? How promising is virtue ethics relative to other approaches in normative ethics?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.24 - Moral Epistemology

Ethical disagreements range from the ethics of abortion to foundational questions about the basic structure of ethics (such as whether or not consequentialism is true). What is the significance of such disagreements for deciding what to believe in ethics? Do moral disagreements provide support for moral skepticism? How, if at all, can we make progress in ethical inquiry? Parallel questions, as they arise in other domains (e.g. mathematics, political philosophy, and epistemology itself) will be examined.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.25 - Moral Sentimentalism

Sentimentalists believe that moral judgments are based on affective states—roughly, emotions—and that the institution of morality is in some sense a construction out of these states. What are the origins of moral approbation and disapprobation? Is there such a thing as a “moral sense”? What role does sympathy or empathy play in moral psychology? How are moral sentiments related to

practical deliberation? Are moral judgments the product of reason or passion? How do complex moral attitudes evolve? What role do social forces play in shaping moral sentiments? Is there empirical evidence for or against sentimentalism? What are the implications of moral sentimentalism for non-cognitivist approaches to moral discourse? Readings will include both classic sentimentalist texts of the 18th Century—Shaftesbury, Hutcheson, Hume, and Smith—and their latter-day descendants.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.26 - Philosophy and the Quantum World

Many striking claims have been made on the basis of quantum mechanics—that the future is undetermined, that an object can be in two places at once, that consciousness has a special causal role, that the future can affect the past, and so on. Quantum mechanics is an incredibly powerful theory; but it is also a deeply troubled theory, and it is far from obvious what it says. In this course we will study quantum theory, its central difficulty (the measurement problem), and options for avoiding the difficulty. We will also evaluate philosophical claims that have been made on the basis of quantum mechanics. No acquaintance with modern physics will be presupposed.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.27 - Categories

What is there? What are the most fundamental kinds of beings and how are they related to nonfundamental beings? Is it possible to develop a system of categories to identify the highest genera of being and to map the basic structure of reality? Do categories sort extramental entities or concepts or cognitive structures? Are they determined by logic or language? Philosophy is rich with competing attempts to develop categorical systems of reality, cognition, and meaning. This course will examine both historical and contemporary approaches to categories and their importance, including skeptics of the entire undertaking. Authors to be considered may include Plato, Aristotle, Aquinas, Ockham, Suárez, Kant, Frege, Husserl, Heidegger, Ryle, Chisholm, Strawson, Dummett, Westerhoff, Lowe, and Brandom.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.28 - Philosophy of Time

Instructor: Lewis

In this seminar we will explore the nature of time and temporal phenomena. Topics include: Does time pass? Do the past and future exist? What light does special relativity shed on the nature of the present? Is an object fully present at a time, or only a temporal part of it? What explains the temporal asymmetries of our experience? Could the world be fundamentally non-temporal?

Prerequisite: Two Philosophy courses, or permission of the Instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PHIL 50.30 - Freedom of Expression

What does it mean to express oneself? Are there special reasons not to limit people's freedom of expression? If protecting freedom of expression is profoundly important, does this mean that even hate speech (for example) must be protected? What limits can there be? These are some of the questions we will take up in this class. The first part of the course will study foundational questions about the nature and value of freedom of expression. The second part of the course will then examine specific topics including obscenity, pornography, hate speech, privacy, and corporate speech. We will conclude with a critical discussion of several recent Supreme Court decisions on freedom of expression.

Prerequisite: Two Philosophy courses, or permission of the Instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.31 - Classics of Modern Aesthetics

This course introduces students to philosophical aesthetics and the philosophy of art through some of the central works of those fields from the 18th Century onwards. Potential questions include: the nature of aesthetic pleasure, the special features of aesthetic judgments, the beautiful and the sublime, the moral potential of art, the relationship between art and freedom, the characteristic aims of art, what makes an experience aesthetic, and the role of symbolism in the arts.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.32 - Love and Respect

Morality seems to involve distinctive attitudes toward other people—distinctive ways of feeling and regarding other people. What are these distinctive attitudes of moral consideration? In this course we examine two candidates: love and respect. We will consider both the question of what these attitudes ultimately involve, when and why they are merited, and the prospects for moral systems built around them.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.33 - Necessity and Possibility

Modal talk is central to a great range of philosophical discussions, in areas from ethics to metaphysics to philosophy of mind and philosophy of science. But talk about what is possible or necessary is puzzling. For, as Hume noted, we never seem to observe anything like necessity in the world. Can talk about what is necessary or possible be true or false? If so, are there parts of reality (other possible worlds, or essences or modal properties of this world) that make it true? Or should modal talk be understood as doing something other than attempting to describe features of the universe? And how can we come to acquire modal knowledge—given that we don't seem to observe modal facts? This course will examine a range of positions in the metaphysics and epistemology of modality.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.34 - Experiencing Time

Perplexity about the nature of time has evolved in lock step with worries about temporal experience. Somehow, we experience time passing, we differentiate now from later and before, and we do all of this while passing through time. Experience of time can be a window onto time itself, but that window might be muddy. Perhaps we fail to understand time because of how we experience it, or perhaps the best way to understand time is to attend to how we experience it.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.35 - Mind, Language, and Morality

This course examines questions about the connection between mind, language, and normative domains such as morality, politics, and law. For example: how should we understand normative language that seems to be fundamentally about prescribing ways of acting, rather than about describing reality? Are moral judgments more a matter of emotion, or of belief? Can we reconcile a commitment to moral objectivity with our best scientific understanding of moral thought and talk? This course will engage such questions from a fundamentally interdisciplinary perspective, engaging with work from philosophy, cognitive science, linguistics, and psychology. In so doing, we will explore how empirical work can inform philosophical inquiry, and how philosophical inquiry can continue to guide ongoing research in the cognitive sciences. Students will be encouraged to work in

interdisciplinary teams to create their own co-authored research.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Cross-Listed as: COCO 031 COGS 11.03

Degree Requirement Attributes: Dist:TMV

PHIL 50.36 - Propaganda

Communication pushes people around. Sentences, stories, pictures, graphs, and maps can all convey information. But they can also convince, enthrall, enrage, (dis)empower, and (de)humanize. This course focuses on how communicative acts and ideologies have this power. It considers some linguistic, political, epistemological, psychological, and aesthetic aspects of such acts. And it considers examples of the phenomenon as diverse as political ads, literature, film, painting, pornography, slurs, compliments and even course syllabi.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.37 - Self-Consciousness

This seminar examines leading proposals for understanding self-consciousness, self-knowledge, and their significance in the philosophy of mind, philosophy of action, and theories of the self. We will address questions such as these: How are 'I'-thoughts properly conceived? Are they irreducible, or is there some way in which they can be explained in other terms? In what sense, if any, are you directly acquainted with your own states of mind? Is self-knowledge perceptual? Is it constitutive of one's status as a rational being? How should our answers to these and related questions affect how we conceive of the self and its capacities?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.38 - Epistemologies of Oppression, Ignorance, and Resistance

This course will survey epistemological questions that are centered around epistemic oppression, ignorance, and resistance, including: How can we define oppression, ignorance, and resistance? What epistemic harms, wrongs, and/or advantages do oppression, ignorance, and resistance give rise to? What forms of resistance can be used to counter epistemic injustices and oppression? What alternative epistemologies should we consider?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.39 - Simulation and Reality

The rapid development of virtual reality suggests that simulated worlds and simulated agents may become feasible. This raises a number of philosophical questions. Could the world I am living in be simulated? Can I know whether I am living in a simulation? Is a virtual world necessarily an illusion? Are simulated harms real harms? Could life in a virtual world be meaningful? Some of these issues are (relatively) new; others extend and sharpen traditional philosophical debates.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.40 - The Neo-Pragmatist Approach

In this course we will study various forms of neo-pragmatism, as they developed through twentieth-century work by figures such as Ramsey, Ayer, Wittgenstein and Ryle, and up to the recent revivals of neo-pragmatism in the work of Blackburn, Brandom, Horwich and others. We will examine how the approach has been applied to a variety of issues such as understanding talk about morality, the mind, necessity, and truth. We will also examine what forms the approach takes, and what challenges it faces.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 50.41 - Kant's Moral and Aesthetic Philosophies

Instructor: Rosenkoetter

What are our moral duties? How are they related to value, especially the value of persons? Why does freedom of the will make a difference to moral theory? How are the truths of ethics and aesthetics related to truths in domains such as natural science? How is beauty a symbol of morality? What can Kant's ethics and aesthetics tell us about the human condition and our relations to other people?

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 60 - Foreign Study in Philosophy I

Instructor: University of Edinburgh staff.

Credit for this course is awarded to students who have successfully completed a Philosophy course at the University of Edinburgh while a member of the Dartmouth Foreign Study Program at the University of Edinburgh.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 61 - Foreign Study in Philosophy II

Instructor: University of Edinburgh staff.

Credit for this course is awarded to students who have successfully completed a Philosophy course at the University of Edinburgh while a member of the Dartmouth Foreign Study Program at the University of Edinburgh.

Prerequisite: Two Philosophy courses, or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: TMV

PHIL 80 - Culminating Experience in Philosophy

This course may be offered in any term and the content varies. This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted. In every case admission requires the permission of the instructor.

Prerequisite: Requires the permission of the instructor.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 80.01 - Kant's Critique of Pure Reason

A close study of this epoch-making work, which has set the agenda for many sub-fields of philosophy since its publication in 1781. Kant observes that philosophy, in contrast to mathematics and natural science, cannot point to any results that are acknowledged by all able practitioners. Thus, philosophy has made no progress. Kant proposes a method and foundation for philosophy that will change that.

This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.05 - Metametaphysics

In this course, we will examine the nature and methods of metaphysics. Are ontological debates genuine debates, or do at least some of them involve pseudo-questions or merely terminological disputes? If they are genuine questions, how can we best find answers to them—or must the answers remain unknowable? Is there a privileged conceptual system for revealing the true ‘structure of reality’? We will address these and other questions, with texts from Carnap and Quine through to the present.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.06 - Images!

This course uses tools from the philosophy of language, philosophy of mind, and philosophy of art to understand non-linguistic representation and its significance. Topics include the nature of depiction, pictorial realism, mental imagery, maps, diagrams, and models.

Prerequisite: Requires the permission of the Instructor.

Degree Requirement Attributes: TMV

PHIL 80.12 - Free Will, Responsibility and the Brain

Do we have free will? Does brain science show that we do or do not? How does moral responsibility depend on freedom? Can we be responsible if we are merely physical mechanisms? Can we blame people for their actions? This course will explore the philosophical questions and neuroscientific literature regarding free will, and will address the implications of this debate for law and society

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.13 - Love, Respect, and Moral Obligation

A survey of closely connected questions about the attitudes of love and respect, as well as the distinctive moral duties associated with each. Questions will include: What is distinctive about the attitudes of love and respect? Do we have universal duties of respect for all persons? If so, what do these duties entail for us? How is the partiality of an attitude like love to be reconciled with the impartiality of respect?

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.14 - Kant on Being, Goodness, and Beauty

This course will cover Kant’s accounts of what it is to judge of something that it *is*, that it is *good*, and that it is *beautiful*. By far the most time will be devoted to the first of these accounts (his so-called theoretical philosophy), since it serves as a foundation for all of the rest. Coverage of the latter two will focus on how all three accounts are unified in a single system of philosophy.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.15 - Epistemic Normativity

This seminar is on foundational issues in contemporary epistemology, focusing on questions about the nature and grounds of epistemic normativity. Possible topics include: the relationship between epistemic rationality and reasons for belief, whether or not epistemic justification is ultimately dependent on our psychologies or practical interests, the relationship between truth and epistemic

justification, and the bearing of general metanormative theorizing on our understanding of normativity within epistemology.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.16 - Plato's (Super)Naturalism

Platonists, ancient and contemporary alike, commit themselves to the existence of abstract, nonphysical, intelligible beings (e.g. numbers, properties, propositions) in addition to concrete, spatiotemporal, perceptibles (e.g. horses, vases, mountains). For Plato, in particular, changeless, intelligible beings are metaphysically and epistemologically prior to changing, perceptibles. The supernatural is prior to the natural. We will attempt to reconstruct and to assess (a) Plato's reasons for positing and privileging supernatural entities; (b) his view of how, if at all, the "two worlds" interact; (c) his view of how, if at all, we are to understand or to explain the natural in terms of the supernatural; and (d) the prospects for "natural science" as Plato understands them.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.17 - Unity, Necessity, Infinity: Themes from Leibniz

This seminar is a study of three great philosophical topics in Leibniz's work and their contemporary counterparts.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.18 - Beauty

Beauty is the preeminent aesthetic value, and plumbing its depths is one of philosophy's oldest occupations. Is beauty an objective feature of the world or merely "in the eye of the beholder"? How do we judge something to be beautiful? What is the relationship between beauty and pleasure? Can art be beautiful? Can nature? What is the relationship between beauty and other values, like justice and virtue? Readings may include Plato, Aristotle, Plotinus, Augustine, Shaftesbury, Hutcheson, Hume, Kant, Schiller, Hegel, Schopenhauer, Nietzsche, G. E. Moore, Iris Murdoch, Mary Mothersill, Arthur Danto, and Alexander Nehamas.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.19 - Quine

W.V.O. Quine was one of the most influential and systematic philosophers of the 20th century. His insights have had deep and lasting effects on epistemology, philosophy of science, philosophy of language, metaphysics and philosophy of logic. In this class we will

work through some of Quine's most influential papers and arguments, and will try to understand the underlying systematic commitments of his views.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: TMV

PHIL 80.20 - Controversies in Feminist Philosophy

Instructor: Brison

This seminar explores controversies in contemporary feminist philosophy over such issues as pornography and prostitution, sexual coercion and consent, the social construction of gender, and the intersections of gender with race, class, sexual orientation, disability, and other group-based identities.

Prerequisite: Requires the permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PHIL 80.21 - Philosophical Methodology

What does philosophical inquiry involve? What *should* it involve? What are the best ways to make progress in philosophy? Are the best methods for making progress in one area of philosophy (e.g. metaphysics) different from the best methods in another area (e.g. ethics)? Does the idea of philosophical progress even make sense? This course will address these and other questions about the nature of philosophy and philosophical methodology. Possible approaches to be discussed include conceptual analysis, philosophical naturalism, genealogy, ideology critique, phenomenology, thought experiments, and the *a priori*.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.22 - Secondary Qualities

Instructor: Kulvicki

Secondary qualities – colors, sounds, smells, tastes, and touches – raise important problems in the philosophy of mind, epistemology and metaphysics. For many reasons, they seem less objective, and more tied to experience, than the traditionally primary qualities like shapes and masses do. Would colors exist in a world without color perceivers? Would sounds exist without hearers? How do the problems with understanding color relate to those for taste, touch and smell? How are secondary qualities related to primary qualities? This course will consider both historical and contemporary attempts to grapple with the primary/secondary quality distinction.

Prerequisite: Requires the permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

PHIL 80.23 - Philosophy and the Quantum World

Instructor: Lewis

Many striking claims have been made on the basis of quantum mechanics—that the future is undetermined, that an object can be in two places at once, that consciousness has a special causal role, that the future can affect the past, and so on. Quantum mechanics is an incredibly powerful theory; but it is also a deeply troubled theory, and it is far from obvious what it says. In this course we will study quantum theory, its central difficulty (the measurement problem), and options for avoiding the difficulty. We will also evaluate philosophical claims that have been made on the basis of quantum mechanics. No acquaintance with modern physics will be presupposed.

Prerequisite: Requires the permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 80.24 - The Real, the True, and the Vaguely

What is truth? What conception of reality does truth involve? Should we think of truth or reality as transcending the limits of our evidence? Should we conceive of them as always tied to a perspective? Is truth an all-or-nothing matter, or might there be borderline cases? Could there be no definite fact of the matter about the way the world is? We'll address such questions using historical and contemporary sources.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.25 - Imagination

The study of imagination has a long, rich philosophical history. Recently, there has been an explosion of interest in the topic. In this course, we will consider efforts to understand what imagination is and what role imagination plays in the cognitive and emotional lives of experiencers, inquirers, and agents. How is imagination related to perception, belief, pretense, supposition, and desire? What role does imagination play in emotions and in actions? How free is imagination? Can we imagine the impossible? What do we learn about imagination by considering how we engage (or are resistant to engage) in fictional imaginings? How do imagination and creativity interact? Can we rely on imagination to learn or to come to know something new? If so, how? If not, why not? Readings will be drawn from both historical and contemporary sources.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.26 - Conceptual Ethics and Conceptual Engineering

Instructor: Thomasson

Some have argued that a central and legitimate job of philosophy involves conceptual ethics and conceptual engineering: that is, work in determining what sorts of language or concepts we should use, and how we should use them. In this course we will examine the motivations for thinking of philosophy in this way. We will go on to consider questions such as: How is conceptual engineering possible, and how could it lead to philosophical progress? To what extent can past philosophical debates be reconceived as involved in conceptual negotiation? What are the signs that conceptual (re-)engineering is needed? How can and should this sort of work be done? What view(s) of concepts are involved in undertaking this work—and is it better to think of this work at the conceptual or linguistic level? What criteria can and should we employ in evaluating concepts, or conceptual systems? Is conceptual engineering even possible—and if so, how can we do it?

Prerequisite: Requires the permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

PHIL 80.27 - Marx and Marxism

An introduction to the thought of Karl Marx and themes from his work. Areas of focus may include Marx's account of alienation and exploitation, his materialist theory of history, his critique of liberalism, his theory of ideology, his conception of freedom and morality and Marxist analyses of culture. Particular attention will be paid to Marx's relevance to contemporary questions in social and political philosophy.

This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.28 - Reasons, Value, and Well-Being

Many otherwise divergent moral theories agree that we have reason to create and sustain value (or "the good"). How should we understand the concept that plays this central role in ethics? Might there actually be two different concepts that are often called by the same name? We face many questions about which sorts of things (pleasure, knowledge, virtue, and beauty) have intrinsic or final value. Well-being plays a central role in theories of value. What is well-being? And what distinguishes it from 'impersonal' values, if there are any?

This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 80.29 - The Ethics of Neuroscience

This course delves deeply into some of the main questions in neuroethics. We will focus on selected issues in the ethics of neuroscience, including cognitive and moral enhancement, disorders of consciousness, and the ethics of neural interventions. Readings will include both philosophical work in neuroethics and relevant seminal papers in neuroscience.

This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted.

Prerequisite: Requires the permission of the instructor.

PHIL 80.30 - Theories of Judgment

This course examines historically important theories of judgment through a contemporary lens. In what sense is judgment an act? How does judgment relate to assertion, belief, and knowledge? Is judgment a unifying act of synthesis? Or can we judge by taking an attitude toward a single object? How does a judgment such as ‘the cat is on the mat’ differ from a mere collection such as {‘cat’, ‘mat’, ‘on top of’}? Traditional theories of judgment span topics that today fall into the philosophy of mind, epistemology, philosophy of logic, and metaphysics. Some instances of this course will focus on contemporary theories. Historical figures may include Plato, Aristotle, Descartes, Arnauld, Leibniz, Kant, Fichte, Bolzano, Brentano, Mill, Husserl, Frege, and Russell.

This advanced seminar is designed to be a culminating experience for majors in Philosophy, although properly qualified students in other disciplines may also be admitted.

Prerequisite: Requires the permission of the instructor.

Degree Requirement Attributes: Dist:TMV

PHIL 87 - Research in Philosophy

The purpose of Philosophy 87 is to provide opportunity for a student to do advanced work on a topic that the student has studied in a regularly offered course, or to study a topic not normally covered in a regularly offered course. In order to enroll in Philosophy 87, a student must prepare a brief (one page) proposal which describes what the student wishes to study and accomplish by taking this research course. All proposals for Philosophy 87 must be reviewed by the faculty of the Department after having been provisionally approved by the faculty member who is the prospective director. Students should consult with faculty members who might serve as advisors in the preparation and submission of a proposal. Independent study proposals must be submitted to the Chair of the department by the

end of the seventh week of the term prior to the elected term. Philosophy 87 may be taken more than once, but at most, one election will count toward satisfaction of the requirements of the major.

Prerequisite: Requires the permission of the Chair.

Offered: Fall, Spring, Summer, Winter.

PHIL 89 - Honors Program I

Open only to Philosophy senior majors who are participating in the Honors Program. The Honors Program is designed for qualified students interested in doing intensive and individualized work in philosophy. Only those students who have successfully completed the Honors Program are eligible to receive major standings of Honors or High Honors. The program is divided into three stages: the Junior Honors Seminar, preparation and submission of a thesis proposal, and Honors thesis writing. All students who register for the Philosophy Major and who expect to have the necessary cumulative averages (3.50 in Philosophy and 3.33 overall) are invited to join the Junior Honors Seminars. In order to be accepted for Honors thesis writing, a student must successfully complete a Junior Honors Seminar, maintain or attain by the end of the Junior year the required grade point averages, and have a thesis proposal approved by the Philosophy Department by the end of the term in residence prior to commencement of thesis writing.

To complete a two-term thesis, qualified students are enrolled in PHIL 89 for the fall term and PHIL 90 for the winter term of their senior year. In extraordinary cases, a student may be permitted to write a winter-spring or fall-spring thesis. In such cases, students are expected to consult with the Chair of the department during the junior year and to request special accommodations when submitting their senior thesis proposals. Only one term of the Honors Program may count towards satisfying the major requirements. Honors Program grades are assigned retroactively at the end of Spring term.

Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for PHIL-090 and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the “ON” for both PHIL-090 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: Requires the permission of the Chair.

Offered: Fall, Spring, Winter.

PHIL 90 - Honors Program II

Open only to Philosophy senior majors who are participating in the Honors Program. The Honors Program is designed for qualified students interested in doing intensive and individualized work in philosophy. Only

those students who have successfully completed the Honors Program are eligible to receive major standings of Honors or High Honors. The program is divided into three stages: the Junior Honors Seminar, preparation and submission of a thesis proposal, and Honors thesis writing. All students who register for the Philosophy Major and who expect to have the necessary cumulative averages (3.50 in Philosophy and 3.33 overall) are invited to join the Junior Honors Seminars. In order to be accepted for Honors thesis writing, a student must successfully complete a Junior Honors Seminar, maintain or attain by the end of the Junior year the required grade point averages, and have a thesis proposal approved by the Philosophy Department by the end of the term in residence prior to commencement of thesis writing.

Students are awarded one course credit for successful completion of this course. Students who have registered for PHIL-089 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both PHIL-089 and this course upon completion of this course at the end of the third term of coursework.

Prerequisite: Requires the permission of the Chair.

Offered: Fall, Spring, Winter.

Physical Education

Haldeman Family Interim Director of Athletics and Recreation: Michael Harrity

Joann Brislin, Senior Associate Athletic Director for Physical Education and Recreation; Heather Somers, Associate Athletic Director Clubs Sports and Intramurals.

Temporary Adjustment to the Physical Education Requirement

Due to extenuating circumstances caused by the COVID-19 pandemic, including impacts on students' schedules and ongoing concerns about virus transmission, the College has revised the Physical Education (PE) requirements for students graduating in the 2021-2022, 2022-2023, 2023-2024, and 2024-2025 academic years as follows:

2022-2023 academic year: All PE requirements are waived for students graduating in 2022 summer, 2022 fall, 2023 winter, and 2023 spring. For students in the class of 2023 and earlier, this waiver has been extended through 2024 winter.

2023-2024 academic year: The swim test has been waived for students graduating in 2023 summer, 2023 fall, 2024 winter and 2024 spring. The number of required PE courses has been reduced to 1 PE courses for students graduating in these terms.*

2024-2025 academic year: The swim test has been waived for students graduating in 2024 summer, 2024 fall, 2025

winter and 2025 spring. Students graduating in these terms are required to complete 2 PE courses.*

*Note the above adjustments are contingent upon the student's graduation term, not class year.

Starting with those who matriculated with the class of 2026, students are required to complete the Wellness Education program (p. 795). Physical Education activities and courses will continue to count towards the Wellness Education program as will new wellness course offerings. There is no longer a swim requirement for graduation.

The purpose of the Physical Education Department is to provide students with the opportunity to experience a variety of activity courses and, in turn, to appreciate the importance of the healthy body/healthy mind connection. It is our goal to introduce undergraduates to a wide range of lifetime sports and activities so that they may benefit from them throughout their adult lives.

Students who participate in an intercollegiate, club sport or the Marching Band may receive credit for that activity during the terms in which they participate. The Outdoor Programs Office and Dartmouth Outing Club offer a variety of classes, activities and clubs that may earn credit. Participation in many of the COSO dance groups may also provide the opportunity for PE credit.

Physical Education Activities

Sports skills and fitness classes include cardio and aerobics classes, yoga, spinning, strength training, pilates, martial arts, zumba, modern dance, skating, golf, fly fishing, tennis, table tennis, beginning swimming, racquetball, squash. Taking advantage of the Dartmouth Skiway and Dartmouth Yacht Club, ski and snowboard classes are offered in the winter and sailing classes in the summer.

OPO and DOC offerings include kayaking, canoeing, wilderness first aid, hiking, mountain biking, rock-climbing, cross-country skiing, organic farming, Ski Patrol and Timber Team.

Intramural Athletics: The Intramural Program is open to the entire student body. Competition in more than thirty activities is organized for three divisions female, male, and open and Leagues that are competitive or recreational in nature. Teams in the different seasonal activities are organized by residence halls, fraternities, sororities, House communities, groups of friends, affinity groups, graduate students, staff, faculty, and administrators. It is the goal of the Intramural Program to organize a constructive, recreational program that provides sporting opportunities for every student, and encourages a spirit of participation, camaraderie, and sportsmanship.

Native American and Indigenous Studies

Chair: N.B. Duthu

Professors C. G. Calloway (History and NAIS), N. B. Duthu (NAIS), M. B. Taylor (NAIS and English); Assistant Professor: M. Hooley (NAIS), Senior Lecturer, J. L. Powell (Hood Museum), L. Robertson; Lecturer, M. B. Ferguson; Faculty Fellow/Research Associates D. Lucero; E. Ornelas; Fellows: K. Burke, A. Joseph.

To view Native American Studies courses, [click here](#). (p. 649)

Native American and Indigenous Studies offers students the opportunity to pursue a program of study that will increase their understanding of the historical experiences, cultural traditions and innovations, and political aspirations of Indigenous peoples in the United States (including Alaska and Hawaii), Canada and other regions of the world. Students explore the intersection of Indigenous and European histories and systems of knowledge. Students will learn essential information about Indigenous ways of living, organizing societies, and understanding the world, and about their relations with Euro-American colonizing powers. They will learn to appreciate how the value systems of different cultures function and to understand the dynamics of cultural change. They will examine contact and conflict between Indigenous and non-Indigenous societies and will appreciate the unique status of Indigenous peoples in the United States, Canada, and other regions of the world.

Students who elect to take a major or minor in Native American and Indigenous Studies will take a number of core courses and will explore interdisciplinary approaches within the field. Courses in our department are open to all students. Indeed, the mission of the Department of Native American and Indigenous Studies depends upon attracting a varied student body who bring their own perspectives and build upon their individual experiences and understandings.

Major Requirements

Students pursue their own interests and develop an individual program, but they also take certain required courses, to ensure that they acquire a common body of substantive knowledge, gain exposure to crucial ways of critical thinking, and explore several essential approaches to Native American and Indigenous Studies.

In order to qualify for a major in Native American and Indigenous Studies, a student must take ten courses, to be selected as follows:

One Prerequisite:

NAIS 8: Perspectives in Native American Studies

One Class in Literature and Languages:

NAIS 30.xx, NAIS 31, NAIS 32, NAIS 34, NAIS 35, NAIS 40, NAIS 41, or NAIS 47

One Class in History and Culture:

NAIS 14, NAIS 15, NAIS 16, NAIS 18, NAIS 19, NAIS 20, NAIS 42, NAIS 51, or NAIS 55

One Class in Governance and Sovereignty:

NAIS 25, NAIS 36, NAIS 44, or NAIS 50

A Culminating Experience course:

NAIS 80 or 81 or NAIS 86/87 (thesis)

Five Electives:

NAIS 11, NAIS 13, NAIS 14, NAIS 15, NAIS 18, NAIS 19, NAIS 20, NAIS 22, NAIS 25, NAIS 28

NAIS 30, NAIS 31, NAIS 32, NAIS 34, NAIS 35, NAIS 36, NAIS 38, NAIS 39, NAIS 40, NAIS 41, NAIS 42, NAIS 45, NAIS 47, , NAIS 50, NAIS 51, NAIS 55, or NAIS 56

NAIS 85 (permission required)

NAIS 86 (permission required)

NAIS 87 (see Honors Program)

All required courses and most electives are usually offered on an annual basis. However, students should consult the Department for current course offerings and special course offerings for each term.

NAIS Modified Major

We allow students to earn a modified major in NAIS (i.e. NAIS modified with another department or program's courses). We follow the basic model of the college in requiring 6 NAIS courses coupled with 4 courses from another other department or program that, all combined, represent a coherent whole. Furthermore, there will always be one course prerequisite (NAIS 8) *in addition* to the 6 required courses.

Students must submit a written statement to the chair of NAIS and to the Registrar describing their rationale for the modified major as a unified, coherent whole, and detailing the relevance of each planned course to the overall program of study.

Students should also consult the college's general guidelines and procedures for modified majors:

<http://dartmouth.smartcatalogiq.com/en/current/orc/Regulations/Undergraduate-Study/Requirements-for-the-Degree-of-Bachelor-of-Arts/Modified-Major>

MINOR REQUIREMENTS

In order to qualify for a minor in Native American Studies, a student must successfully complete six courses in the Program, as follows:

One Prerequisite: Native American Studies 8: Perspectives in Native American Studies
 Four Elective Courses
 A Culminating Experience course: Native American Studies 81

NAIS - Native American and Indigenous Studies

To view Native American and Indigenous Studies requirements, click here (p. 647).

NAIS 7 - First-Year Seminars in Native American and Indigenous Studies

First Year Seminar: TBA

NAIS 8 - Perspectives in Native American Studies

The growing field of Native American Studies is inherently interdisciplinary. This course gives an overview of the relevant intellectual and cultural questions of tribal expression, identity, traditional thought, continuity, and sovereignty. Using readings from the areas of literature, philosophy, visual arts, anthropology, philosophy of history, and cultural and political discourse, we will examine how their discourses are used in the construction of tribal people as Other, and how these discourses either promote or inhibit the ongoing project of colonialism in indigenous communities and lives. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 9 - Settler Colonialism: Theory, History, Present

“Settler Colonialism” is a term coined by scholars to describe a particular form of colonial expansion driven by mass settler migration and predicated upon the elimination and assimilation, rather than the subjugation, of Indigenous peoples. This course is designed to introduce you to the scholarly theory of “settler colonialism” and its critics, and then to consider its applicability to particular historical case studies and the contemporary societies that those cases have birthed.

Cross-Listed as: HIST 09.08

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 11 - Ancient Native Americans

This course provides an introduction to the ancient societies of North America. The course examines the populating of the Americas and related controversies. We then concentrate on the subsequent development of diverse pre-Columbian societies that included hunter-gatherer bands in the Great Basin, the Arctic, and the sub-Arctic;

Northwest Coast chiefdoms; farmers of the Southwest, such as Chaco Canyon and the desert Hohokam; and the mound-builders of the Eastern Woodlands.

Cross-Listed as: ANTH 011

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 13 - Feast and Forest

This class explores the interrelated social, cultural and political dimensions of Indigenous food systems, notions of kinship, and associated land-based practices. Work in this class will link the politics of Indigenous land and resource rights with the sociality of farming, hunting, gathering, feasting and other food traditions. We will contemplate and engage various elements of Indigenous food systems and health from subsistence food traditions to government commodity foods to urban Native American food movements. Food provides a space where many concepts from Native American Studies converge including food sovereignty, interspecies thinking, land-language linkages, health disparities, Indigenous environmental ethics and Indigenous community resurgence. In this class, we will focus on experiential forms of learning and our time will be organized as weekly field excursions where we learn directly from Indigenous communities, directly from the land, and learn by doing. Nine weeks of hands-on activities will culminate by hosting a fall feast on campus.

Degree Requirement Attributes: Dist:TMV; WCult:CI

NAIS 14 - The Invasion of America: American Indian History Pre-Contact to 1800

This course surveys Native American history from pre-contact times to 1800. It offers a chronological overview of major trends and developments, supplemented by case studies and readings that illustrate key issues and events. The overall context of the course is the conflict generated by the colonial agendas of various European nations and the early republic, but the primary focus will be the historical experiences of the diverse Indian peoples of North America in the wake of European invasion and their struggles to survive in the new world that invasion and colonialism created.

Cross-Listed as: HIST 014

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 15 - American Indians and American Expansion: 1800 to 1924

This course surveys Native American history from c. 1800 to the Indian Citizenship Act in 1924. The overall context of the course is the expansion of the U.S. and the Indian policies adopted by the U.S. government, but the primary

focus is the historical experience of Indian peoples and their struggles to retain their cultures and autonomy while adapting to great changes in the conditions of their lives. Open to all classes.

Cross-Listed as: HIST 015

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 16 - Twentieth Century Native American History

Serving as the final course in a three-quarter survey of Native American history, this class reviews Native history from the late 19th century to the present, focusing on the interplay between large institutions and structures – such as federal and state governments, or the US legal system – and the lived, local experience of tribal communities. The major themes followed throughout the course of the term include: historical narrative (and what it justifies or explains), place and space (how local and national entities define territories), and indigeneity (indigenous identity).

Cross-Listed as: HIST 039

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 18 - Indigenous Environmental Studies

In this course, we examine Indigenous worldviews, environmental values and everyday life through the lens of environmental issues facing Indigenous nations and communities. Our geographic focus is on North America and the Pacific, with limited examples from other places and peoples globally. Through course materials, discussions, and assignments, students gain exposure to varied Indigenous perspectives and Indigenous knowledges expressed and enacted by scholars, Elders, community people, political leaders, and activists. Key concepts in Indigenous environmental studies will be discussed including Indigenous rights and responsibilities, Indigenous environmental stewardship, energy and development, land-language linkages, tribal sovereignty and self-determination, empowerment and resurgence.

Cross-Listed as: ENVS 018

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

NAIS 19 - Encountering Forests

Why do people care about forests? How do people become knowledgeable about a landscape and how do they use theoretical and place-based, practical knowledge about forests? In this course, we attempt to see forests from different cultural and professional lenses including those of Abenaki resource practitioners and natural resource managers. We look at the ways different types of information and different cultural perspectives influence ecological restoration, conservation and land use decisions. Open to all classes.

NAIS 20 - Global Indigenous Politics

This course explores the contemporary politics of Indigenous Peoples and settler societies. It takes a sociological, legal, political, and anthropological approach to how politics operate within and around Indigenous Peoples. By using a comparative and international perspective, it examines the dynamics of critical relationships in terms of national, regional, and global political order. We will look at “standard” settler states often referred to as “neo-Britains,” such as the United States, Canada, New Zealand, and Australia, but also Indigenous Peoples and issues from Europe, Asia, and South America.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

NAIS 21 - Indigenous Peoples and Political Economy

This class places foundational concepts of political economy into direct, generative contact with Indigenous experiences, histories, and economic arrangements, both historically and in the contemporary period. Topics range from how Indigenous peoples generated early discussions around *equality* in Europe to how contemporary North American tribes’ gaming revenues might be fungibly redeployed to meet costs associated with “sustainability.” This class will explore examples primarily from North American tribal and federal contexts but will also include examples from other nations/hemispheres.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

NAIS 22 - Native American Lives

In the past, American Indian history and experience have usually been taught through the lens of the dominant culture, while ignoring the accounts that Indian people have presented in their own words. This course will examine some key issues in Native American history and culture reflected in the biographies and autobiographies of individual American Indians. Their life stories, some contemporary and some historical, will help us understand the forces affecting the world of Native people, and how they shaped their own lives in response. Many early (auto)biographies are “as-told-to” narratives. Consequently, as a point of methodology, we will take time to consider the role, motives, and the effect of the amanuensis (the recorder of an oral narrative) on the story, and as a non-Native mediator of Native experience. Open to all classes.

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 23 - Resource Extraction and Indigenous Led Solutions

This course is a brief survey of resource/natural relative extraction (depending on your world view) and ongoing solutions Indigenous People are leading in the management

of our natural world. This is illustrated by several major environmental issues: water, mining, oil, natural gas, hunting and fishing, outdoor recreation, data access and agriculture.

Cross-Listed as: ENVS 80.19

Degree Requirement Attributes: Dist:TMV; WCult:NW

NAIS 25 - Indian Country Today

This course introduces students to Indian Country by way of exploring contemporary issues of importance to American Indians. Students will begin by examining briefly the concept of "tribal sovereignty" and the role it has, and continues to have, in driving tribal politics. Students will then broaden their understanding of Indian Country by exploring practical issues such as: American Indian political activism, repatriation of sacred objects and remains, American Indian water rights, hunting and fishing rights, gaming in Indian Country, education, and contemporary American Indian arts. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 28 - Native Americans and Sports

In this course, students will explore, through intensive research, writing, and discussion, important contemporary, historical, and cultural issues related to Native Americans and sports. From time immemorial, sports have been many different things to the Indigenous peoples of North America: sacred/religious activity, entertainment, a form of warfare, an opportunity for education/social mobility, and a vehicle for fame/celebrity. By learning about the deep connections Native Americans have to five sports - lacrosse, running, football, basketball, and "alternative" sports (skateboarding, golf, and mixed martial arts) - students will gain a more profound understanding of the Native American experience in North America. Students will gain a greater knowledge of the importance of sports for Native Americans across wide geographies and chronologies. Students will also learn how Native Americans' relationship to sports has changed over time. Most importantly, students will engage in a significant research project on a topic of their choosing related to Native Americans and sports.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 30 - Special Topics in Native American Studies

Course offerings under this rubric vary from year to year. Emphasis is placed on writing and research skills in any aspect of Native American and Indigenous Studies.

NAIS 30.08 - Contemporary Native American Art

An introduction to contemporary Native American art from North America with attention given to traditional forms, techniques and designs employed in different media (e.g.

paintings, basketry, carving, sculpture, ceramics, photography and textiles). The course will feature excursions to local galleries, studios and museums and meetings with local Native American artists.

Offered: Fall.

NAIS 30.09 - The Native Southwest: Peoples, Places & Stories

Sante Fe and northern New Mexico are living "Textbooks" that reveal the multiple cultural influences that have helped shaped the people, the landscape and daily life of this special part of the United States. The course will focus on the past, present and future of the Native peoples of this region and their efforts to sustain their indigenous lifeways over time.

NAIS 30.15 - Contemporary Native American Art

This course will focus on contemporary Native American artists and the variety of artistic practices that make contemporary Native American art so diverse.

Degree Requirement Attributes: Dist:ART; WCult:CI

NAIS 30.21 - Native American Art and Material Culture

This course examines North American Indigenous art and material culture through interdisciplinary perspectives. Throughout the course students will gain a greater understanding of the role that the arts play in the social, cultural, economic and political lives of Indigenous peoples. This course envisions art not as something that merely reflects experience, but as a tool that is used to create new forms for imagining and shaping the world. During the term, we will examine how artists, novelists, historians, anthropologists, art historians and others have contributed to an interdisciplinary dialogue about Native American art and material culture.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

NAIS 30.25 - Introduction to Indigenous Languages

This is a hybrid course that will combine elements of independent study with seminar-style discussion. Students will design a plan for deep and meaningful engagement with their target language and discuss relevant methodologies and case studies. Recognizing the particular urgency and challenges many learners of indigenous language face, the course will cover methodologies, strategies for language learning, as well as the opportunities and constraints to equip students as indigenous language learners.

Cross-Listed as: LING 11.25

Offered: Winter.

Degree Requirement Attributes: Lang:LRP; Dist:SOC;
WCult:NW

NAIS 30.26 - Indigenous Geographies, Environmental Ethics, and Interspecies Relationalities

This course surveys how Indigenous nations and peoples conceptualize their belonging to place and their roles/responsibilities within respective ecosystems. We will address how citizens, knowledge keepers, treaty rights practitioners, and governments of certain Indigenous nations experience(d) environmental changes and ecological transformations. This course provides an introduction to how these peoples and governing bodies have navigated settler colonial governance, imposed alterations to landscapes, changes to their food systems and sustainable economies, and threats to their communities' health emerging from industrial/infrastructural development and contamination. This course seeks to present the efforts of sovereign Indigenous nations and their citizens as they assert their political and environmental authority throughout their traditional homelands and homelands, as well as within their contemporary homes. Critically, in pushing against popular narratives of these nations and peoples' complete dispossession, this course addresses how Indigenous-led ecological restoration initiatives, legal innovations and interventions, and water protection efforts attempt to restore interspecies ecological networks and the presences of their other-than-human relatives. We will explore how contemporary Indigenous peoples and their ancestors rely/relied on these relationships (and the environments that allow(ed) them to flourish) for survival and ontological belonging to place.

Degree Requirement Attributes: Dist:TMV; WCult:NW

NAIS 30.27 - Imagining Siberia

This course examines the geographical and cultural space of Siberia through literature, film, journalistic, historical and scholarly writing. Among its central themes are the colonization of Siberia, integration of indigenous Siberians into Russian life; indigenous political and environmental activism; Siberia as a place of exile (imperial and Soviet); Siberia as a site of socialist construction; the effect of industrial development on ecology, indigenous practices, as well as Siberia's wider population; climate change.

Cross-Listed as: RUSS 38.23

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 30.28 - Peoples of Oceania

The "Peoples of Oceania" course is an intentionally post-colonial and anti-racist approach to studying the vast and varied cultures of Oceania. We will focus on relationships between the religious, social, political, and economic systems in Oceania, rather than dividing weeks into the four geographic regions: Polynesia, Micronesia,

Melanesia, and Australia, which have historically made up the foundation of many Pacific survey courses. Using the work of indigenous Tongan and Fijian scholar Epeli Hau'ofa (1939-2009) and his seminal text "We are the Ocean" as a guiding force, we will crisscross the atolls and islands that make up Oceania, creating a navigator's chart of discussions and debates. Major themes discussed in class include: race/gender/class politics surrounding the ownership and control of cultural heritage, indigenous data sovereignty and intellectual property rights, and climate justice as social justice.

Cross-Listed as: ANTH 50.34

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

NAIS 30.29 - Introduction to Hawaiian History and Studies

This class aims to offer students a foundation in Hawaiian studies and also theoretical and methodological lessons that are portable—that is, that they can use in their other courses.

The class understands the term "Hawaiian" as it is commonly used in Hawai'i: to refer to Native Hawaiians (alternatively known as Kanaka, Kanaka Hawai'i, Kanaka Maoli, Kanaka O'iwi). Thus the course will focus on Kanaka, although students in this course will also learn much about Hawai'i that is not exclusive to Kanaka.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

NAIS 30.30 - Indigenous Approaches to Reproductive Justice

What are the conditions that provide a dignified life? What are the histories and contemporary reproductive lives of marginalized people (e.g., access to contraception, comprehensive and culturally informed sex education, birth work/birthing methods, prenatal and pregnancy care, menopause). This seminar will utilize Indigenous knowledges and approaches to consider sites like healthcare systems, tribal governments, and tribal sovereignty as profoundly connected to reproductive justice. This course will provide a theoretical understanding of reproductive justice and Marxist feminist theory on reproductive and social labor. We will explore these questions through legal cases, books, historical readings, first-person narratives, films, podcasts, and scholarly articles.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 30.31 - Fame, Status, and Indigeneity

The study of fame, status, and new media isn't merely a study of the famous, the celebrated, or the infamous—it is

a critical study about the human and how we experience and understand belonging, memory, storying, time, mystery, and (im)mortality. In many ways, then, the study of fame and its technologies are also a study into the anxieties that emerge from our connections to or disconnections from the world around us. Given such understandings, this course situates fame, status, and new media as a way of knowing, understanding, and relating to the world around us.

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 30.32 - Indigenous People in International Law

This course will provide an overview of the major international law rules and instruments, institutions, and relevant decisions of international tribunals that relate to the rights of Indigenous Peoples.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

NAIS 31 - Indians in American Literature

Indians are uncanny absences in the American narrative and yet persistent fixtures in our national literature from its origins to the present day. This course examines the pervasive appearance of the seductive, strange, and evolving Indian figure in works by prominent American authors such as Nathaniel Hawthorne, Herman Melville, James Fenimore Cooper, William Faulkner, Ernest Hemingway, Willa Cather, and Toni Morrison. We will explore the shifting and ideological role of the Indian as tragic emblem, savage defender, spiritual ally, and modern foil. We will explore the complicated ways that the literary Indian has served to both authenticate and trouble the nation's founding narratives and desires, and more recently, to stand as a mythical antidote to postmodern crises of value, economics, ecology, and spirituality. We will consider the appeal of such tropes in particular regional and historical contexts, such as the Reconstruction South, as well as racial or ethnic ones, such as the African American appropriation of Indian resistance, nobility, and genealogies.

Degree Requirement Attributes: Dist:LIT; WCult:W

NAIS 32 - Indian Killers: Murder and Mystery in Native Literature and Film

This course explores the abundant crime fiction and murder mysteries by contemporary Native American artists. These works imagine a democratized space where colonial violence is avenged, American law is malleable, and intellect triumphs over racism. While most critics applaud such decolonizing efforts, we will ask more difficult questions: do these sensational narratives do real cultural work? Do they suggest that colonial violence begets only more violence? And in the end, who are its true victims?

Cross-Listed as: ENGL 53.20

Degree Requirement Attributes: Dist:LIT; WCult:CI

NAIS 34 - Native American Oral Traditional Literatures

Native American oral tradition constitutes a rich and complex dimension of the American literary heritage. This course will examine a range of oral genres from several time periods and tribal sources. Oral traditions and the textual sources into which they are anthologized provide valuable insights into the nature of human creativity. They are also full of unique hermeneutical challenges. This course will include some contemporary theoretical approaches to orality and the metaphysics of the voice to unpack some of these questions.

Cross-Listed as: ENGL 55.14

Degree Requirement Attributes: Dist:LIT; WCult:NW

NAIS 35 - Native American Literature

Published Native American writing has always incorporated a cross-cultural perspective that mediates among traditions. The novels, short stories, and essays that constitute the Native American contribution to the American literary tradition reveal the literary potential of diverse aesthetic traditions. This course will study representative authors with particular emphasis on contemporary writers.

Cross-Listed as: ENGL 032

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:NW

NAIS 36 - The Undead South: Horror and Haunting in U.S. Southern Literature

This course explores the many forms of horror and haunting—racial, cultural, historic, economic, political—in the region known as the U.S. South, a national space where the possibilities of regeneration are continually thwarted by the aftershocks of a harrowing past. “Undead” tropes encompass numerous varieties of posthumous horror: the dead rising from graves; mourning and funerary practices; the glorification of lost causes and heroes; the excavation of unsuccessfully repressed crimes and bodies. We will consider both traditional forms of Gothic representation (in works by Poe, O’Connor, Faulkner, etc.) as well as contemporary resurgences in the vampires, zombies, and other necrotic forms of recent literature, television, film, and other media. Along the way, we will seek to identify the disturbing ways that the U.S. South has served—both consensually and coercively—as a kind of purgatorial space for America’s most haunting histories.

Cross-Listed as: ENGL 63.06

Degree Requirement Attributes: Dist:LIT; WCult:W

NAIS 38 - Lewis and Clark in Indian Country

In 1804-06, Meriwether Lewis and William Clark completed a remarkable odyssey, from St. Louis to the Pacific, and back. They wrote more than one million words, describing the country, and paid particular attention to the Indian nations they met. This class will use the abridged edition of the journals to examine the context, experiences, and repercussions of an expedition that initiated journeys of discovery for both the young United States and the Native peoples of the American West.

Cross-Listed as: HIST 38.02

Degree Requirement Attributes: Dist:SOC

NAIS 40 - Language Revitalization

There is currently a measurable reduction in the amount of linguistic diversity around the world as many languages become moribund or cease to be spoken. With greater awareness of language endangerment and attrition, there have been counteracting efforts to maintain and revive the use of many of these languages. In this course we examine the phenomena of language endangerment and language revitalization. We will evaluate the socio-historical reasons for language shift, the rationale for language revitalization and the relative degrees of success in different revitalization programs. There will be a focus on the languages of North America.

Cross-Listed as: LING 11.06

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 41 - Native American Literature and the Law

The Acoma Pueblo poet Simon Ortiz once noted that "because of the insistence to keep telling and creating stories, Indian life continues, and it is this resistance against loss that has made life possible." The regenerative and reaffirming force of tribal stories has been most severely tested when confronted by the overwhelming and often destructive power of federal law in Indian affairs. The complex matrix of legal and political relations between Indian tribes and the federal government thus serves as a singularly important arena to examine contested notions of national identity, sovereignty, relationships to lands and people, and concepts of justice. Students will read literary texts produced by Native authors and legal texts involving Indian tribes in an effort to understand how the Native production of stories contributes to the persistence of tribalism in contemporary Native America. Open to all classes.

Degree Requirement Attributes: Dist:LIT; WCult:CI

NAIS 42 - Gender Topics in Native American Life

This course will address a range of topics concerning gender that are of particular significance to indigenous communities. These topics will be considered from historical, political, cultural and social perspectives. In the

context of this class, the term "indigenous" is a category that includes tribal nations of the United States including Hawaii, the First Nations of Canada, and the indigenous people of Australia and New Zealand. The material is presented with particular concern for the diversity of indigenous groups and the variety of their own experiences and autochthony. We will explore their responses to misconceptions of tribal gender roles and identities projected upon Native people by the agents and institutions of settler colonialism. This approach opens a broader discussion about the many actions of indigenous communities to deconstruct and decolonize gender categories that are alien to the continuity, integrity, and vitality of their own traditions. The interdisciplinary approach of this course will engage texts from philosophy, literature, semiotics, history, and policy, as well as gender studies from various socio-cultural perspectives.

Cross-Listed as: WGSS 40.01

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

NAIS 47 - Contemporary Native American Poetry

Muscogee poet, Joy Harjo has stated that Native Peoples are "...still dealing with a holocaust of outrageous proportion in these lands...Many of us...are using the 'enemy language' with which to tell our truths, to sing, to remember ourselves during these troubled times." This course examines the ways contemporary American Indian and other indigenous poets employ literary gestures of resistance and creativity to outlive the ongoing effects of colonialism. We explore how their poetry contributes to the reclamation and continuity of tribal memory and the regeneration of tribal traditions and communities. Our course includes lyric voices from the reservation, from the city, and from indigenous spaces in diasporic and global contexts. We will examine the combined influences that oral tradition, ritual life, and tribal values have on these contemporary poets. The indigenous poetic voice occupies a unique position in contemporary American poetry, but also in the discourse of settler colonialism. This course traces how the themes of these poetic voices bring forward images of past and contemporary experience, to craft a poetic tradition that is distinctly indigenous. Open to all classes.

Cross-Listed as: ENGL 53.25

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

NAIS 50 - Federal Indian Law

This course will focus on the constitutional, statutory and jurisprudential rules of law that make up the field of Federal Indian Law. Attention will be given to the historical framework from which the rules were derived. After tracing the development of the underlying legal

doctrines that are prominent today, the course will turn to a consideration of subject-specified areas of Indian law, including hunting and fishing rights, water rights, and preservation of religious and cultural rights.

Cross-Listed as: GOVT 069

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 51 - Pan-Indianism in American History

This course provides the history of pan-Indian movements in Indigenous North America from 1680 to the present. In the current era of self-determination, tribal sovereignty, and Indigenous nationhood, we perhaps sometimes forget that pan-Indian movements have played a significant part in the history and experiences of Native peoples of North America. We will explore the many ways in which Native peoples have aligned themselves with other tribal nations religious, military, educational, economic, and environmental movements, in the process cutting across linguistic, cultural, religious, and national lines. Indigenous North Americans have deployed pan-Indianism as a strategy to confront both international such as colonialism and the struggles for control of contested Borderlands, and more regional and localized forces. Taken in its entirety, understanding pan-Indianism is essential to understanding the history of Native North America.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 54 - Black and Indigenous Slavery

This course explores how slavery in the New World emerged out of multiple traditions, such as Roman, Mediterranean, African, and Amerindian bondage, as well as diverse forms of captivity and forced labor. Primarily, we will focus on the expansion, overlaps, and variations between Indigenous and African slavery; the legalities justifying these institutions; and varying forms of emancipation in areas such as West and West Central Africa, Europe, Mesoamerica, North and South America, and the Greater Caribbean.

Cross-Listed as: AAAS 60.02 HIST 85.02

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 55 - The First President and the First Americans: The Indian World of George Washington

Much of the story we know about George Washington and the birth of the nation takes place in the East--Mount Vernon, Philadelphia, Yorktown-but Washington and the emerging nation also faced west, to Indian country. Washington's world and his life intersected constantly with Native America. He spent much of his life surveying and speculating in Indian lands. He got a crash course in Indian diplomacy at age twenty-one and his mishandling of Indian allies sparked the French and Indian War. He participated in two expeditions against Fort Duquesne (now Pittsburgh)

and defended the Virginia frontier against Indian attacks. His break with Britain stemmed in large part from Crown policy that threatened his investments in Indian land. As commander of the Continental Army and then President of the United States, he dispatched armies into Indian country.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 56 - Indigenous North American Borderlands

This course focuses on the histories of Indigenous peoples in the borderlands of North America across time in both geographic and thematic contexts. Viewing Native America as an incredibly complex series of borderlands is a useful interpretive model for better understanding the history of Native peoples. Lectures, readings, and class discussion will focus on elements such as cultural contact, conquest and colonialism, missionization, citizenship, gender, and nation. While exploring these various themes, we will touch on some familiar territory such as frontiers and middle grounds, but we will also question our own personal, and often, region-based expertise in order to unpack a more nuanced view of Indigenous borderlands and their significance.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

NAIS 60 - Ecology, Sovereignty, and Contemporary Art in Oceania

Anthropologic environmental degradation has emerged as a key theme in contemporary art and visual culture in Oceania. This proliferation of work comes as no surprise considering Oceania is on the "frontlines" of anthropogenic climate change as one of the world's regions most threatened by rising sea levels, extreme weather events, and resource extraction. In the face of such ecological crises, artistic production and creative expression are crucial means by which peoples of Oceania and its diaspora are fighting for environmental justice. In this course, we will learn from Indigenous filmmakers, performers, sculptors, architects, poets, photographers, and installation artists who are taking control of the imagery and offering radical reimaginings that inspire the public to act and to hold those most responsible to account.

Throughout this course we will learn about and engage with contemporary artists who analyze the history of settler colonial impacts on land/water in the Pacific through resource extraction, military and nuclear testing, tourism and urban development, and climate change. In the context of these histories of environmental destruction, the course will embrace and explore Indigenous artistic activism.

The course will conclude with a deep dive into artistic constructions of the region's alternative, decolonized futures.

Degree Requirement Attributes: Dist:ART; WCult:NW

NAIS 61 - Indigenous Guardians: Protecting our Planet

In this course, we will explore key anthropological concepts through contemporary settings which demonstrate the worth of Indigenous thinking and anthropology in creating solutions that respond to urgent contemporary issues such as climate change, loss of biodiversity, industrial exploitation and pollution, and increased infectious disease. Through a range of lectures, discussions, reading materials and other resources, this course will expose students to growing local and Indigenous anthropologies.

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

NAIS 81.02 - American Indian Intellectuals

This seminar surveys some of the prominent voices in American Indian intellectual culture from the 1960s to the present. The seminar will examine four "kinds" of American Indian intellectuals in order to make better sense of what an American Indian intellectual is, and more importantly, what does it mean for one to be part of an American Indian intellectual culture? The course will explore the work of tribal leaders, American Indian scholars, artists and writers, and Native women.

Degree Requirement Attributes: Dist:TMV; WCult:NW

NAIS 81.03 - Seminar: Pen and Ink Witchcraft: Native American History Through Treaties

Treaties were instrument of dispossession in North America and Indian people referred to treaty making as "pen and ink witch-craft." But the hundreds of Indian treaties also generated unique records of cultural encounter. Working with the records of key treaties, this seminar will examine the protocols of Indian diplomacy, the agendas of the participants, the outcomes of the treaties.

Cross-Listed as: HIST 96.08

Degree Requirement Attributes: Dist:INT or TMV; WCult:NW

NAIS 81.05 - Indigenous Legal Systems & Legal Pluralism

This course focuses on Indigenous law and legal systems, primarily from the United States but with some attention to the *jurisgenerative* (or law-creating) roles of Canadian First Nations and Australian Aboriginal Peoples. For Indigenous peoples, the resurgence of traditional Indigenous laws and their accompanying legal structures serves as an important marker of indigenous self-determination and nation (re)building. At the same time, these developments challenge the long-standing hegemony of the nation-state, particularly the centrality of the state's legal system and the presumption that the state is the sole

author and arbiter of law. The resurgence of Indigenous law and legal systems, in short, tests the limits of legal pluralism, the notion that two or more legal systems can co-exist peacefully in shared territories.

Cross-Listed as: GOVT 86.49

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 81.06 - Fictions of Indigeneity

Indians are tragic footnotes in the American narrative and yet persistent fixtures in its literature. Largely anachronistic, indelibly other, and conceptually unstable, Indigenous representations convey complex attitudes of guilt, fear, repression, and desire. These "Indians" surface vividly at times of cultural, economic, and ecological crisis; they are not "real," but they profoundly alter reality, even for Indians themselves. Readings will include works by William Faulkner, Ernest Hemingway, Willa Cather, Cormac McCarthy, Toni Morrison, and others.

Cross-Listed as: ENGL 63.32

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

NAIS 81.07 - Colonialism, Decolonialism, and the University

This seminar will trace a genealogy of the development of the modern American university with a particular emphasis on the relationship between Indigenous and Black students, NAIS and Black studies, and role the university plays in contemporary American life. Readings (and student responses) will track (in Unit 1) the material and economic emergence of the university within systems of enslavement and Indigenous land expropriation through the rise of the modern student movements and the mechanisms of liberal multicultural inclusion designed to foreclose them; (in Unit 2) theories of disciplinary diplomacy and refusal; and (in Unit 3) new decolonial and abolitionist frameworks for reimagining what the university might be.

Degree Requirement Attributes: Dist:SOC; WCult:NW

NAIS 85 - Independent Study in Native American Studies

This course is designed for students who wish to pursue in depth some subject in Native American Studies not currently offered at the College. Students may not register for independent study until they have discussed their topic with the instructor, and have a course permission card signed by the Chair. Please consult the rules and regulations for NAS 85 in the Program office.

Offered: Fall, Spring, Winter.

NAIS 86 - Independent Research in Native American Studies

This course is designed for a student who wishes to research a particular problem in greater depth than is possible in an Independent Study course (NAS 085). The Chair must give approval, and a faculty advisor will be assigned to each student to supervise the work through regular class meetings. Usually a formal paper embodying the results of the research is required. A student wishing to enroll in this course must first discuss the topic with a faculty member, who will serve as research advisor, and then submit a formal research proposal to the Program. Students are awarded one course credit for successful completion of this course upon completion of NAS 087. Students register for NAS 086 and receive a grade of "ON" (ongoing) at the end of the term. Students then register for NAS 087 the subsequent term to complete the coursework. A final grade will replace the "ON" in NAS 086 upon completion of NAS 087.

Offered: Fall, Winter.

NAIS 87 - Native American Studies Honors

This course is open only to majors and double majors by arrangement with the Chair. The course requires the completion of a formal thesis. Please consult the rules for this course in the Native American Studies Program office. Students are awarded one course credit for successful completion of this course. Students who have registered for NAS 086 register for NAS 087 to complete the coursework. A final grade will replace the "ON" for NAS 086 upon completion of this course for a total of 2 credits for NAS 086 and NAS 087.

Offered: Spring, Winter.

Physics and Astronomy - Undergraduate

Chair: Ryan C. Hickox

Professors M. P. Blencowe, R. R. Caldwell, B. C. Chaboyer, M. Gleiser, R. C. Hickox, J. W. LaBelle, K. A. Lynch, R. M. Millan, R. Onofrio, C. Ramanathan, A. J. Rimberg, B. N. Rogers, R. Sarpeshkar, L. Viola; Associate Professors Y-H Liu, J. D. Whitfield, K. C. Wright; Assistant Professors R. Boyack, J. F. Mahlmann, B. Mutlu-Pakdil, E. Newton, D. G. E. Walker, M. Zhou; Research Professors R. E. Denton, R. Fesen, M. K. Hudson, J. G. Lyon, H-R Mueller, P. Padoan, J. R. Thorstensen; Research Associate Professor A. Dotter; Research Scientists T. C. Li, M. Patel; Visiting Assistant Professor A. R. H. Smith; Visiting Associate Professor E. Cobanera; Adjunct Professors D. Giannakis, J. Liu; Adjunct Associate Professors G. T. F. Hautier, T. P. Smith; Adjunct Assistant Professor M. Fitzpatrick.

To view Astronomy Undergraduate courses, click here. (p. 661)

To view Physics Undergraduate courses, click here. (p. 663)

To view Physics and Astronomy Graduate requirements, click here. (p. 975)

To view Astronomy Graduate courses, click here. (p. 977)

To view Physics Graduate courses, click here. (p. 977)

Courses for Students in the Humanities and Social Sciences

The following courses are especially recommended for students not majoring in one of the sciences: PHYS 1/2 and PHYS 5 (p. 663), and ASTR 1 (p. 661) and ASTR 2/3.

The requirements below apply to students matriculating in fall 2022 and later. Students who matriculated prior to this should use the requirements listed in their matriculated year but may discuss their options with a major advisor. Previous ORC listings are available in the registrar's ORC archive.

Requirements for the Major in Physics

Prerequisite: MATH 3 (p. 566), MATH 8 (p. 567), MATH 13 (p. 568), and MATH 22 (p. 569) or MATH 23 (p. 569) or PHYS 22 (p. 664); PHYS 13 (p. 663), PHYS 14 (p. 664), and PHYS 19 (p. 664). Students interested in pursuing higher-level math classes are encouraged to take both MATH 22 (p. 569) and MATH 23 (p. 569) rather than PHYS 22 (p. 664). Students with advanced placement may substitute PHYS 15 (p. 664) and PHYS 16 (p. 664) for PHYS 13 (p. 663), PHYS 14 (p. 664), and PHYS 19 (p. 664).

Students completing a major in physics are required to take a minimum of eight courses beyond the prerequisites. All students must complete the five courses in the core-sequence: PHYS 40 (p. 665), PHYS 41 (p. 665), PHYS 43 (p. 665), PHYS 44 (p. 666) [ENGS 72 (p. 307) may be substituted], and PHYS 50 (p. 666). The choice of the remaining three electives offer two broad tracks to completing the Physics Major. Examples for each track can be found on the Department Website.

Specialized Track: This track is focused on deep study of physics and astronomy at an advanced level, and is recommended for students planning to go on to graduate school in the physical sciences. All electives must be in physics and astronomy, with at least two having a course number higher than 60. Students are strongly encouraged to engage in independent research. Courses in other departments could be substituted with the approval of the Undergraduate Advisor and the Curriculum Committee.

Interdisciplinary Track: This track may be desirable for students interested in a broad range of careers benefiting from physics problem solving skills such as medicine, neuroscience, public policy, science journalism, STEM education, and industrial R&D. One of the electives must be in physics and astronomy, while up to two can be physics-related courses in other STEM fields. Courses satisfying the elective requirement are connected with the principles or practices used in physics, or emphasize the use of physical principals as a framework through which to explore and understand diverse disciplines. Examples of faculty-approved courses meeting this requirement include MATH 66 (p. 573), MATH 72.01 (p. 574), COSC 89.18 (p. 233), CHEM 96 (p. 189), ENGS 60 (p. 305), EARS 78 (p. 261), and EDUC 46 (p. 285). Students should consult with the Undergraduate Advisor when choosing electives.

Both major tracks require one upper-level laboratory course: PHYS 47 (p. 666), PHYS 48 (p. 666), PHYS 76 (p. 667) or ASTR 61 (p. 662). The department elective courses are PHYS 30 (p. 664), PHYS 31 (p. 665), PHYS 47 (p. 666), PHYS 48 (p. 666), ASTR 15 (p. 661), ASTR 19 (p. 662) or ASTR 25 (p. 662), and all physics and astronomy courses numbered in the sixties or higher.

All students are required to complete a culminating activity in the major. The culminating experience can be satisfied by receiving credit for one of the following courses: PHYS 68 (p. 666), Introductory Plasma Physics; PHYS 72 (p. 667), Introductory Particle Physics; PHYS 73 (p. 667), Introductory Condensed Matter Physics; PHYS 74 (p. 667), Space Plasma Physics; PHYS 77 (p. 667), Introduction to General Relativity and Gravitation; PHYS 76 (p. 667), Methods of Experimental Physics; PHYS 82 (p. 667), Special Topics Seminar; PHYS 92 (p. 668), Physics of the Early Universe; ASTR 74 (p. 662), Astrophysics; ASTR 75 (p. 662), High Energy Astrophysics; ASTR 81 (p. 662), Special Topics in Astronomy; and PHYS 87 (p. 668), Undergraduate Research. Students must complete some individual project work and present a paper, talk or poster based on this work in a department-approved setting. The culminating experience must be completed in the junior or senior year unless otherwise approved by the Undergraduate Advisor and the Department Curriculum Committee.

The culminating experience and laboratory courses are included in, not in addition to, the eight courses required for the major.

All major programs require a GPA of 2.0 or higher in all courses counted toward the major.

Students who plan to complete an ambitious physics major suitable for graduate school in physics should take PHYS 13 (p. 663) and PHYS 14 (p. 664) in the freshman year, combined with PHYS 19 (p. 664) either spring term first year or fall term sophomore year, or they should take PHYS 15 (p. 664) and PHYS 16 (p. 664) in the first year, in all cases taking MATH 13 (p. 568) and MATH 22 (p.

569) or MATH 23 (p. 569) or PHYS 22 (p. 664) as soon as their math preparation allows. Any of these combinations allows the student to start taking the intermediate courses (PHYS 40-41-43-44-50) in the sophomore year and to start taking advanced courses in the junior year. Students beginning physics in the sophomore year can, however, easily complete the major. Note that PHYS 15 (p. 664) is intended for students who had calculus-based classical mechanics in high school, and students must pass a placement exam in order to take it. Entering students taking PHYS 13 (p. 663) in the Fall quarter must have placement into MATH 8 (p. 567) or higher.

Students should inquire (with the department Undergraduate Advisor) about using PHYS 22 (p. 664) to replace MATH 22/23. As noted above, students interested in pursuing higher-level math classes are encouraged to take both MATH 22 (p. 569) and MATH 23 (p. 569), rather than PHYS 22 (p. 664).

Typical programs are outlined below. A physics major may be completed with almost any Dartmouth Plan attendance pattern.

First-year students with no advanced placement can pursue an ambitious physics major that might follow the example program below.

Year	Fall	Winter	Spring
First	MATH 3 (p. 566)	MATH 8 (p. 567)	MATH 13 (p. 568)
		PHYS 13 (p. 663)	PHYS 14 (p. 664)
Subsequently	MATH 22 (p. 569) or MATH 23 (p. 569)		
	PHYS 19 (p. 664)		

The intermediate courses PHYS 40, 41, 43, 44 and 50 can be started as soon as winter term of the sophomore year.

First-year students with advanced placement in mathematics qualify for taking Physics 13 during fall term and might follow the example program:

Fall	Winter	Spring
MATH 8 (p. 567)	MATH 13 (p. 568)	MATH 22 (p. 569) or MATH 23 (p. 569)

or 11

PHYS 13 (p. 663) PHYS 14 (p. 664) PHYS 19 (p. 664)

First-year students with advanced placement in physics and mathematics qualify for Physics 15-16 and might follow the example program:

Fall	Winter	Spring
MATH 8 (p. 567) or MATH 11 (p. 568)	MATH 13 (p. 568)	MATH 13 (p. 568) or MATH 22 (p. 569) or MATH 23 (p. 569)
PHYS 15 (p. 664)	PHYS 16 (p. 664)	PHYS 31 (p. 665) or PHYS 40 (p. 665)

In either case, MATH 22 (p. 569) or MATH 23 (p. 569) could be taken fall term of the sophomore year, concurrently with PHYS 43 (p. 665), or PHYS 22 (p. 664) may be taken in the winter term of the sophomore year. The intermediate courses PHYS 40 (p. 665), 41, 43, 44 and 50 can be started as early as the sophomore year.

The Modified Physics Major

A modified physics major may be desirable for students interested in a broad range of careers such as medicine, the health professions, public policy, or journalism. The prerequisites for the modified major are the same as those for the physics major, and may include the prerequisites of the other department. The modified major consists of ten additional courses, of which at least six must be in the Department of Physics and Astronomy. Courses selected in other departments (science or otherwise) should form a unified whole with the physics courses, and should draw on and relate to a physics background. It is also possible to modify the physics major with courses outside the science division, subject to these same general guidelines. Students are required to complete a culminating activity in the major. The culminating experience requirements for the modified physics major are the same as the physics major. A written rationale explaining the intellectual coherence of the proposed program of courses, approved by the Undergraduate Advisor, is required in all cases. Interested students are urged to consult the Undergraduate Advisor.

Requirements for the Engineering Physics Major

The Department of Engineering Sciences and the Department of Physics and Astronomy offer a major in Engineering Physics. This major features a 5/5 split in courses, unlike a modified major which requires six courses from one field and four from the other.

The prerequisite courses for the Engineering Physics major are MATH 3 (p. 566), MATH 8 (p. 567), MATH 13 (p. 568), MATH 23 (p. 569); PHYS 13 (p. 663), PHYS 14 (p. 664); CHEM 5 (p. 184); and COSC 1 (p. 221) and COSC 10 (p. 221) or ENGS 20 (p. 300).

The Engineering Physics major is a ten-course program consisting of three Engineering Sciences core courses (ENGS 22 (p. 300), ENGS 23 (p. 300), ENGS 24 (p. 300)); three Physics core courses (PHYS 19 (p. 664), PHYS 40 (p. 665), PHYS 43 (p. 665) [Students taking PHYS 15 (p. 664) and PHYS 16 (p. 664) should substitute a third physics elective for PHYS 19 (p. 664)]); and four electives, two from each department. Two electives must be selected from the following list: ENGS 25 (p. 300), ENGS 33 (p. 302), ENGS 34 (p. 302); PHYS 50 (p. 666), PHYS 68 (p. 666), PHYS 90 (p. 668); PHYS 73 (p. 667) or ENGS 131 (p. 909); PHYS 66 (p. 666) or ENGS 64 (p. 306) or ENGS 120 (p. 907); PHYS 44 (p. 666) or ENGS 72 (p. 307). The other two electives may be courses from the Engineering Sciences Department numbered above 20, excluding ENGS 80 and ENGS 87 (p. 309), or courses from the Physics and Astronomy Department which fulfill the straight physics major.

A culminating experience is required in the major which can be taken instead of one of the electives above. It must be one of the following: a project or a thesis, ENGS 86 (p. 309), ENGS 88 (p. 310) or ENGS 89 (p. 310)*; an advanced engineering sciences course with a significant design or research project, normally taken in the senior year, chosen from an approved list (consult the Engineering Sciences Department for the most recent list); or PHYS 68 (p. 666), PHYS 72 (p. 667), PHYS 73 (p. 667), PHYS 74 (p. 667), PHYS 76 (p. 667), PHYS 82 (p. 667), or PHYS 87 (p. 668).

**ENGS 89 (p. 310) must be taken as part of the two-course design sequence ENGS 89 (p. 310)/ ENGS 90 (p. 310). Prior to enrollment in ENGS 89 (p. 310), at least six engineering sciences courses must be completed: ENGS 21 (p. 300) plus five additional courses numbered 22 - 76.*

All major programs require a GPA of 2.0 or higher in all courses counted toward the major.

For more information contact Professor Lynch (Physics and Astronomy) or Professor Liu (Engineering Sciences).

Students who major in Engineering Physics or major in Physics with an Engineering Sciences minor can enter the professionally-accredited Bachelor of Engineering (B.E.) program at the Thayer School and complete the requirements for the B.E. degree with an additional year of study beyond the A.B. Students interested in pursuing the B.E. are strongly encouraged to work closely with their major advisor to choose their elective courses.

A detailed description of the B.E. requirements can be

found on the Engineering Sciences ORC page.

Requirements for the Major in Astronomy

Prerequisite: MATH 3 (p. 566), MATH 8 (p. 567), MATH 13 (p. 568); and two courses from the introductory physics sequence: PHYS 3 (p. 663) and 4 (p. 663), or PHYS 13 (p. 663) and 14 (p. 664), or PHYS 15 (p. 664) and 16 (p. 664).

Students completing a major in astronomy are required to take ASTR 15 (p. 661), ASTR 25 (p. 662), ASTR 61 (p. 662) and one elective from ASTR 74 (p. 662), ASTR 75 (p. 662), ASTR 81 (p. 662), ASTR 87 (p. 663). Two additional courses must be selected from Physics and Astronomy courses numbered 19 or above. The remaining two courses may be selected from any Physics and Astronomy course numbered 19 or above, or given the interdisciplinary nature of astronomy, two suitable advanced courses from other science departments may be taken as part of the astronomy major, subject to department approval.

Graduate courses in Physics and Astronomy are open to qualified undergraduates. Students are required to complete a culminating activity in the major. For the astronomy major this requirement may be satisfied by receiving credit for one of the following courses: ASTR 74 (p. 662), Astrophysics; ASTR 75 (p. 662), High Energy Astrophysics; ASTR 81 (p. 662), Special Topics in Astronomy; ASTR 87 (p. 663), Undergraduate Research in Astronomy; PHYS 77 (p. 667), Introduction to General Relativity and Gravitation. The culminating experience is included in, not in addition to, the eight courses required for the major.

All major programs require a GPA of 2.0 or higher in all courses counted toward the major.

Requirements for Physics and Astronomy Minors

Physics Minor

Prerequisite: MATH 3 (p. 566), MATH 8 (p. 567), MATH 13 (p. 568), MATH 22 (p. 569) or MATH 23 (p. 569), or equivalents; PHYS 13 (p. 663) and PHYS 14 (p. 664) (or PHYS 15 (p. 664) and PHYS 16 (p. 664)).

Four courses are required in addition to the prerequisites. One of these must be PHYS 19 (p. 664) except that students taking PHYS 15 (p. 664) and PHYS 16 (p. 664) may substitute another elective for PHYS 19 (p. 664). The other three must be chosen from physics courses numbered 30, 31 or 40 and above, and/or astronomy 15, 19 or 25 and above, at least one of which must be numbered above all of these.

Note that PHYS 19 (p. 664) has PHYS 14 (p. 664) as prerequisite.

Astronomy Minor

Prerequisites: MATH 3 (p. 566) and MATH 8 (p. 567) or equivalents; PHYS 13 (p. 663) and PHYS 14 (p. 664) (or PHYS 3 (p. 663) and PHYS 4 (p. 663), or PHYS 15 (p. 664) and PHYS 16 (p. 664)).

Four courses are required in addition to the prerequisites. ASTR 15 (p. 661) and ASTR 25 (p. 662) plus any two of the following: ASTR 19 (p. 662), ASTR 61 (p. 662), ASTR 74 (p. 662), ASTR 75 (p. 662), ASTR 81 (p. 662), ASTR 87 (p. 663), PHYS 31.03 (p. 665), PHYS 31.04 (p. 665), or PHYS 77 (p. 667).

Note that ASTR 25 (p. 662) has PHYS 14 (p. 664) as prerequisite.

Requirements for the Mathematical Physics Minor

This minor is sponsored by the faculty in Mathematics and Physics. It may be combined with majors in either of the two departments, or any other department. Students majoring in both physics and mathematics cannot take the minor.

Prerequisites: PHYS 13 (p. 663), PHYS 14 (p. 664), PHYS 19 (p. 664) (or PHYS 15 (p. 664) and PHYS 16 (p. 664)), and PHYS 40 (p. 665), MATH 3 (p. 566), MATH 8 (p. 567), MATH 13 (p. 568), and MATH 22 (p. 569) or MATH 24 (p. 569).

Requirements: A total of four additional courses are required. These must include MATH 23 (p. 569) and MATH 46 (p. 572). Mathematics majors must choose two elective physics courses from the following list; physics majors must choose two elective mathematics courses; students majoring in a department other than mathematics or physics must choose one mathematics and one physics course.

PHYS 30 (p. 664), PHYS 31 (p. 665), PHYS 41 (p. 665), PHYS 43 (p. 665), PHYS 44 (p. 666), PHYS 47 (p. 666), PHYS 50 (p. 666), PHYS 66 (p. 666), PHYS 72 (p. 667), PHYS 75 (p. 667), PHYS 77 (p. 667), PHYS 90 (p. 668). [Note PHYS 50 (p. 666) requires PHYS 40 (p. 665).]

MATH 31 (p. 570) or MATH 71 (p. 574), MATH 42 (p. 572), MATH 43 (p. 572), MATH 53 (p. 572), MATH 54 (p. 573), MATH 63 (p. 573), MATH 66 (p. 573), MATH 73 (p. 575), MATH 76 (p. 575).

An advanced undergraduate or graduate level physics or mathematics course may be substituted, with permission from the physics or mathematics department undergraduate advisor. No course may count towards both the major and minor.

Off Campus Study

The Department of Physics and Astronomy sponsors a foreign study program (FSP) in South Africa during alternate winter terms. Twelve to sixteen students will be selected for the program; MATH 3 (p. 566) an introductory

physics course (Physics 3 (p. 663), or 13 (p. 663) or 15 (p. 664)), and one introductory astronomy course (Astronomy 2 (p. 661), or 3 (p. 661), or 15 (p. 661), or 25 (p. 662)) are prerequisite courses. Students on the FSP get credit for three courses: PHYS 31.03 (p. 665), ASTR 61 (p. 662), and ASTR 81 (p. 662) (all of which count towards the astronomy or physics major). The FSP consists of five weeks of intensive course work on the campus of the University of Cape Town, followed by one week spent at the South African Astronomical Observatory (SAAO), which will include data taking, followed by independent research study on the Cape Town campus using the data collected, under close supervision of a faculty member. Dartmouth owns approximately a ten percent stake in the Southern African Large Telescope, which is at SAAO and is the largest optical telescope in the Southern Hemisphere. For further information, see Professors Chaboyer or Hickox.

Honors Program in Physics Or Astronomy

An honors student carries out a program of independent work in physics or astronomy under the supervision of a member of the faculty. This independent work may be done in the student's senior year, but often begins earlier. It may be experimental, theoretical, or observational. A written report on the completed work is required.

Any major meeting the college requirements (as described in the Regulations section of this catalog) is eligible for admission to the departmental Honors Program. To enter the program eligible students should obtain the permission of the Department and of the faculty member who is to supervise the work. Seniors will receive information on the application process and subsequent deadlines early Fall term. Early consultation with the Department is encouraged.

All departmental Honors are considered individually and awarded by a vote of the faculty. To be considered for *High Honors* the student must defend an Honors Thesis based upon the independent work before a faculty committee. Students with an average in the major of 3.75 or higher who do not complete an honors thesis may be considered for *Honors*, as distinct from High Honors, provided they have completed three courses beyond the minimum number required for the major from among the list of courses numbered 60 or higher. One of the courses must be PHYS 76 (p. 667), PHYS 82 (p. 667), ASTR 81 (p. 662) or PHYS 87 (p. 668).

All Honors students must meet the minimum requirements of the regular major, and, ordinarily, should take physics, astronomy, and mathematics courses beyond those requirements. Special programs may be worked out for eligible students who wish to include extensive work in a field related to physics or astronomy.

Courses for Graduate Credit

Physics and astronomy courses offered for graduate credit are those numbered 61 or higher. The Department of Physics and Astronomy will allow graduate credit for any course offered by the Departments of Biochemistry, Biological Sciences, Chemistry, Earth Sciences, Engineering Sciences, or Mathematics that receives graduate credit from that department.

ASTR - Astronomy - Undergraduate Courses

To view *Physics Undergraduate courses*, [click here](#). (p. 663)

To view *Astronomy Undergraduate requirements*, [click here](#). (p. 657)

To view *Physics and Astronomy Graduate requirements*, [click here](#). (p. 975)

To view *Astronomy Graduate courses*, [click here](#). (p. 977)

To view *Physics Graduate courses*, [click here](#). (p. 977)

ASTR 1 - Exploration of the Solar System

Instructor: Newton (summer), Chaboyer (spring)

An introduction to the study of the solar system and exoplanets. Topics to be discussed include phases of the moon and eclipses, formation and evolution of the early solar system, Terrestrial and Jovian planetary surfaces and atmospheres, moons and small bodies in the solar system, and exoplanets. Course material will include results from recent planetary spacecraft missions. Labs include making observations with telescopes.

Offered: Spring, Summer.

Degree Requirement Attributes: Dist:SLA

ASTR 2 - Exploring the Universe

Instructor: Astro Visitor

A survey of contemporary knowledge of the nature and the evolution of stars, galaxies and the universe. Topics include stellar evolution, the origin of the elements, the deaths of stars, black holes, the structure of our Galaxy, other galaxies, dark matter, the expanding universe and the big bang. Physical processes underlying these phenomena are discussed. No student may receive credit for both ASTR 2 and ASTR 3. Identical to ASTR 3, but without the observing laboratory.

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:SCI

ASTR 3 - Exploring the Universe, with Laboratory

Instructor: Astro Visitor

A survey of contemporary knowledge of the nature and the evolution of stars, galaxies and the universe. Topics include stellar evolution, the origin of the elements, the deaths of stars, black holes, the structure of our Galaxy, other galaxies, dark matter, the expanding universe and the big bang. Physical processes underlying these phenomena are discussed. Students will make observations with radio and optical telescopes. Supplemental course fee required. No student may receive credit for both ASTR 2 and ASTR 3. Identical to ASTR 2, but with an observing laboratory.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

ASTR 7 - First-year Seminars in Astronomy

ASTR 15 - Stars and the Milky Way

Instructor: Mutlu-Pakdil

An introduction to astronomy and astrophysics for science majors and others with some background in physics, providing an observational and theoretical background for more advanced topics in astrophysics. Topics include basic properties of stars as derived from observations, stellar evolution, black holes, transfer of energy by electromagnetic radiation, the interstellar gas and the Milky Way galaxy. Students will make observations with the telescope.

Prerequisite: An introductory physics course (or permission of instructor) and MATH 3.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

ASTR 19 - Habitable Planets

Instructor: Newton

Is the Earth unique, or are there other planets in the universe which can support life? This question has been pondered for thousands of years, and humanity is now on the cusp of being able to answer this question. This course will examine the question of planetary habitability, focusing on the processes which made the Earth habitable, and the likelihood of finding other habitable planets in the universe. Topics to be covered include the creation of the elements, the formation of structure in the universe, planetary system formation, the habitability of Earth and other bodies in the solar system, the future habitability of Earth, and the prospects of finding habitable planets around other stars.

Prerequisite: MATH 3

Cross-Listed as: EARS 019

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

ASTR 25 - Galaxies and Cosmology

Instructor: Astro Visitor

This is a course in physical cosmology. The first half builds the Universe from the bottom up, focusing on galaxies. Topics include galaxy classification dynamics, clustering, dark matter, and evidence for the large scale homogeneity. The second half builds the Universe from the top down, developing the Big Bang cosmology. Topics include FRW equation classical cosmological tests, nucleosynthesis, and cosmic microwave background.

Prerequisite: PHYS 14 or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

ASTR 61 - Observational Techniques in Astronomy

Instructor: Astro Visitor

The fundamental techniques of observational astronomy. Topics include detectors, photometry, spectroscopy, data acquisition and analysis.

Prerequisite: ASTR 2, ASTR 3 or ASTR 15.

Offered: Fall.

Degree Requirement Attributes: Dist:SLA

ASTR 74 - Astrophysics

Instructor: Newton

A survey of the processes which generate radiation detected by astronomers, and how astronomers interpret observations to understand the Universe. Topics include radiative transfer, blackbody radiation, bremsstrahlung, synchrotron radiation, inverse Compton scattering, atomic and molecular spectra. Applications will include emission from neutron stars, accretion disks surrounding black holes, stellar atmospheres, intergalactic gas and the cosmic microwave background.

Prerequisite: PHYS 14 or PHYS 16; and PHYS 19 or PHYS 24 or PHYS 40; and ASTR 2 or ASTR 3 or ASTR 15, or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

ASTR 75 - High Energy Astrophysics

Instructor: Mahlmann

The physics and observations of black holes, neutron stars, white dwarfs, supernova remnants, and extragalactic objects through x-ray, gamma-ray, and cosmic rays.

Prerequisite: PHYS 19 and ASTR 25 or the equivalent, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

ASTR 81 - Special Topics in Astronomy

Advanced study of a topic in observational astronomy, culminating in a one- to two-week observing session at a major research observatory.

ASTR 81.01 - Observing in South Africa

Instructor: Hickox

This course is an advanced study of a topic in observational astronomy, including a one- week observing session at the South African Astronomical Observatory in Sutherland, South Africa. During their time at the observatory, students will have the opportunity to collect data for their observational project. At the completion of the observing, students will return to Cape Town where they will work in pairs, analyzing the data they obtained at the observatory. The course will culminate with a written presentation of the results of the students' research project. Specific research topics will vary and could range from studies of exoplanets, stars or other galaxies, depending on faculty and student interest.

Offered: Winter.

ASTR 81.02 - Special topics in Astronomy, with observing

This course is an advanced study of a topic in observational astronomy, including a one to two-week observing session at a major research observatory. During their time at the observatory, students will have the opportunity to operate a telescope and collect data for their observational project. At the completion of the observing, students analyze some of the data they obtained at the observatory. Specific research topics will vary and could range from studies of exoplanets, stars or other galaxies, depending on faculty and student interest.

ASTR 87 - Undergraduate Research in Astronomy

Instructor: Staff

Intensive individual work on an observational or theoretical problem in astronomy or cosmology under the guidance of a staff member.

Prerequisite: Permission of the Chair.

Offered: Fall, Spring, Summer, Winter.

PHYS - Physics - Undergraduate Courses

To view Astronomy Undergraduate courses, click here. (p. 661)

To view Physics Undergraduate requirements, click here. (p. 657)

To view Physics and Astronomy Graduate requirements, click here. (p. 975)

To view Astronomy Graduate courses, click here. (p. 977)

To view Physics Graduate courses, click here. (p. 977)

PHYS 1 - Understanding the Universe: From Atoms to the Big Bang, with Laboratory

Instructor: Visitor

An introduction to the evolution of physical theories and models of natural phenomena from ancient Greece to modern times. Topics include Pre-Socratic and Aristotelian natural philosophy; the scientific revolutions of Copernicus, Kepler, Galileo, and Newton, and the birth of mechanics; electromagnetism, thermodynamics, and the physics of light in the nineteenth century; the emergence of quantum mechanics and relativity theory; modern particle physics and the search for unification; the interface of particle physics and cosmology; and physics and its contexts (other sciences, worldviews, technologies, the Cold War). Students will carry out five biweekly laboratory experiments illustrating major discoveries. No student may receive credit for both Physics 1 and Physics 2. Identical to Physics 2, but with the laboratory.

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

PHYS 2 - Understanding the Universe: From Atoms to the Big Bang

Instructor: Visitor

No student may receive credit for both Physics 1 and Physics 2. Identical to PHYS 1, but without the laboratory.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 3 - General Physics I

Instructor: Onofrio (summer), Mahlmann/Hickox (fall)

The fundamental laws and phenomena of mechanics, heat, wave motion, and sound, including relativistic concepts. The sequence Physics 3-4 is designed primarily for students who do not intend to take PHYS 19. One laboratory period per week.

Prerequisite: MATH 3.

Offered: Fall, Summer.

Degree Requirement Attributes: Dist:SLA

PHYS 4 - General Physics II

Instructor: Blencowe (winter), Millan (spring)

The fundamental laws and phenomena of electricity, magnetism, and light, including quantum mechanical

concepts; atomic and nuclear physics. One laboratory period per week.

Prerequisite: PHYS 3.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 5 - Physics for Future Leaders

Instructor: Visitor

This class is an introduction to modern physics, the resulting technologies and social ramifications. Physics topics include radiation, energy, atomic and nuclear structures, relativity, waves and quantum mechanics. These in turn have led to modern technologies such as microwaves, radar, GPS, lasers, nuclear power and weapons. We may also examine MRIs, X-rays, digital cameras, quantum cryptography, semiconductors including computer chips and photovoltaics. This course aims to take some of the mystery out of these technologies so that a student can be an informed citizen as society debates the uses of these machines and devices. Finally, we look at potential future developments such as quantum computing and new energy technologies. No prior physics is required.

Degree Requirement Attributes: Dist:TAS

PHYS 7 - First-year Seminars in Physics

Instructor: Whitfield

Offered: Winter.

PHYS 13 - Introductory Physics I

Instructor: LaBelle (fall), Caldwell (winter)

The fundamental laws of mechanics. Reference frames. Harmonic and gravitational motion. Thermodynamics and kinetic theory. PHYS 13, PHYS 14, and PHYS 19 are designed as a three-term sequence for students majoring in a physical science. One laboratory period per week.

Prerequisite: MATH 3 and MATH 8 (at least concurrently).

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 14 - Introductory Physics II

Instructor: Zhou/Ramanathan (winter), Liu/Walker (spring)

The fundamental laws of electricity and magnetism. Maxwell's equations. Waves. Electrical and magnetic properties of bulk matter. Circuit theory. Optics. One laboratory period per week.

Prerequisite: PHYS 13 and MATH 8, or permission of the instructor.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 15 - Introductory Physics I, Honors Section

Instructor: Liu (fall), Rimberg (winter)

PHYS 15 and PHYS 16 is an alternative sequence to PHYS 13, PHYS 14 and 19 for students whose substantial background in physics and mathematics enables them to study the material at a faster pace than is possible in regular sections, and who are willing to devote correspondingly more work to the course. Admission criteria are described in the First Year, available from the Office of the Dean of Undergraduate Students. Classical dynamics of particles and rigid bodies. Special Relativity. Introduction to Quantum Mechanics including the wave-particle duality of radiation and matter, the Uncertainty Principle and the Schrödinger equation in one and three spatial dimensions. One laboratory period per week.

Prerequisite: MATH 8 or MATH 9 concurrently, and permission of the instructor.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 16 - Introductory Physics II, Honors Section

Instructor: Walker (winter), Zhou (spring)

Electric and magnetic fields of charges and currents. Electromagnetic induction. Dielectric and magnetic materials. Circuit theory. Maxwell's equations, electromagnetic waves and optics. Special relativity. One laboratory period per week.

Prerequisite: PHYS 15 or permission of the instructor.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 19 - Relativistic and Quantum Physics

Instructor: Walker (fall), Mueller (spring)

The general theme of this course is the wave-particle duality of radiation and matter, with an introduction to special relativity. Classical wave phenomena in mechanical and electromagnetic systems including beats, interference, and diffraction. Quantum aspects of electromagnetic radiation include the photoelectric effect, Compton scattering and pair production and annihilation. Quantum aspects of matter include DeBroglie waves, electron diffraction, and the spectrum of the hydrogen atom. The Schrödinger equation is discussed in one and three spatial dimensions.

Prerequisite: PHYS 14 and MATH 13, or permission of the instructor.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 22 - Applied Mathematical Methods for Physicists

Instructor: Mueller

This course surveys two of the most important areas of mathematical physics: linear algebra and the theory of differential equations. Topics from linear algebra include complex numbers, systems of equations, matrices, vector spaces, and the eigenvalue problem. Topics from differential equations include linear differential equations, homogeneous and non-homogeneous differential equations with constant coefficients, and partial differential equations (separation of variables). The application of these techniques to problems in physics and astronomy will be emphasized. Not open to students who have received credit for Phys 82.02

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PHYS 30 - Biological Physics

Instructor: Samkoe

Introduction to the principles of physics and engineering applied to biological problems. Topics include the architecture of biological cells, molecular motion, entropic forces, enzymes and molecular machines, and nerve impulses.

Prerequisite: CHEM 5, PHYS 13 and PHYS 14 (or equivalent). PHYS 14 (or equivalent) may be taken concurrently. Students with strong quantitative skills who have taken PHYS 3 and PHYS 4 can enroll with permission of the instructor.

Cross-Listed as: ENGS 030

Degree Requirement Attributes: Dist:TAS

PHYS 31 - Explore Physics!

Prerequisite: PHYS 13, PHYS 14 or PHYS 15, PHYS 16

Degree Requirement Attributes: Dist:SCI

PHYS 31.01 - Nonlinear Dynamics of Physical Systems

Most problems introduced in introductory physics course are based on linear systems; the simple harmonic oscillator is a prime example. This course will instead focus on the dynamics of systems that are instead explicitly non-linear, as are the vast majority of physical systems in the real world; examples from real life include self-oscillators such as the human heart, exotic electrical devices such as the superconducting Josephson junction, and complex, chaotic phenomena such as weather. We will focus on using graphical techniques for figuring out the behavior of differential equations without actually solving them, frequently using Mathematica as a tool for numerics and visualization. Students will also be introduced to the art of

making good physical approximations.

Degree Requirement Attributes: Dist:SCI

PHYS 31.02 - Research Methods in 21st Century Physics and Astronomy

This course provides a structured introduction to some of the key methods used in 21st Century Physics and Astronomy Research. Student will learn how to perform a literature search, engage in hands-on experimental and/or computational research and use computational techniques for data analysis and modeling. Students will practice distinguishing between critical variables and background details and learn to summarize and present their results to different audiences. Ethics and researcher responsibilities will also be explored.

Degree Requirement Attributes: Dist:SCI

PHYS 31.03 - Research Methods in 21st Century Astronomy in South Africa

Instructor: Visitor

This course will introduce students to research methods used within astronomy, as well as to the cutting-edge research conducted in South Africa and its impact on South African society. Students will be introduced to modern tools used by astronomers, with an emphasis on hands-on practice using Python for scientific analyses. From guest lecturers and site visits, students will learn about science and society in South Africa. Offered as part of the Astronomy FSP.

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PHYS 31.04 - Research Methods in 21st Century Astronomy

Instructor: Whitfield

This course provides a structured introduction to some of the key methods used in 21st Century Astronomy Research. In this course students will gain hands-on experience using computational techniques for data analysis and modeling in python. Students will be introduced to all aspects of the research process, from reviewing the literature, to producing high quality plots, to presenting their research to their peers. Ethical questions related to conducting research in the US will be explored. Not open to students who have received credit for PHYS 31.02, PHYS 31.03.

Degree Requirement Attributes: Dist:SLA

PHYS 40 - Quantum Physics of Matter

Instructor: Whitfield (fall), Blencowe (spring)

An introduction to the quantum physics of matter on different scales, from a phenomenological perspective. Schrödinger equation in three spatial dimensions, angular momentum and hydrogenic wavefunctions. Spin and the Pauli exclusion principle, application to multi-electron atoms, the periodic table. Molecular bonds and spectra. Basic properties of solids, survey of nuclear models and reactions. An introduction to the standard model of elementary particle physics.

Prerequisite: PHYS 15 or PHYS 19; and PHYS 14 or PHYS 16, or permission of the instructor.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 41 - Electricity and Magnetism

Instructor: Lynch (fall), Millan (winter)

The differential and integral laws of electric and magnetic fields in vector form. Potential theory and boundary value problems. Maxwell's equations, the wave equation and plane waves.

Prerequisite: PHYS 15 or PHYS 19; and PHYS 14 or PHYS 16; or permission of the instructor.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SCI

PHYS 43 - Statistical Physics

Instructor: Mueller

Kinetic theory of gases. Boltzmann's Principle. Boltzmann, Bose-Einstein and Fermi-Dirac statistics. The statistical approach to thermodynamics. Applications to radiation, atoms, molecules, and condensed matter.

Prerequisite: PHYS 15 or PHYS 19; and PHYS 14 or PHYS 16; or permission of the instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PHYS 44 - Mechanics

Instructor: Millan

The fundamental principles of mechanics. Lagrangian form of the equations of motion. Central force motion, collisions and scattering, dynamics of rigid bodies, vibrations, normal modes, and waves. Nonlinear dynamics and chaos.

Prerequisite: PHYS 15 or PHYS 19; and PHYS 14 or PHYS 16; and MATH 22 or MATH 23 or PHYS 22, or permission of the instructor.

Offered: Summer.

Degree Requirement Attributes: Dist:SCI

PHYS 47 - Optics

Instructor: Wright

This course covers geometrical, physical, and modern optics topics including the propagation, reflection, dispersion, and refraction of radiant energy; polarization, interference, and diffraction in optical systems; the basics of coherence theory, lasers, quantum optics, and holography. Applications of optical and laser science will be discussed. Lectures and laboratory work.

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Prerequisite: PHYS 14 or PHYS 16 and MATH 13, or permission of the instructor.

Offered: Winter.

Degree Requirement Attributes: Dist:SLA

PHYS 48 - Electronics: Introduction to Linear and Digital Circuits

Instructor: Stauth (fall), Odame (winter)

Principles of operation of semiconductor diodes, bipolar and field-effect transistors, and their application in rectifier, amplifier, waveshaping, and logic circuits. Basic active-circuit theory. Introduction to integrated circuits: the operational amplifier and comparator, to include practical considerations for designing circuits with off-the shelf components. Emphasis on breadth of coverage of low-frequency linear and digital networks, as well as on high order passive and active filter design. Laboratory exercises permit "hands-on" experience in the analysis and design of simple electronic circuits. The course is designed for two populations: a) those desiring a single course in basic electronics, and b) those that need the fundamentals necessary for further study of active circuits and systems.

Prerequisite: ENGS 22, or equivalent background in basic circuit theory.

Cross-Listed as: ENGS 032

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:TLA

PHYS 50 - Introductory Quantum Mechanics

Instructor: Boyack

An introduction to the basic concepts and formalism of quantum mechanics. Time-dependent and time-independent Schrödinger equation for a variety of systems in one and three spatial dimensions, bound and unbound states, quantum tunneling. Basics of Dirac notation and matrix formalism. Orbital and spin angular momentum, addition rules. Approximation methods: WKB and variational approach, time-independent perturbation theory.

Prerequisite: PHYS 40 and MATH 22 or MATH 23 or PHYS 22, or permission of the instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 66 - Relativistic Electrodynamics

Instructor: Liu

Classical electromagnetic radiation and relativistic electrodynamics. Topics include: electromagnetism and relativity; Maxwell stress-tensor; electromagnetic wave propagation in free space and media; radiation by charged particles; scattering; diffraction.

Prerequisite: PHYS 41 or permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 68 - Introductory Plasma Physics

Instructor: Zhou

The physics of ionized gases with emphasis on the theory of waves and instabilities. Includes introduction to magnetohydrodynamics and kinetic theory of plasmas.

Prerequisite: PHYS 41 or permission of instructor.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PHYS 70 - Fourier Transforms and Complex Variables

Instructor: Testorf

Survey of a number of mathematical methods of importance in Engineering and Physics with particular emphasis on the Fourier transform as a tool for modeling and analysis. Orthogonal function expansions, Fourier series, discrete and continuous Fourier transforms, generalized functions and sampling theory, complex functions and complex integration, Laplace, Z, and Hilbert transforms. Computational Fourier analysis. Applications to linear systems, waves, and signal processing.

Prerequisite: MATH 46 or ENGS 22, ENGS 23, or the equivalent.

Cross-Listed as: ENGS 092

Degree Requirement Attributes: Dist:QDS

PHYS 72 - Introductory Particle Physics

Instructor: Onofrio

Characterization of elementary particles and their interactions according to the standard model; leptons, quarks, gauge bosons, and the Higgs mechanism. Composite particles and their interactions. Methods of production and measurement of particles. Particle lifetimes and cross sections.

Prerequisite: PHYS 50

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PHYS 73 - Introductory Condensed Matter Physics

Instructor: Rimberg

The physics of condensed matter, primarily solids with periodic order. Theory and measurement of electronic, optical, magnetic, and thermal properties of solids. Lattice structures, symmetries, and bonding energies. The reciprocal lattice and the Brillouin Zone. Bloch's Theorem. Electron energy band structure and the Fermi surface, phonon mode dispersion, and other elementary excitations.

Prerequisite: PHYS 43 and PHYS 50; PHYS 43 may be taken concurrently.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PHYS 74 - Space Plasma Physics

Plasma processes in the solar system. The solar cycle, solar flares, solar wind outflow and interaction with distinct types of planetary magnetospheres. Plasma waves, particle acceleration and generation of escaping electromagnetic radiation. Magnetosphere-ionosphere coupling, and ionospheric interaction with the neutral atmosphere.

Prerequisite: PHYS 66 or PHYS 68, or permission of the instructor.

Degree Requirement Attributes: Dist:SCI

PHYS 75 - Quantum Computation and Information

Instructor: Whitfield

Overview of basic ideas in classical and quantum computation. Concepts and physical realizations of quantum bits (qubits). Topics in quantum computation may include the Deutsch-Jozsa, quantum Fourier transform, Shor factorization and Grover search algorithms. Topics in quantum communication include quantum key distribution schemes and quantum teleportation. Issues relating to the foundations and interpretations of quantum mechanics will be revisited throughout the course.

Prerequisite: PHYS 15 or PHYS 19; or MATH 22; or permission of instructor.

Offered: Spring.

Degree Requirement Attributes: Dist:QDS

PHYS 76 - Methods of Experimental Physics

Instructor: Wright

Experiments emphasizing modern techniques and topics in physical measurements. Experiments will cover areas including condensed matter, particle and plasma physics,

and such practical laboratory techniques as noise suppression, digital data acquisition, and operation of standard laboratory equipment.

Prerequisite: PHYS 40

Offered: Spring.

Degree Requirement Attributes: Dist:SLA

PHYS 77 - Introduction to General Relativity and Gravitation

Instructor: Caldwell

An introduction to Einstein's General Theory of Relativity.

Topics: review of special relativity and spacetime diagrams; equivalence principle; coordinates and four vectors; the spacetime metric; particle motion from a variational principle, the geodesic equation; spacetime physics; redshift and time dilation in the solar system, gravitational lenses, black holes, the expanding universe, gravitational waves, time machines (closed timelike curves); the field equations of General Relativity, connecting spacetime curvature to energy and momentum.

Prerequisite: PHYS 44 and PHYS 41.

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PHYS 82 - Special Topics Seminar

Advanced study in physics or astrophysics. Students will read and report orally on significant journal articles and write a paper summarizing their library research.

PHYS 82.02 - Introductory Mathematical Methods for Physicists

This course surveys topics from linear algebra and differential equations, selected for their importance in upper-level physics courses. Topics from linear algebra will include complex numbers, systems of equations, matrices, vector spaces, and the eigenvalue problem. Topics from differential equations will include linear differential equations, series solutions, systems of differential equations, and partial differential equations (separation of variables). The course will serve as an alternate to the Math22/23/24 prerequisite for physics majors.

Prerequisite: MATH 3, MATH 8, AND MATH 13

Degree Requirement Attributes: Dist:QDS

PHYS 82.03 - Introductory Quantum Optics

Instructor: Rimberg

Introduction to quantum optics and its applications. Quantum harmonic oscillators, quantization of the electromagnetic field, Fock states, quantum treatment of beam splitters and interferometers, coherent and incoherent

states, squeezed light, entanglement. Applications to be discussed include gravity wave detection, quantum enhanced resolution and lithography, and quantum imaging.

Offered: Spring.

Degree Requirement Attributes: Dist:SCI

PHYS 85 - Reading Course

Instructor: Staff

Reading course under the direction of a faculty member.

Offered: Fall, Spring, Summer, Winter.

PHYS 87 - Undergraduate Research

Instructor: Staff

Intensive individual work on an experimental or theoretical problem in physics or astronomy under the guidance of a staff member.

Offered: Fall, Spring, Summer, Winter.

PHYS 90 - Intermediate Quantum Mechanics

Instructor: Ramanathan

An in-depth study of the formal apparatus and postulates of non-relativistic quantum mechanics. Dirac formalism for pure quantum states and operators, quantum measurements and uncertainty relations. Mixed quantum states and density operators. Quantum dynamics in Schrödinger and Heisenberg picture. Symmetries and conservation laws, angular momentum theory. Approximation methods: time-independent and time-dependent perturbation theory.

Prerequisite: PHYS 50

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PHYS 92 - Physics of the Early Universe

Instructor: Caldwell

An introduction to the study of the early universe, focusing on the interaction of nuclear and particle physics and cosmology, the so-called inner-space outer-space connection. After an investigation of the Robertson-Walker metric and its application to the Big Bang model, the course will address the following topics; thermodynamics in an expanding universe; nucleosynthesis (synthesis of light nuclei) and baryogenesis (origin of excess matter over antimatter); inflationary models of cosmology; primordial phase transitions; introduction to quantum cosmology.

Prerequisite: PHYS 41, PHYS 43, PHYS 44, PHYS 50 and ASTR 25 (recommended).

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

Psychological and Brain Sciences - Undergraduate

Chair: P. Tse, Professor

Professor Emeritus G. Wolford; Professors S. Beilock, A. Clark, D. Coch, B. Duchaine, R. Granger, J. Haxby, J. Taube, P. Tse, T. Wager, T. Wheatley; Associate Professors L. Chang, D. Kraemer, J. Manning, J. Murray, K. Nautiyal, C. Robertson, K. Smith, A. Soltani, V. Störmer, M. van der Meer; Assistant Professors E. Finn, P. O'Neill, K. Sanchez, A. Stolk, M. Thornton, S. Warlow; Senior Lecturer M. Herman; Lecturers J. Bharucha, K. R. Clark, L. Dwiell, G. Greenough, L. Veillette, S. Winter, S. Wray; Adjunct Professor J. Sargent; Adjunct Associate Professor M. Funnell; Adjunct Assistant Professor M. Detzer; Research Professors P. Cavanagh, Y. Halchenko; Research Assistant Professor W. Hudenko.

To view Psychological and Brain Sciences Undergraduate courses, click here.

To view Psychological and Brain Sciences Graduate requirements, click here.

To view Psychological and Brain Sciences Graduate courses, click here.

Requirements for the Psychology Major

Prerequisites: PSYC 1 (p. 670) and PSYC 10 (p. 670). Students must obtain a grade no lower than C in PSYC 1. Students who fail to obtain a C or better in PSYC 1 may still complete a major in Psychology in the event that they earn C or better in their next two Psychology courses. PSYC 10 may be taken concurrently with PSYC 1. As a course prerequisite to the major, PSYC 10 should be taken at or before the time of declaring the major; otherwise it must be taken in the first offering following sign-up for the major. Though we recommend against substituting, some other statistics courses are permitted as alternatives to PSYC 10 with permission, specifically: ECON 10 (p. 275), GOVT 10 (p. 454), MATH 10 (p. 568), QSS 15 (p. 690) and SOCY 10 (p. 736). MATH 10 credit by AP or IB is not an acceptable substitute.

Requirements: The minimum major consists of one required course (PSYC 11 (p. 670)) and seven electives numbered above 20. At least two of these seven electives must be numbered in the 20s, one 50 or higher, and another 60 or higher; the 60 or higher requirement constitutes the Culminating Experience requirement in Psychology. Of the two courses in the 20s, one must come from the set PSYC 23 (p. 671), PSYC 24 (p. 671), or PSYC 25 (p. 671). The second must come from the set PSYC 21 (p. 671), PSYC 22 (p. 671), or PSYC 28 (p. 671) unless the student has credit for PSYC 6, in which case any additional PSYC

course in the 20s will meet this requirement. PSYC 38 (p. 672) is an acceptable alternative to PSYC 28, and may alternatively fulfill this requirement. PSYC 88 (p. 686) may not be used to satisfy the 60 or above requirement. With prior approval, credit for up to two electives may be transferred from another institution, but credit for courses numbered 50 and above must be obtained at Dartmouth. Transfer of credits must be approved by the Chair of the Departmental Undergraduate Committee and by the Registrar prior to taking the course(s). Certain graduate courses may be taken by qualified and advanced undergraduates if permission is obtained from the course instructor.

The course numbers have meaning. Courses numbered 10 and below do not carry major credit. Courses numbered in the 20s are introductions to particular sub-areas in psychology. Courses in the 30s, 40s, and 50s are more advanced than 20s level courses and generally have a narrower focus. Courses in the 60s are advanced laboratory courses. Courses in the 80s are upper level seminars.

The Department recommends that majors take more upper level (50, 60, and 80 level) courses than the minimum requirement.

The Modified Major

The Psychology major cannot be modified. This includes both modified majors in which Psychology is the primary component (e.g., Psychology Modified with Economics) and those in which it is the secondary component (e.g., Economics Modified with Psychology). Students who seek to modify a major in another department with courses in Psychology may do so by using the option of a modified major without indication of the secondary department (e.g. Economics Modified). Students who wish to have a more substantial study of Psychology noted on their transcript are encouraged to declare a Psychology minor.

Requirements for the Minor

The Minor will consist of 6 courses: PSYC 1 (p. 670) (prerequisite) plus five additional courses numbered 11 or above 20. Two of the five must be numbered in the 50s or above. While two of the six may be transfers, transfers cannot count toward the 50 or above requirement.

Requirements for the Major and Minor in Neuroscience

See section 'Neuroscience' in this catalog for information regarding these major and minor programs.

Honors Program

Qualified students majoring in Psychological and Brain Sciences have the opportunity to participate in an Honors Program that provides individualized advanced instruction and research experience in psychology.

Individuals may apply for honors work as early as the spring term of their junior year, but not later than the end of the first week of fall term of their senior year. Eligibility

for honors is a 3.30 average in the major and a 3.0 average overall. Students interested in doing honors work should consult the Department website for information and the required permission checklist.

To be awarded Honors at graduation, a student must fulfill the following requirements:

1. Satisfactorily fulfill all course requirements of the major.
2. By the mid-winter term date specified on the checklist, the student must submit a prospectus of their thesis work to the Departmental Undergraduate Committee. The prospectus shall include a brief description of the rationale for the research, methods used, analyses to be employed and implications of the expected results.
3. An acceptable thesis, based upon two terms of laboratory or field research that is carried out under the auspices of PSYC 89.01 (p. 686) and PSYC 89.02 (p. 687) and under the supervision of a department faculty member must be written. The Honors Thesis will entail an independent and individual project. Furthermore, the thesis must be read and approved by the student's Thesis Committee. The Thesis Committee must include a regular member of the Department of Psychological and Brain Sciences faculty. The other individual, if not a regular member of PBS, must have an active academic appointment (e.g. Research Associate, Research Assistant Professor, Medical School faculty, faculty in other departments of the College, for instance). Either Committee member may serve as the primary advisor. The two members of the Thesis Committee may not be in the same laboratory. The Thesis Committee will read and evaluate the thesis and make recommendations to the Undergraduate Committee regarding the awarding of Honors.
4. Honors students will present their research to departmental faculty and interested others during the latter part of the Spring term of their senior year.

Psychological and Brain Sciences Department Website

Please check the Department website at <http://pbs.dartmouth.edu/> for further information, including updated course offerings, department events, and checklists to aid in planning a major, minor, or independent research.

PSYC - Psychological and Brain Sciences - Undergraduate Courses

To view Psychological and Brain Sciences Undergraduate requirements, click here. (p. 668)

To view Psychological and Brain Sciences Graduate requirements, click here. (p. 959)

To view Psychological and Brain Sciences Graduate courses, click here. (p. 960)

PSYC 1 - Introductory Psychology

Instructor: Duchaine and Tse, Duchaine and Wheatley

This course provides an introduction to the scientific study of the mind, brain, and behavior. Emphasis is placed upon the basic psychological processes of perception, consciousness, cognition, memory, and motivation as well as development, personality, individual differences, social behavior, and psychological disorders.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 6 - Introduction to Neuroscience

Instructor: Finn, Warlow

This course provides students with an introduction to the fundamental principles of neuroscience. The course will include sections on cellular and molecular neuroscience, neurophysiology, neuroanatomy, and cognitive neuroscience. Neuroscience is a broad field that is intrinsically interdisciplinary. As a consequence, the course draws on a variety of disciplines, including biochemistry, biology, physiology, pharmacology, (neuro)anatomy and psychology. The course will begin with in-depth analysis of basic functions of single nerve cells. We will then consider increasingly more complex neural circuits, which by the end of the course will lead to an analysis of the brain mechanisms that underlie complex goal-oriented behavior.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 7 - First-Year Seminars in Psychology

Instructor: Detzer

Offered: Spring.

PSYC 10 - Experimental Design, Methodology, and Data Analysis Procedures

Instructor: Bharucha, Thornton, Murray, Wray

This course covers the various ways in which empirical information is obtained and analyzed in psychology and neuroscience. Statistical techniques covered will include ways to describe center and spread, t-tests, linear regression, chi-square, and complex analysis of variance (ANOVA), as well as use of a common statistical program to analyze data. This course is the preferred preparation for PSYC 11, Laboratory in Psychological Science.

Prerequisite: PSYC 1 or PSYC 6 (may be taken concurrently). Because of the large overlap in material covered, no student may receive credit for more than one of the courses ECON 10, GOVT 10, MATH 10, PSYC 10,

QSS 15, or SOCY 10 except by special petition. Cannot be taken concurrently with PSYC 11.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:QDS

PSYC 11 - Laboratory in Psychological Science

Instructor: K.R. Clark, Winter, Manning

Progress in psychological science depends upon the analysis and thoughtful interpretation of results from well-designed experiments. In this course you will learn how to think critically about this research process, first through a series of guided readings and exercises. In the second part of the course you will design, carry out, and analyze your own original experimental research project as part of a small team and then present your work in a public forum and as a written journal-style manuscript.

Prerequisite: PSYC 1 or PSYC 6, and PSYC 10. Cannot be taken concurrently with PSYC 10.

Offered: Fall, Spring, Summer.

Degree Requirement Attributes: Dist:SLA

PSYC 15 - Impact Design

Instructor: Wheatley and Loeb

This innovative, team-based, project course is about impact--what it is, how you experience it, how you create it, how you measure it. We focus on designing products and experiences for community partners as part of the Social Impact Practicum program. Rather than looking at how we can solve a problem, we look at how we can create delight for users. Students will learn how to combine core principles from human psychology with the tools of design to create products and user experiences that promote engagement, adoption, and learning. Past community partners have included the Hartford Autism Regional Program (HARP) and the Aging Resource Center.

Cross-Listed as: COSC 29.04

Degree Requirement Attributes: Dist:TMV

PSYC 21 - Perception

Instructor: Tse

Our senses are our windows to the world, and the scientific study of the senses is one of the oldest sub-disciplines in experimental psychology. This course introduces students to the fundamental workings of our senses of vision, hearing, touch, taste and smell. The course includes careful consideration of experimental methodology as well as content.

Prerequisite: PSYC 1 or PSYC 6

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PSYC 22 - Learning

Instructor: Winter

Learning is a fundamental process of behavior change that is essential for survival. In this course, we will approach the study of learning primarily focusing on Pavlovian and instrumental conditioning procedures. Generally, this course focuses on the psychological principles that underlie learning, memory, and behavior. In addition, we will also cover material examining the neural systems underlying these processes. The main goal of this course is for students to develop a strong understanding of theory and research in the area of learning and behavior.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

PSYC 23 - Social Psychology

Instructor: Sanchez

This course is an introduction to social psychological theory and research. Specific topics include perception of self and others (e.g., attitudes, emotions), interpersonal relations (e.g., attraction, altruism, conformity, aggression), and group dynamics (e.g., decision making, intergroup conflict). Within those contexts, emphasis is placed on how we construe situations around us and how those situations influence us in ways we may not realize.

Prerequisite: PSYC 1

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 24 - Psychopathology

Instructor: Hudenko

This course explores various types of psychopathology, with a focus on characteristics, diagnosis, etiology, and treatment. We will examine psychopathology from a variety of perspectives and will discuss current research on specific disorders. The experience of psychopathology will be illustrated using case histories and video footage to better understand the realities and challenges for those who are diagnosed.

Prerequisite: PSYC 1

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PSYC 25 - Developmental Psychology

Instructor: Herman

We will examine the social and cognitive development of children from infancy to adolescence. We will also consider the implications of psychological research and

theory for parenting, and for social and legal policies that affect young children. Film and videotape materials will be used to illustrate examples of infant and child behavior.

Prerequisite: PSYC 1

Degree Requirement Attributes: Dist:SOC

PSYC 28 - Cognitive Psychology

Instructor: Bharucha

This course provides a comprehensive overview of cognitive psychology, the scientific study of mental processes: how people acquire, store, transform, use, and communicate information. Topics may include perception, attention, language, memory, reasoning, problem solving, decision-making, and creativity.

Prerequisite: PSYC 1, PSYC 6, or COGS 1

Cross-Listed as: COGS 002

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 32 - Introduction to Programming for Psychological Scientists

Instructor: Manning

Studying the mind is an increasingly computational endeavor. Modern psychological laboratories use computers to administer experiments, collect data, analyze data, create figures, write papers, and share their work with the world. Related and analogous approaches are used in fields as diverse as finance, art, biomedical science, law, and many others. In this course we will use hands-on training experiences, problem sets, and mini research projects to introduce students to a sampling of the computational tools employed in cutting-edge psychological research. A focus of the course will be on “open science” practices that enable scientists to share and clearly document each aspect of the scientific process.

Prerequisite: PSYC 11 required, MATH 1 or MATH 3 recommended.

Degree Requirement Attributes: Dist:TAS

PSYC 35 - Cellular and Molecular Neuroscience

Instructor: Hoppa

This course focuses on cellular and molecular mechanisms that underlie the development and function of the nervous system. The course focuses on three phases of cellular neuroscience: 1) Developmental neuroscience including cell division, migration, and survival; 2) Neural communication including the function of ion channels and synaptic plasticity; and 3) Molecular mechanisms of neurological diseases and therapeutic approaches. Lectures are supplemented by in class discussion and exploration of techniques for studying

cellular neuroscience including microscopy, electrophysiology, advanced genetic approaches, and animal models used to study the nervous system and neurological disorders.

Prerequisite: PSYC 6

Cross-Listed as: BIOL 035

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PSYC 36 - Systems Neuroscience with Laboratory

Instructor: Smith, van der Meer

The primary focus of this course is the physiological basis of behavior from a systems perspective. Such topics as localization of function, neural models, and the physiological bases of sensory/motor systems, learning/memory, and spatial cognition are considered. The laboratory introduces the student to the anatomy and physiology of the mammalian central nervous system and to some of the principal techniques used in systems and behavioral neuroscience. Not open to students who have received credit for PSYC 065.

Prerequisite: PSYC 6

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SLA

PSYC 37 - Behavioral Neuroscience

Instructor: A. Clark, O'Neill

We are complex organisms that perform complex behaviors. In this course we will explore the neurological underpinnings of behavior. Some topics we will cover include the neural control of life-sustaining behaviors such as eating and drinking. In addition, we will explore how the brain contributes to the display of other complex behaviors such as sexual behavior and responding to stress. We will use the text, primary research articles and case studies to examine the relationship between brain and behavior. Not open to students who have received credit for PSYC 045.

Prerequisite: PSYC 6

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 38 - Cognitive Neuroscience

Instructor: Robertson

In Cognitive Neuroscience, we survey the neural basis of a variety of cognitive phenomena that are the heart of human experience: how we perceive and attend to the world around us; how we remember and forget our experiences; how we listen, communicate, and understand through language and music; how we reason, evaluate, and decide

under risk and uncertainty; how we represent our thoughts and those of others; how we lose and gain consciousness through sleeping and waking; how we develop, learn, and adapt. To do this, we take a multidisciplinary approach that spans disciplines including psychology, neuroscience, computer science, biomedical engineering, and philosophy. We will also learn about classic and cutting-edge scientific methods including psychophysics, functional neuroimaging, electrophysiology, optogenetics, machine learning, and brain-computer interfaces. All in all, this course represents a blend of neurobiology (brain) and psychology (behavior). It aims to provide necessary background knowledge for scientific frontiers related to understanding human neuroscience and behavior.

Not open to students who have received credit for PSYC 027.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 40 - Introduction to Computational Neuroscience

Instructor: Granger

Your brain is composed of low-precision, slow, sparsely-connected computing elements, yet it outperforms any extant computer on tasks ranging from perception to planning. Computational Neuroscience has as its twin goals the scientific understanding of how brains compute thought, and the engineering capability to reconstruct the identified computations. Topics in the class included anatomical circuit design, physiological operating rules, evolutionary derivation, mathematical analyses, and emergent behavior, as well as development of applications from robotics to medicine.

Prerequisite: One of: PSYC 1, PSYC 6, COSC 1, or ENGS 20.

Cross-Listed as: COGS 021 COSC 016

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PSYC 43 - Emotion

Instructor: Thornton

Emotions define human experience. When you ask someone how they are, they tell you how they are *feeling*. We formulate our life goals in terms of emotions, striving to obtain happiness, while avoiding regret. Emotions such as love, pride, contempt, and shame shape our social relationships, both as individuals and as groups. When our emotions go badly awry, we suffer debilitating mental illnesses such as depression and anxiety. Although emotions play a central role in our lives, studying them scientifically presents profound challenges. They seem

intuitively hidden, elusive, messy, and hard to evoke or quantify in a laboratory. Despite these challenges, researchers have developed a thriving science of our emotional lives, which you will learn about in this course. We will begin by considering the origins of emotion, both biological and cultural. Subsequently we will examine how emotions manifest themselves in our bodies and brains, change dynamically over time, shape our social interactions, influence our cognition, and affect our mental health. Finally, we will consider ongoing theoretical debates in emotion science, and where the field could and should go next.

Prerequisite: PSYC 1 or PSYC 6

Offered: Summer.

Degree Requirement Attributes: Dist:SOC

PSYC 50 - Issues in Neuroscience

Courses with this number consider topics in the field of neuroscience. Topics are treated at an intermediate level and the focus will be on topics not covered in detail in PSYC 36 or 37. The selection of issues is at the discretion of the instructor.

Degree Requirement Attributes: Dist:SCI

PSYC 50.01 - Neuroscience of Mental Illness

Instructor: Funnell

The goal of this course is to explore the neuroscience of mental disorders. The ways in which we conceptualize and categorize psychopathology is changing rapidly, particularly as we gain insights into the neurological correlates of mental illness. We will review the characteristics of specific mental disorders and then delve into current neuroscientific research. We will focus in particular on the fundamental processes underlying psychopathology so that we can gain a better understanding of neurological relationships amongst seemingly disparate disorders. Although the class is focused on neuroscience, mental disorders cannot be fully understood without considering the experience of those suffering from these disorders. To better understand the experience of mental illness, we will watch a series of films and read a personal account of mental illness. This course requires a strong background in neuroscience; at minimum, successful completion of PSYC 6.

Prerequisite: PSYC 6

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PSYC 50.02 - Decision Making: Linking Behavior to Brain

Instructor: Soltani

In our daily lives we are faced with many decisions: what to eat for lunch, whether to spend the next hour on Instagram or on homework, or what courses to take next quarter. Some of those decisions require gradual deliberation while others can be made quickly. Nevertheless, to make any decision we rely on external information and what outcomes we expect from those decisions. Decisions are easy to make if information is complete and the outcomes are certain. But how does the brain combine different sources of partial information to make decisions in the face of uncertain outcomes? In this course we will examine decision making from both behavioral and neurobiological points of view. Specifically, we will learn about different methods used in psychology, economics, and neuroscience (e.g. operant conditioning, game theory, reinforcement learning, prospect theory, electrophysiology, neuroimaging) to study decision making at various levels, from cognitive processes to underpinning neural activity and mechanisms.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 50.03 - Neuroethology

Instructor: Stott

Neuroethology is the mechanistic and evolutionary approach to the study of animal behavior ('ethology') and its underlying neural circuit processes. A central theme of neuroethology is its focus specifically on behaviors that have been honed by natural selection (like mate selection, communication, locomotion). Often, this can be best understood in model organisms that have unique and highly specialized adaptations. In this course we will ask questions such as, how do bats echolocate? Does birdsong give us insight into how the human brain acquires language? What can a crab teach us about plasticity in the nervous system? Through a combination of readings, video content, and in-class discussion, we will examine general principles of nervous system function highlighted by each model organism. Classes will contain a mix of lectures, discussion, activities, and student presentations.

Prerequisite: PSYC 6

PSYC 50.07 - Exotic Sensory Systems

Instructor: K. Finn

Ever wonder what it's like to be a cat, or a fish, or a bat, or an octopus? Without careful consideration of another animal's sensory capacities, cognitive capabilities, and social situation, we risk inappropriately ascribing our own human characteristics and motivations to them when explaining their behavior (i.e. anthropomorphization). This course explores the "umwelts" or sensory self-worlds of

non-humans, using concepts from information theory to deconstruct what they may be perceiving.

Prerequisite: PSYC 1 or PSYC 6, and PSYC 10

Degree Requirement Attributes: Dist:SCI

PSYC 50.08 - Neurobiology of Learning and Memory

Instructor: Winter

This course will discuss the neurobiology of learning and memory from cognitive, behavioral, and cellular neuroscience perspectives. The goal of the course is to better understand the neurobiological mechanisms and brain systems that underlie learning and memory processes. A fundamental understanding of membrane and synaptic potentials is strongly recommended

Prerequisite: PSYC 6 or instructor permission

Degree Requirement Attributes: Dist:SCI

PSYC 50.09 - Motivation, Drugs, and Addiction

Instructor: Smith

This course will explore how the brain controls our motivation to pursue goals and how drugs of abuse hijack those systems. We will learn about some historical perspectives of motivation as well as modern neuroscience work showing how areas of the brain might contribute to motivations. In the process, we will explore in detail how narcotic drugs (opioids, stimulants, alcohol, cannabis) act in the brain and the mechanisms underlying the transition from drug use to addiction.

Prerequisite: PSYC 6

Offered: Fall.

Degree Requirement Attributes: Dist:SCI

PSYC 50.10 - Brainwaves

Instructor: van der Meer

From the very first electrical recordings of the human brain in the 1920s it became clear that the brain generates rhythmic, wave-like patterns of neural activity. Studying these "brainwaves" has resulted in major advances across multiple areas of neuroscience and psychology: in understanding fundamental brain processes underlying memory, attention, and predictive processing, in creating consumer devices and brain-machine interfaces that seek to improve different areas of brain function, and in cutting-edge diagnosis and treatment of a number of brain disorders. This course provides an introduction to the phenomenon of brainwaves. Using a combination of textbook readings, primary research articles, and in-class discussion, we will explore the neural basis of brainwaves, their significance for brain function and dysfunction, and evaluate their potential for applications in consumer and clinical devices. You will learn to describe different aspects of brainwaves using precise terminology, to

interpret and critically evaluate brainwave data and claims made on the basis of such data, and situate their significance in the broader context of fundamental and applied neuroscience.

Prerequisite: PSYC 21, PSYC 27, PSYC 28, or PSYC 38

Degree Requirement Attributes: Dist:SCI

PSYC 50.14 - Functional Neuroimaging of Psychiatric Disorders

Instructor: Silbersweig

Functional brain imaging has revolutionized the study of systems-level behavioral neuroscience and psychiatric disorders, through the ability to localize and characterize distributed brain activity directly associated with perception, cognition, emotion and behavior in disorders where there are not gross brain lesions. This course will introduce students to translational neuroimaging methods at the interface of neuroscience, psychology and medicine. It will cover recent and ongoing advances in our understanding of fronto-limbic-subcortical brain circuitry across the range of psychiatric disorders (e.g. mood disorders, anxiety disorders, psychotic disorders, personality disorders, addictions). It will discuss new, emerging biological (as opposed to descriptive) taxonomies and conceptualizations of mental illness and its treatment. It will explore the implications of such knowledge for issues such as consciousness, meaning, free will, emotion, resilience, and religiosity. It will incorporate clinical observations, scientific data and readings, and examine future directions in brain-mind medicine.

Prerequisite: PSYC 1 or PSYC 6

Degree Requirement Attributes: Dist:SCI

PSYC 50.15 - Sleep and Sleep Disorders

Instructor: Greenough

Sleep is a bodily function that is preserved among all animal species. Sleep is essential for life and optimal functioning. This course will examine the neuroanatomical and neurophysiologic underpinnings of sleep. Normal and disordered sleep will be discussed. The pathologic processes that disrupt normal sleep and lead to disordered sleep in human beings will also be examined. The consequences of disordered sleep, inadequate sleep or poor-quality sleep on individuals and society as a whole will be discussed.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 50.16 - Neurobiology of Fear and Anxiety

The course will be a survey of historical and modern studies regarding the neurobiology underlying fear and

anxiety in animals. We will use a variety of media including scientific literature, podcasts, clips from films, as well as visual art as points of discussion on the topics each week.

Prerequisite: PSYC 6

Degree Requirement Attributes: Dist:SCI

PSYC 50.17 - Psychedelics and the brain: from molecular pathways to altered states of consciousness

Instructor: L. Dwiell

Psychedelics have recently reemerged as powerful tools for treating psychiatric disorders as well as for understanding basic properties of the nervous system and consciousness. To critically engage with cutting-edge research, we will cover a broad array of foundational methodologies in neuroscience and psychology, from signaling pathways within and between neurons to whole-brain imaging and psychometrics in humans. Over the term we will explore a wide range of questions: What are psychedelics - is that even a good word to use? How can a single dose of psilocybin lead to long-lasting changes in mood/behavior? What is ego death? Can these drugs be used for mind-control? What are the risks of using psychedelics? How can we study a drug without placebo/blinding? Is this whole field just hype? To address these questions, and many more, we will use in-person lectures, small-group discussions, and a curated selection of primary research and media.

Prerequisite: PSYC 6 or BIOL 12

Offered: Summer.

Degree Requirement Attributes: Dist:SCI

PSYC 51 - Issues in Information Processing

Courses with this number consider topics from the areas of perception, memory, cognition, and quantitative models from the point of view of information processing. Material is treated at an intermediate level on a set of issues not covered in Psychology 21 and 28. Selection of issues is left to the discretion of the instructor, but specific emphasis is given to methodology. Enrollment limited to 35 students.

Degree Requirement Attributes: Dist:SOC

PSYC 51.01 - The Neuroscience of the mind-body problem

Instructor: Tse

Neuroscience has learned a great deal about how neurons function, and Psychologists have learned a lot about the contents and processes of the mind. But we lack a deep understanding of the bridge that must link these two sides of the "mind-body" problem. We do not yet fully understand (1) how information is processed, transformed and communicated by neurons, (2) how consciousness can

be realized in physical neuronal activity, or (3) how mental events realized in physical brain events can be causal of subsequent mental and physical events. This course will focus on what is known about the neural code and the neural bases of consciousness, mental causation and free will and what is not yet understood. We will focus on reading original research articles and chapters from books that attempt to get at these deep and challenging conceptual and empirical issues. A particular focus will be the relationship of attentional processing to consciousness, and its neural bases. Students will be expected to write up critiques of readings, and present on topics of common interest.

Prerequisite: PSYC 6, PSYC 21, or PSYC 28

Degree Requirement Attributes: Dist:SOC

PSYC 51.02 - Face Perception

Instructor: Haxby

Faces are one of the richest sources of information for non-verbal communication. Through faces we recognize identity and infer the emotional and mental states of others, as well as where they are directing their attention. This course will focus on the neural mechanisms for face perception and how these mechanisms facilitate rapid extraction of cues that facilitate social interaction. Particular relevance will be put on the neural systems for representation of person knowledge. In addition to weekly readings, students will have a written exam at the end of the course.

Prerequisite: PSYC 1 or PSYC 6

Cross-Listed as: COGS 11.04

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

PSYC 51.09 - Human Memory

Instructor: Manning

Knowing how our brains organize and spontaneously retrieve memories is at the heart of understanding the basis of the ongoing internal dialog of our conscious thoughts. Put simply, our memories make us *who we are*. The field of human memory also has a practical side. For example, how much should we trust eyewitness testimony? Or, should you cram for tomorrow's exam or get a good night's sleep instead? We will examine a range of classic and cutting-edge experimental results and theories that form the foundation of our current understanding of how we learn and remember.

Prerequisite: PSYC 1 or PSYC 6

Degree Requirement Attributes: Dist:SOC

PSYC 51.11 - Thinking

Understanding how people think is a central quest in cognitive psychology. The extraordinary human capacity for logic and reason have earned our species the moniker "rational animal". But research points to a dizzying array of cognitive functions that may come into play when we think. Thought may be infused with emotion, blinded by illusion, relativized by culture, or biased by ideology or self-interest. Thought is framed by mental categories, constrained by selective attention, memory and forgetting, and skewed by the familiar or the novel. In this course, we will examine research on many of these facets of thinking - from lucidly logical thinking to brazenly irrational thinking to aesthetic thinking that is neither. Along the way, we will consider a range of related issues: slow and fast thinking; conscious and unconscious processing; verbal and spatial thinking; the relationship between thought and language; imagination, creativity, and artistic thinking; attributions of causality; moral thinking; and judgments of people and groups.

We will also touch upon the evolutionary bases for thought and a comparison of human intelligence with artificial intelligence.

Prerequisite: PSYC 1 or PSYC 6

Cross-Listed as: EDUC 059

Degree Requirement Attributes: Dist:SOC

PSYC 51.12 - Visual Intelligence

Instructor: Störmer

How is our perceptual experience shaped by our memories, attention, and culture? When looking around the world, we have the impression that we perceive a true image that faithfully reproduces the physical properties of the world. However, perception is a construction of what's really out there, and our visual system constantly makes smart guesses and complex inferences about what we are likely to be perceiving.

In this course, we will learn how our own memories, attention, and cultural background influence our perception of people, objects, scenes, and emotions; what optical illusions reveal about the visual system; what and why we forget certain things but remember others; what the failures of visual attention mean in real-life contexts (e.g., mammography, or the TSA), and how experience shapes our ability to see.

Prerequisite: PSYC 1 or 6; and PSYC 10

Offered: Winter.

Degree Requirement Attributes: Dist:SCI

PSYC 51.13 - Psycholinguistics

Instructor: Wray

The deceptively simple tasks of perceiving and producing language require the performance of complicated and often overlapping functions at high speeds. How can we study the representations and processes that make language possible as they interact in the black box that is the human mind? The goal of this course is to provide a broad understanding of research focusing on how the human mind structures, stores and accesses linguistic information. Not open to students who have received credit for LING 50.01.

Prerequisite: LING 1 or COGS 1 or Instructor Permission

Cross-Listed as: COGS 50.05 LING 025 LING 50.01

Degree Requirement Attributes: Dist:SCI

PSYC 51.14 - Sustainable Choices: Understanding Human Cognition To Save The Planet

Instructor: Soltani

Every choice we make in our daily life has an impact on the environment we live in and on life on earth in general. While perceiving this impact is impossible in most cases, the enormous human population and globalization make the cumulative impact of every simple choice very profound. In this multi-disciplinary course, we explore how human activities affect life on earth in terms of climate change, biodiversity, deforestation, pollution, etc., in order to learn about the intricate link between our everyday choices and eco-sustainability, as well as how physical and biological laws limit or improve our ability to be sustainable. This course is focused on learning about the impact of our choices as it is focused on learning about heuristics/biases that humans exhibit when making those choices and how these heuristics/biases emerge in the brain. The course brings together ideas from Neuroscience, Psychology, Economics, Physics, and Biology among other fields to teach students about how and to what extent decisions we face in everyday life, directly or indirectly, influence life on earth, and how negative impacts can be mitigated by understanding the neural bases of human decision making.

Degree Requirement Attributes: Dist:SOC

PSYC 51.15 - Social Perception

In a fleeting glance, we can identify a person, infer their emotional state, determine their gender, estimate their age, assess their attractiveness, and surmise the focus of their thoughts. Social perception is fundamental to social interaction in humans as well as other animals. This course will examine social perception in humans and other species and in doing so will touch on issues including functional specialization, neurocognitive development, and evolution. Faces have received much of the attention in social perception and we'll spend significant time on face perception, but we'll also cover body perception, biological motion perception, voice perception, and some of the various types of social perception in non-human

animals. We will draw on a range of approaches including psychophysics, neuropsychology, single-cell recording, transcranial magnetic stimulation, fMRI, and twin studies.

Degree Requirement Attributes: Dist:SOC

PSYC 51.16 - Computational Models of Behavior

Instructor: Murray

Psychology and neuroscience have long sought to learn how brains function — such as, how we make decisions and learn from experience — by studying behavior during cognitive tasks. But how much can behavioral data really reveal about *how* the brain does what it does? This endeavor has been revolutionized by the development of *computational models of behavior*, mathematically defined algorithms describing mental processes that generate behavioral outputs from sensory and internal variables. In this approach, quantitative behavioral data can be compared to simulated behavior from models, and the model parameters can be fit to empirical data.

The goal of this course is to understand how computational models of behavior can be used to gain insight into psychological and neural processes. We will focus on canonical models of decision making and reinforcement learning. We will place emphasis on conceptual issues such as the purpose and logic of computational modeling and its role in experimental science.

Prerequisite: One of PSYC 1 or PSYC 6; and PSYC 10 (or equivalent)

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PSYC 52 - Issues in Learning and Development

Courses with this number consider several important sub-fields of learning and psychological development. Material is treated at an intermediate level on a set of issues not covered in Psychology 22 and 25. Selection of issues is left to the discretion of the instructor, but they will be selected with emphasis upon the psychological principles emerging from the study of humans and animals in the context of learning, early experience, and maturations. Enrollment limited to 35 students.

Degree Requirement Attributes: Dist:SOC

PSYC 52.04 - Adolescent Risk Behavior and Policy: Corporate and Environmental Influences

Instructor: Sargent

Chronic health conditions (like cancer and heart disease) kill the majority of people worldwide. Those diseases result, in part, from use of products—e.g., tobacco, alcohol, & convenience food—that are produced and marketed worldwide by multinational corporations. This

course centers around how corporations influence unhealthy product consumption during childhood and adolescence. This course describes the theoretical basis for these influences, the science used to establish corporate products as a cause of youth behavior, and how governments try to limit the influence through regulation. The study will cover tobacco, alcohol, drug use, homicide/suicide, food/obesity, and risky sex.

Prerequisite: PSYC 1

Cross-Listed as: PBPL 52.04

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PSYC 52.06 - Typical and Atypical Neurodevelopment

Instructor: Robertson

Approximately one trillion synapses are formed each day during the first three years of life, many of which are pruned away by age five. What is happening in the brain during these formative years? The goal of this course is to provide insight into the neural basis of human cognition by examining the “tabula rasa” of the human brain and how it changes over the first few years of typical and atypical development. Throughout the course, we will wrestle with questions regarding which facets of our neural machinery and cognitive abilities are innate vs. acquired. We will discuss the development of specific cognitive capacities (e.g. learning to read, recognize faces, pay attention, communicate, socialize) from the perspective of individuals with typical developmental trajectories in each of these domains, as well as from the perspective of individuals with difficulties in each domain (e.g. dyslexia, prosopagnosia, ADHD, autism). This course will draw upon your prior knowledge of psychology, cognitive neuroscience, and neurobiology, and will explore classic and cutting-edge peer-reviewed scientific studies of developmental psychology, neurodevelopment, cognitive development.

Prerequisite: One of the following: PSYC 6, PSYC 21, PSYC 27, PSYC 28, or PSYC 38

Degree Requirement Attributes: Dist:SCI

PSYC 52.07 - Educational Psychology

Instructor: Kraemer

How do we learn? How can modern educational settings harness recent innovations concerning the essence of human learning? Educational psychology provides a foundation for applying the psychological principles that underlie learning in both formal and informal educational settings. In this course, we will explore the multitude of ways that people learn, the effects of different types of teaching strategies on learning, and the impact of individual differences on learning. We will also explore assessment, creativity and problem solving, as well as

cultural and motivational influences on learning across diverse educational situations. Underlying the course will be an account of the way the human mind works, changes, and adapts in different settings. This includes the home, the school, the university and any context in which explicit or implicit education takes place. Open to all classes.

Cross-Listed as: COGS 031 EDUC 030

Degree Requirement Attributes: Dist:SOC

PSYC 52.08 - STEM Learning and Education

Instructor: Kraemer

How do we learn, understand, and teach science, technology, engineering, and math (the STEM disciplines)? In this class, we will explore the nature and development of the scientific mind; how we formulate theories, design experiments, and understand scientific, technological, and mathematical concepts; and how we learn and teach related skills in the classroom, addressing the debate about the effectiveness of direct instruction and hands-on approaches. Open to all classes.

Cross-Listed as: EDUC 046

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

PSYC 52.09 - The Reading Brain: Education and Development

Instructor: Coch

The majority of children entering first grade do not know how to read; the majority of children leaving first grade do know how to read, at least at a basic level. What is involved in the amazing development of the ability to make meaning of marks on a page? What goes on in the brain during reading and learning to read? We explore answers to these questions and more in this introduction to reading as we investigate the roles of orthography, phonology, semantics, syntax, and comprehension in reading. We focus on the development of reading behaviors, the brain bases of reading skills, and how scientific discoveries can inform educational practices. Open to all classes.

Cross-Listed as: COGS 033 EDUC 050 LING 11.19

Degree Requirement Attributes: Dist:SOC; Lang:LRP

PSYC 52.10 - Neurodiversity

Instructor: C. Robertson

There is remarkable variation in how each of our brains are wired and how we each experience the world. Yet, neuroscience has traditionally focused on understanding the *general* principles of neural processing, often overlooking the diversity of cognitive experience. The course centers on a timely and fundamental question: what does “neurodiversity” mean, and in what ways can neural

architecture exhibit diversity? To address this question, we will harness philosophical, neurobiological, and computational perspectives. Moving away from a medicalized model of thinking about psychiatric conditions, this course introduces key dimensions of human cognition that are thought to be particularly susceptible to neurodiversity (e.g., predict vs. sense, explore vs. exploit, empathize vs. systemize). Along the way, we will integrate neural and computational models of how these dimensions neurally and cognitively manifest in conditions like autism, schizophrenia, ADHD, and anxiety. We will also examine timeless issues like “nature versus nurture”, to understand what specialized neural circuitry is innate vs. developed in humans. Finally, we’ll tackle ethical questions around diagnosis, intervention, and societal perceptions. This course is designed for students who are interested in exploring cutting-edge studies in cognitive science, neuroscience, and computational psychiatry, building on their prior knowledge in these areas while honing their skills in reading and synthesizing scientific literature.

Prerequisite: PSYC 6, or two of the following: PSYC 1, PSYC 21, PSYC 22, PSYC 28, PSYC 38, and PSYC 40

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 53 - Issues in Social Psychology

Courses with this number consider several important sub-fields of social psychology. Material is treated at an intermediate level on a set of issues that are not covered in Psychology 23. Selection of issues is left to the discretion of the instructor, but specific emphasis is given to individual and group attitudes, modes of interpersonal communication, and behavior control in humans and animals.

Degree Requirement Attributes: Dist:SOC

PSYC 53.02 - Social Perception

In a fleeting glance, we can identify a person, infer their emotional state, determine their gender, estimate their age, assess their attractiveness, and surmise the focus of their thoughts. Social perception is fundamental to social interaction in humans as well as other animals. This course will examine social perception in humans and other species and in doing so will touch on issues including functional specialization, neurocognitive development, and evolution. Faces have received much of the attention in social perception and we’ll spend significant time on face perception, but we’ll also cover body perception, biological motion perception, voice perception, and some of the various types of social perception in non-human animals. We will draw on a range of approaches including psychophysics, neuropsychology, single-cell recording, transcranial magnetic stimulation, fMRI, and twin studies.

Degree Requirement Attributes: Dist:SOC

PSYC 53.10 - Social and Affective Motivations in Decision-making

Instructor: Chang

Why do we tip restaurant servers, cab drivers, and coffee baristas? Why does our grocery shopping behavior change when we are hungry? This course will explore the social and affective motivations that influence how we make everyday decisions from the diverse perspectives of psychology, economics, and neurobiology. This course will provide an introduction to how social psychological constructs and feelings can be modeled using tools from decision theory (e.g., value & uncertainty) and how these processes might be instantiated in the brain. Topics to be covered include other-regarding preferences (e.g., trust, reciprocity, fairness, and altruism), affective motivations (e.g., risk, dread, regret, and guilt), and social considerations (e.g., reputation, conformity, and social-comparison).

Prerequisite: PSYC 23, PSYC 27, or PSYC 28

Degree Requirement Attributes: Dist:SOC

PSYC 53.12 - The Behavior of Groups

Instructor: Herman

Much of your life is spent in groups: families, classes, teams, cliques, Greek organizations, work teams. Have you ever wondered what’s going on under the surface or how you can make your groups function better? Although these groups may be dissimilar in size, format, and function, the psychological processes involved are surprisingly consistent. This course will analyze psychological theories of group interaction including conformity, competition, conflict, leadership, negotiation, communication, power dynamics, status orders, initiation rites, ostracism, expectation states, and stereotypes. Readings will include classics such as Zimbardo’s Stanford Prison experiment, Tajfel’s minimalist groups paradigm, Sherif’s Robber’s Cave experiment, Whyte’s Street Corner Society, and Pennington’s Social Psychology of Behavior in Small Groups. Assignments will involve several reading analyses, a final exam, and—of course—a group project.

Prerequisite: PSYC 1

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PSYC 53.13 - Social Neuroscience

This class will focus on the principles of social neuroscience (SCN) and survey a broad array of topics in the field. Social neuroscience attempts to answer social science questions, such as ‘why does rejection hurt?’ and ‘is empathy innate?’ with neuroscience methods, such as brain imaging and neuropharmacology.

Prerequisite: PSYC 1 or PSYC 6

Degree Requirement Attributes: Dist:SOC

PSYC 53.14 - Social Neurocognition

Instructor: Stolk

This course will provide students with a thorough background in the emergent field of social cognitive neuroscience. A broad range of social phenomena will be examined at multiple levels. First, at the social level including experience and behaviors. Second, at the cognitive level which deals with information processing systems. And lastly, at the neural level which deals with brain/neuronal bases of the first two levels. Topics include joint action, animal and human communication, and altered social functioning in psychiatric and neurological disorders. These topics will be discussed at both general and specific (article) levels.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

PSYC 53.15 - Positive Psychology and Resilience

Instructor: Veillette

This course will provide an overview of the field of Positive Psychology. Students will be provided with opportunities to learn theory and research pertaining to the psychology of human strengths, assets, abilities, and resilience. Recent empirical research will be reviewed, and students will be asked to apply the information in written assignments and class discussion. Topics will include: subjective well-being and positive emotions; optimal performance; personal fulfillment; optimal medical health; resilience; emotional intelligence; creativity; optimism; hope; self-efficacy; goals and life commitments; wisdom; humility/ compassion/ altruism; forgiveness; gratitude; love; moral motivation and the virtues (strengths of character); intrinsic motivation and flow; social support; positive coping; spirituality, meaning and purpose in life; the civic virtues (altruism, volunteerism, "prosocial" behavior).

Prerequisite: PSYC 1 or PSYC 6

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 54 - Issues in Applied Psychology

Courses in this number consider several important sub-fields of applied psychology, such as environmental psychology and consumer behavior. Material is treated at an intermediate level. Selection of issues is left to the discretion of the instructor, but they will be selected with emphasis upon the extension of established psychological principles to problems of contemporary society.

Enrollment limited to 35 students.

Degree Requirement Attributes: Dist:SOC

PSYC 54.02 - Health Psychology

Instructor: Detzer

This course will explore the relationship between psychology and health. We will study clinical psychology research and treatment contributions to 1) health promotion; 2) chronic physical illness; and 3) interaction with the US healthcare system. This course utilizes a multi-modal learning approach and will include lectures, readings, small and large group class discussions, videos, guest speakers, and self-reflection of each student's own health behavior. Through in-depth study of topics such as lifestyle and health, stress, cancer and palliative care, chronic physical pain, and insomnia, we will explore illness and the individual/family, adherence/self-management, and medical treatment issues including doctor/patient/medical system aspects of care.

Prerequisite: PSYC 1 or PSYC 6

Degree Requirement Attributes: Dist:SOC

PSYC 54.03 - Forms of Therapy

Instructor: Hudenko

Each year, millions of people vow to make a change. Some may wish to end their habit of procrastination, others to improve a significant relationship, or still others may commit to combat a mental illness. Whatever their goal, people often discover how challenging personal change can be. At its core, clinical psychology facilitates such change through the scientific application of psychological principles. The purpose of this course is to introduce you to various scientifically-validated modalities of individual psychotherapy, with an emphasis on how psychotherapies utilize psychological principles to produce change. Over the course of the semester we also will explore special topics in the field of clinical psychology such as: human connection, empathy, emotion, ethics, psychological assessment, pharmacological treatments, and treatment evaluation.

Prerequisite: PSYC 24

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PSYC 54.04 - Forensic Psychology

Instructor: Corbin

This course introduces students to the various ways psychology relates to the law and its systems and processes. The course focuses on the role of the forensic psychologist in the criminal justice system and other

workplaces. It also focuses on the tools and responsibilities of a forensic psychologist.

Prerequisite: One of the following: PSYC 1, PSYC 6, COGS 1, SOCY 1, and SOCY 2

Degree Requirement Attributes: Dist:SOC

PSYC 54.05 - Neuromarketing and Consumer Neuroscience

Instructor: K. R. Clark

How do measures of the brain and body map onto a brand marketer's return on a research investment? This course focuses on the history and topics related to the nascent, yet burgeoning, cross-disciplinary field of consumer neuroscience and new technological advances in marketing related to neuromarketing. The course will provide a unique vantage on the multiple academic and applied histories of the field, its ethical ramifications, along with general perspectives focusing on current practices and potential future directions, including the implications of predicting mass consumer behavior from small test samples. Students will have the opportunity to engage with some of the most notable academic and practitioners in the field and will participate in a capstone project of original research applying theory and utilizing psycho physiological tools applied in real-world neuromarketing research.

Prerequisite: PSYC 1 and one of: PSYC 21, PSYC 27, PSYC 28, PSYC 38; or PSYC 6

Degree Requirement Attributes: Dist:SOC

PSYC 54.07 - Clinical Science Practicum

Instructor: Hudenko

This course is designed to provide students with an experiential learning opportunity by applying knowledge and skills gained in the classroom to actual work settings while under both site and academic supervision. Students who have an interest in clinical psychology will learn about the different facets of working in a social service, mental health, or other community setting while assessing their own skills and suitability for this kind of graduate work or employment experience. Students will spend up to 10 hours/wk at their practicum site and will be mentored onsite. Additional supervision will be provided by a clinical science faculty member during regularly scheduled class times and didactic instruction will be offered to complement and enhance work that is completed at practicum sites.

Prerequisite: PSYC 24 and instructor permission

Degree Requirement Attributes: Dist:SOC

PSYC 54.08 - Leadership

Instructor: Jordan

What makes a great leader? Why would others follow you? A century of psychological research clarifies the traits, skills and behaviors of effective leaders, including how they attract, influence, develop and empower followers to excel in different situations. Readings will explain the psychological science; classroom demonstrations, guest leader interviews, case study discussions and small group challenges will illuminate it. Outside the classroom, weekly leadership practice assignments will reinforce core concepts, increase self-awareness, and develop leadership capabilities, all in support of a community impact initiative that each student will select, plan and lead (courage required). Your instructor will apply three decades of experience in developing thousands of leaders at all levels on multiple continents, to guide and challenge you to develop your science-based leadership potential.

Prerequisite: PSYC 1 or permission of instructor

Cross-Listed as: PBPL 047

Degree Requirement Attributes: Dist:SOC

PSYC 60 - Principles of Human Brain Mapping with fMRI

Instructor: Haxby, Chang

This course is designed to introduce students to the theoretical and practical issues involved in conducting functional magnetic resonance imaging (fMRI) experiments of cognitive and behaviorally-related brain activity. Participants will gain an understanding of the physiological principles underlying the fMRI signal change, as well as the considerations for experimental design. The course will include firsthand exposure to the scanning environment and data collection procedures. Participants will be provided conceptual and hands-on experience with image processing and statistical analysis. At the completion of this course, it is expected that participants will be prepared to critique, design, and conduct fMRI studies; appreciate limitations and potentials of current fMRI methods and techniques; and better understand the broad range of expertise required in an fMRI research program. The course is designed to provide the participant with intensive, hands-on instruction. As a result, enrollment in the course will be limited. Knowledge of MR physics, signal processing, or the UNIX/Linux operating system is not a prerequisite.

Prerequisite: Instructor permission through the department website

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:TLA

PSYC 62 - Principles of Human Electrophysiology: Using Brain Waves to Understand the Mind

The goal of this course is to provide an introduction to the methodologies of human electroencephalogram (EEG) and event-related potentials (ERPs). The course will cover what EEG is (i.e., what type of brain signals we are measuring and how), how to design ERP experiments, how to prepare an EEG subject and record data, basic EEG and ERP analysis such as artifact rejection, filtering, and computing ERPs. The class will also cover how to present ERP data and interpret ERP components.

Degree Requirement Attributes: Dist:SLA

PSYC 63 - Experimental Study of Human Interaction

Instructor: Stolk

Insight into how human brains work in their most ubiquitous and biologically meaningful context, social interaction, has remained largely elusive. This course ventures into this “dark matter” of social neuroscience, pursuing the question of what constitutes a meeting of minds. Conceptual and methodological challenges of studying human interaction are dealt with in-class discussions, laboratories, and small group research projects on selected topics. Students will be expected to design, run, analyze, and write up an interaction study answering a question of their choosing. Example research projects include but are not limited to studies of human interactive behavior in the real world, the lab, simulated scenarios, or on social media.

Prerequisite: PSYC 11, PSYC 23, and instructor permission through the department website

Degree Requirement Attributes: Dist:SOC

PSYC 70 - Neuroscience Research

This course is offered every term and is designed to enable Neuroscience majors early in their course of study to engage in independent laboratory research under the direction of a neuroscience faculty member. Students are required to write a final report that describes the goal of the project, their research, and what they learned from their experience. This course may count in the neuroscience major as an elective numbered above 20, but cannot fulfill the requirement for electives numbered above 40. It cannot be used towards the culminating experience. Students may take up to three terms of independent/honors research (PSYC 70, PSYC 90, PSYC 91) but only two terms may be counted for credit towards the major. More advanced students who have taken at least two core neuroscience courses should enroll in PSYC 90.

Prerequisite: PSYC 6. Submission of the Checklist for enrolling in Independent Research, which includes approval from the advisor.

Offered: Fall, Spring, Summer, Winter.

PSYC 80.01 - Neuroscience of Reward

Instructor: Smith

Much of the life of humans and other animals revolves around reward, whether engaging in basic pleasures like food and sex or enjoying more complex things like music. This course will introduce conceptual frameworks to understand reward as a phenomenon that is distinct from other features of goal-directed behavior. We will then discuss recent advances in neuroscience research that are helping us to understand the basic brain mechanisms that make things pleasurable, including anatomical pathways, neurotransmitter systems, and dynamics of neural activity.

Prerequisite: PSYC 6 and one of PSYC 37 or PSYC 45: and instructor permission through the department website

PSYC 80.02 - Neuroeconomics

Instructor: Soltani

Neuroeconomics is an emerging field in which a combination of methods from neuroscience, psychology, and economics is used to better understand how we make decisions. In this seminar course, we learn about economic and psychological theories that are used to investigate and interpret choice behavior, and mental and neural processes that underlie decision making. We also examine how recent neurobiological discoveries are used to refine decision theories and models developed in psychology and economics. During this course, students will read and discuss the most current research findings in neuroeconomics. They will also learn to develop new ideas/hypotheses and design experiments to test those ideas/hypotheses, or to use their knowledge to inform society about the implications of findings in the field of neuroeconomics.

Prerequisite: Instructor permission through the department website

PSYC 80.04 - The Weight Among Us: What Neuroscience Can Teach Us About Obesity

Instructor: Clark, A

In 1995, about 56% of adults in the U.S. were overweight or obese. Thirty years later, that number has risen to over 70%. Despite major advances in our scientific understanding of obesity during this time, many questions remain unanswered. Recently, new anti-obesity medications have gained attention. Students in this course will examine, through the lens of neuroscience, how obesity research—its successes, failures, and ongoing challenges—informs prevention, clinical treatment, and long-term management of obesity.

Prerequisite: PSYC 6 and one of the following: PSYC 37 or PSYC 45 (recommended), instructor may waive PSYC

37/45 for qualified students; and instructor permission via the department website.

PSYC 80.05 - Mind, Brain, and Health

Instructor: Wager

What does the mind have to do with physical health? In this course, we explore the idea that the mind and brain influence physiological processes related to mental and physical health alike. How we conceptualize ourselves and our place in the world sets the stage for how we interpret life events and make decisions. This conceptualization also governs how our bodies respond to stressors and other environmental conditions.

Prerequisite: PSYC 1 or PSYC 6; 4 other PSYC/PSNS courses; and instructor permission via the department website.

Offered: Fall.

PSYC 80.06 - Advanced Seminar on Brain Evolution

Instructor: Granger

For the first 200 million years of mammalian evolution, most animals' brain sizes were highly predictable from their body size. In the past four million years, an evolutionary blink of the eye, primates rapidly evolved brains that are several times larger than previously would have been predicted for their body size. How did this occur? What are the effects of these substantial brain changes? What are the contents of human brains, and how do they differ from the brains of other primates (and other mammals, and non-mammals)? Evolution acts on genes, not on organisms; what are the genetic factors that have been identified in recent primate brain growth? What relationships may obtain between anatomical and functional brain characteristics? What mechanisms are at play, including extrinsic factors and evolutionary "pressures"? What differential predictions do various theories make, and how are they tested? How would we know if a hypothesis is false; how do we know if they are falsifiable? The class will critically examine a set of related topics including brain structure, anthropology, evolution, genetics, development, cognition, race, intelligence.

Prerequisite: PSYC 1 or PSYC 6; and instructor permission via the department website

Offered: Spring.

PSYC 80.07 - Neuroscience and Artificial Intelligence

Instructor: Murray

The brain is capable of processing complex information to generate flexible behavior across a wide range of changing conditions. Neuroscience has been a source of inspiration for the field of Artificial Intelligence (AI) in its development of machines that can learn and act, especially for AI architectures using neural networks and deep

learning. In turn, developments in AI have provided models which are being used to better understand the brain's computational functions.

This seminar course will examine this reciprocal interaction between neuroscience and AI. A focus will be on a historical overview on how ideas in neuroscience and psychology shaped early AI. We will also examine how the AI tools offer approaches to study brain function (often referred to as "NeuroAI" in the current research literature). Seminar discussions will be based on readings that include a mix of classic and modern research papers and reviews, and book chapters.

PSYC 81.04 - Neural Basis of Human Imagination

Instructor: Tse

The capacities that set humans apart in kind, not just in degree, from all other known animals include, in part, capacities and propensities for art, music, analogical reasoning, abstract thought, creativity, the spontaneous generation and use of symbols, the ability to reason abstractly about others and about events, as well as the ability to manipulate symbols recursively and syntactically. This course will explore the hypothesis that all these modes of human behavior and cognition share a common root cause in our brains. We will focus in particular on the human capacity to imagine. We can, for example, construct a representation of a thing, say an airplane, or an event, say a planned party, and then go about making real that which we imagined. How is this capacity to imagine and creatively plan realized in the brain? Where did it first appear in the human lineage? What is the relationship of imagining to other important capacities, such as attention, volition, consciousness, planning and executive control? The goal of this course is to try to answer such questions by reading empirical and theoretical papers and chapters that try to account for what it is that makes the human mind human, by looking at distinctive aspects of processing in the human brain.

Prerequisite: One of the following: PSYC 6, PSYC 21, PSYC 28; and instructor permission through the department website.

PSYC 81.08 - Animal Cognition

Instructor: van der Meer

Can rats empathize with others, or experience regret? Can birds grasp the intentions of others, or imagine the future? Do dogs deliberately deceive their human companions? This seminar will explore the cognitive abilities of a range of animals through the careful analysis of behavior, defining rigorous and measurable criteria for inferring complex behaviors, and contrasting them with simpler alternatives. We will draw on neural data, asking if phenomena such as creativity, mental time travel, and theory of mind can be detected based on the observation of

brain activity. Finally, we will consider questions relevant to human health: can mice become schizophrenic, chronically depressed, or develop post-traumatic stress disorder? Lively discussion in the classroom is encouraged.

Prerequisite: PSYC 22 or PSYC 28, and instructor permission through the department website

PSYC 81.09 - Storytelling with Data

Instructor: Manning

Humanity creates nearly 350 TB of data each day, and much of it is freely available for us to download. But making sense of that staggering amount of text, video, audio, and other forms of data is like drinking from a firehose: the sheer quantity of data makes it tricky to make sense of what it *means*. In this course we will study how to find, clean, analyze, make sense of, and communicate about complex data.

In addition to helping you to build up your data science toolbox, the course is centered around telling engaging, compelling, (often) entertaining, and, above all, clear “stories” about data. This will require considering your audience’s mindset, goals, motivations, and backgrounds, and then leveraging those considerations to develop effective ways of conveying the major plot points.

Prerequisite: Instructor permission through the department website

Offered: Spring.

PSYC 81.10 - Neural Bases of Attention and Consciousness

Instructor: Tse

This course will cover the relationship between volitionally attending and consciousness, particularly in the domain of human visual processing. By consciousness we mean that which is currently subjectively experienced. The relationship between attention and consciousness appears to be very tight; that which we choose to attend to we are conscious of, and that which we are conscious of we could choose to attend to in the next moment. We will examine what is known about the neural bases of the different types of attention, with a particular focus on 'endogenous attention,' which is the mode of attending that is under volitional control. We will at the same time examine what is known about the neural bases of visual consciousness, with a particular focus on those aspects of neural processing that are modulated by volitionally attending to a stimulus or not. In addition to one main text ("The Quest for Consciousness" by Christof Koch) we will read scientific papers that place useful constraints on the neural bases of volitional attention and visual consciousness.

Prerequisite: PSYC 1 or PSYC 6; and PSYC 11 or a lab course that is a part of the Neuroscience major, and permission through the department website.

PSYC 81.11 - Real-World Scene Perception

Instructor: Robertson

We experience our visual environment as a seamless, immersive panorama. Yet, each view of this environment is discrete and fleeting, separated by expansive eye movements and discontinuous views of our surroundings. How does the brain build a unified representation of an immersive, real-world visual environment? This course will discuss the scientific literature of real-world visual scene understanding. The topics we will cover in this course cut across human, animal, and computational studies, addressing questions such as: What are the circuits and mechanisms that enable the recognition of a visual scene from just one glance? How are the representational dimensions of visual scenes mapped onto the surface of the brain? How can our understanding of human scene perception guide machine vision systems?

Prerequisite: One of: PSYC 6, PSYC 21, or PSYC 28, and instructor permission through the department website

PSYC 81.12 - Using Naturalistic Stimuli, Brain Imaging, and Big Data Methods to Understand Human Cognition

Instructor: Haxby

Natural human experience involves a continuous stream of incoming stimuli in a rich context of prior knowledge and expectations. Traditionally, experimental psychology attempts to reduce this complexity using controlled experiments that vary a single, experimental variable and hold other, control variables constant. Human cognition, however, develops to extract information and guide behavior based on uncontrolled, naturalistic stimuli in an ecologically rich environment. In this seminar we will examine a new approach to experimental cognitive research that uses uncontrolled, naturalistic stimuli and discovers structure and meaning in the brain activity and behavioral responses they evoke using advanced computational methods from machine learning and big data analysis. We will discuss the advantages of this new approach for studying complex and ecological cognition and the limitations of the current state-of-the-art. Throughout the course we will consider future directions and challenges for extending this approach into new domains of cognition, developing richer naturalistic stimulation paradigms, and developing more powerful methods for discovering the structure of information in real world events and environments.

Prerequisite: Permission of instructor. Background in psychological and brain imaging research methods, computer science, and machine learning will be helpful, but students need not have background in all of these areas.

Offered: Fall.

PSYC 81.13 - Persuasion and Propaganda

We all change our minds about various issues over the course of our lives. This course will examine how minds are changed. What are the most effective means of changing someone's mind? How do people attempt to persuade one another of the rightness or wrongness of a position? How do governments use propaganda and other forms of inculcation to convince people of the rightness of their positions? How do advertisers manipulate consumers into wanting to buy their products? How do religions and cults convince people to dedicate their lives and resources to their cause? What happened in cases of collective transformation of a society that to us, now, seem irrational, as happened, for example, in the rise of nazism? What are the roles of conformity, peer pressure, and force in enhancing mindsets and belief systems. What role do dissenters play in the propagation of ideas, and the limits placed on inculcation and mind control? This seminar is exploratory and discussion-based. We will view media and read articles or books outside of class and then discuss associated ideas in class. There will be one or two oral presentations in front of the class, and associated writing projects, in which the student deeply investigates some aspect of one of the questions above.

PSYC 83.07 - The Problem of Other Minds

Success in a social world requires understanding other people's thoughts and feelings. Yet, other people's mental states are not directly observable: you cannot see a thought or touch a feeling. Nonetheless, humans are actually quite proficient in inferring these invisible, internal states of mind. How do we accomplish these mind-reading feats? This course will address this question, which is known as 'the problem of other minds.' We will tackle 'the problem of other minds' from multiple angles, relying heavily on neuroscience and psychology research, as well as a few foundational papers from philosophy. Specifically, we will address questions such as: Do specialized portions of the brain accomplish mental state inference? When do mind-reading skills develop in children and are humans the only species that can represent other minds? Why do some people, such as individuals with autism spectrum disorder (ASD), experience difficulties in understanding others? What leads to biases in mental state inference, such as anthropomorphism (when people attribute mental states to inanimate objects) and dehumanization (when people under attribute mental states to humans)?

Prerequisite: PSYC 1, PSYC 10, and instructor permission through the department website

PSYC 83.08 - Social And Neural Networks

Instructor: Thornton

Networks exert profound influences on our lives. We are each embedded within social networks that influence our

emotional wellbeing, the information we can access, and even which diseases we might catch. Likewise, each of us has a complex network of neurons embedded within our head: our brain. The structures of these neural networks reflect our cognitive abilities, mental health, and how we form our social networks. Despite the superficial dissimilarities between these types of networks, we can use a common framework – graph theory – to describe and understand both social and neural networks. This course will explore social psychology and neuroscience through the lens of networks, providing students with novel perspectives on and powerful tools for analyzing these subjects. Students will come away with a firm grasp of graph theory, social networks, brain networks, and artificial neural networks.

Prerequisite: PSYC 1 or PSYC 6, and PSYC 10 or equivalent, and one of the following: PSYC 23, PSYC 38, a course in the PSYC 53 series, or PSYC 60; and instructor permission through the department website

PSYC 83.09 - Neurobiology of Social Intelligence

Instructor: Stolk

A deep understanding of any social species requires a neurobiological understanding of how and why brains interact. In this culminating seminar, we will critically examine the social contexts that forged and continue to shape human intelligence. We will be considering evolutionary, comparative, game-theoretic, computational, developmental, and pathological aspects of our social intelligence from a neurobiological perspective. The goal is to gain insight into how humans became such big-brained other-regarding apes, and how our brains developmentally construct and pathologically lose socio-cognitive faculties, as seems to be the case in certain psychiatric and neurological disorders. Students will be expected to read and critically assess the neuroscientific literature and explore empirical opportunities for new insights into the neurobiology of human social intelligence.

Prerequisite: PSYC 1 or PSYC 6

Offered: Winter.

PSYC 84.05 - The Power of Beliefs

Instructor: Chang

How do beliefs affect clinical outcomes? This course provides an in-depth examination of the role of beliefs and expectations in the manifestation of psychological symptoms and their treatment. Topics to be covered include the psychological and biological bases of pharmacological placebo effects, the mechanisms underlying psychotherapy (e.g., patient and provider expectations), and also how cultural expectations impact how psychological symptoms are experienced (e.g., hallucinations, delusions, and somatization).

Prerequisite: PSYC 1 or PSYC 6; and instructor permission through the department website

PSYC 84.06 - Organizational Psychology

Instructor: Jordan

How do some organizations unleash remarkable creativity, teamwork, job satisfaction, and performance, while others struggle, stagnate, become toxic and/or fail? Through active engagement with case studies, simulation challenges, external experts, and project-based learning we will find out. This seminar will explore how the attitudes, motivations and behavior of individuals and groups affect organizational performance, and the psychological science that helps explain why. We will discover how the best leaders use their power and influence to shape their organization's culture and build organizational systems that place the right talent in the right roles, empower high-performing teams, improve processes, develop capabilities, and reward the right behaviors. Students will derive practical science-based insights they can use to strengthen the teams, clubs, and organizations to which they belong.

Prerequisite: PSYC 1 or PSYC 6; and one of the following: PSYC 23 or 28 or 53.12 or 54.08; and Instructor Permission via the Department Website

Degree Requirement Attributes: Dist:SOC

PSYC 86.01 - Selective Developmental Deficits

Instructor: Duchaine

Cognitive neuropsychology relies on selective deficits to shed light on the organization of the brain. In the past, nearly all selective deficits reported in the neuropsychological literature involved brain-damaged patients who lost particular abilities, but many selective deficits due to failures of development have been identified in recent years. These include deficits affecting computations concerned with color, faces, objects, spatial abilities, music, language, reading, number, and memory. This course will discuss the theoretical basis of selective deficits, examine the cognitive and neural profiles of particular selective developmental deficits, and consider the more general implications of selective developmental deficits and the research opportunities they present.

Prerequisite: Permission through the department website

PSYC 86.04 - Bucci Fellows Seminar in Advanced Neuroscience

Instructor: Nautiyal

This seminar provides advanced undergraduates the opportunity to participate in the exploration of the cutting edge of neuroscience research through the vehicle of the Annual Meeting of the Society for Neuroscience (SfN). The conference program serves as a syllabus and roadmap for the most up-to-date techniques and discoveries in the field of neuroscience. The seminar will explore topics and

issues informed by the scheduled presentations at the meeting, allowing student learning to keep pace with the current research and knowledge of leading international experts in neuroscience. The culmination of the course will involve travel to the Annual Meeting of SfN with over 30,000 neuroscientists. This experience is designed to make neuroscience "come alive," and to provide students with valuable opportunities to take part in a scientific conference, meet world-renowned researchers, prospective graduate mentors, and possible future employers. Students will also have the chance to develop important professional skills through critical evaluation of research, exposure to different presentation styles, and preparation of an in-depth research paper and oral presentations. This seminar is offered in honor of the late Professor David Bucci and his dedication to innovative undergraduate teaching in Neuroscience. Thanks to the generosity of the donors to the David Bucci Fellows Fund, all travel expenses for students will be covered by Bucci Fellowships.

Prerequisite: PSYC 6 and instructor permission through the department website. Students interested in the course should contact the instructor prior to the course registration period. Students will be asked to complete a brief application stating their interest in the course, what they hope to get out of the course, courses completed in Neuroscience/Psychology, and any prior/current research experience. Advanced students (Seniors, then Juniors) majoring in Neuroscience or Psychology will be given priority for enrollment. A code of conduct will also be developed by and for the students to guide their participation at the conference as ambassadors of Dartmouth College.

PSYC 86.05 - Future Directions in Psychological Science

Instructor: Wheatley

Psychology and neuroscience are ever evolving. Textbooks, with their hundreds of pages, are continually edited, making way for new areas of research previously unstudied. What is on the horizon for these fields? In this culminating seminar, we will look at the ways these fields are breaking new ground in deepening our knowledge of the human mind, the research that foreshadowed those changes, and the role of interdisciplinarity. We will also discuss the implications of these new directions in terms of how we grapple with the deepest psychological questions – What does it mean to be human? How should we treat others? How do minds connect? And how should science, itself, change to become more robust, open and objective? Throughout the class, we will discuss the important and challenging ethical implications of these new frontiers.

Prerequisite: PSYC 1 and instructor permission via the department website

Offered: Winter.

PSYC 88 - Independent Psychology Research

This course is designed to enable qualified students to engage in independent laboratory or field research under the direction of a PBS faculty member. Students are required to write a final report of their research. Students may take up to three terms of independent research (or one term of independent research and two terms of honors research), but no more than two terms of 88, 89, or a combination of 88s and 89s may count toward the eight required courses for the major. This course may not be used to fulfill the upper-level (60 or above) major requirement.

Prerequisite: PSYC 1 or PSYC 6, and PSYC 10, and PSYC 11. Submission of the Checklist for enrolling in Independent Research, which includes approval from the advisor.

Offered: Fall, Spring, Summer, Winter.

PSYC 89.01 - Honors Psychology Research I

This course is designed to enable especially qualified Psychology majors, usually seniors, to engage in honors laboratory or field research under the direction of a faculty member. No more than two terms of 88, 89, or a combination of 88s and 89s may count toward the eight required courses for the major. This course may be used to fulfill the upper-level (60 or above) major requirement. Students are awarded one course credit for successful completion of this course once they complete the Psychology Honors Program requirements, generally at the end of the spring term. Students subsequently register for PSYC 89.02. Although students must register for two terms of Honors Psychology Research (PSYC 89.01 and PSYC 89.02), honors research coursework extends over three terms. Students do not register for a third term. A final grade will replace the "ON" for both this course and PSYC 89.02 upon completion of the Psychology Honors program requirements. See the description of the Psychology Honors program for additional information.

Prerequisite: PSYC 1, PSYC 10, and PSYC 11. A 60-level course is strongly recommended. Submission of the checklist for enrolling in Honors Research, which includes approval from the advisor. The checklist is available on the department website.

Offered: Fall, Spring, Summer, Winter.

PSYC 89.02 - Honors Psychology Research II

Psychology Honors students register for PSYC 89.02 as their second term of honors research. Students are awarded one course credit for successful completion of this course once they complete the Psychology Honors Program requirements, generally at the end of the spring term. Students register for this course after PSYC 89.01. Students register for only two terms, though honors research coursework extends over three terms. A final grade will replace the "ON" for both PSYC 89.01 and this

course upon completion of the Psychology Honors Program requirements.

Prerequisite: PSYC 89.01

Offered: Fall, Spring, Summer, Winter.

PSYC 90 - Independent Neuroscience Research

This course is designed to enable Neuroscience majors to engage in independent laboratory research under the direction of a Neuroscience faculty member. Students are required to write a final report of their research. Students may take up to three terms of independent research (or one term of independent and two terms of honors research), but only two terms may be counted for credit towards the major. If two terms are taken, one may count towards the major culminating experience and the second may count as an elective numbered above 20, but cannot be used to fulfill the major requirement for electives numbered above 40.

Prerequisite: PSYC 6, PSYC 10, two of the four core courses required for the major and submission of the Checklist for enrolling in Independent Research, which includes approval from the advisor.

Offered: Fall, Spring, Summer, Winter.

PSYC 91.01 - Honors Neuroscience Research I

This course is designed to enable qualified Neuroscience majors (whose major GPA is above 3.3), usually seniors, to engage in honors laboratory or field research under the direction of a faculty member. Students must take two terms of Honors Research (PSYC 91.01 and PSYC 91.02). No more than two terms of 90, 91, or a combination of 90s and 91s may count toward the required courses for the major. Since honors students take PSYC 91.01 and PSYC 91.02, one may count towards the upper-level (60 or above) culminating experience requirement for the major and the second may count as an elective numbered above 20, but cannot be used to fulfill the major requirement for electives numbered above 40. Students are awarded one course credit for successful completion of this course once they complete the Neuroscience Honors Program requirements, generally at the end of the spring term. Students subsequently register for PSYC 91.02. Although students must register for two terms of Honors Neuroscience Research (PSYC 91.01 and PSYC 91.02), honors research coursework extends over three terms. Students do not register for a third term. A final grade will replace the "ON" for both this course and PSYC 91.02 upon completion of the Neuroscience Honors program requirements. Please see the description of the Neuroscience Honors program for additional information.

Prerequisite: PSYC 6; and PSYC 10 or BIOL 29. Submission of the checklist for enrolling in Honors Research, which includes approval from the advisor. The checklist is available on the department website.

Offered: Fall, Spring, Summer, Winter.

PSYC 91.02 - Honors Neuroscience Research II

Neuroscience Honors students register for PSYC 91.02 as their second term of honors research. Students are awarded one course credit for successful completion of this course once they complete the Neuroscience Honors Program requirements, generally at the end of the spring term. Students register for this course after PSYC 91.01. Students register for only two terms, though honors research coursework extends over three terms. A final grade will replace the “ON” for both PSYC 91.01 and this course upon completion of the Neuroscience Honors Program requirements. See full course description listed with PSYC 91.01 and the Neuroscience Honors program description for more details.

Prerequisite: PSYC 91.01

Offered: Fall, Spring, Summer, Winter.

PSYC 92.01 - Senior Thesis in Psychology I

This course is designed to enable Psychology majors, usually seniors, to engage in laboratory or field thesis research under the direction of a faculty member. No more than two terms of 88, 92, or a combination of 88s and 92s may count toward the eight required courses for the major. This course may be used to fulfill the upper-level (60 or above) culminating requirement. Students are awarded one course credit for successful completion of this course once they complete the Psychology thesis requirements, generally at the end of the spring term. Students subsequently register for PSYC 92.02. A final grade will replace the “ON” for both this course and PSYC 92.02 upon completion of the Psychology thesis requirements.

Offered: Fall, Spring, Summer, Winter.

PSYC 92.02 - Senior Thesis in Psychology II

Psychology Senior Thesis students register for PSYC 92.02 as their second term of research. Students are awarded one course credit for successful completion of this course once they complete the thesis requirements, generally at the end of the spring term. Students register for this course after PSYC 92.01. A final grade will replace the “ON” for both PSYC 92.01 and this course upon completion of the Psychology thesis requirements.

Offered: Fall, Spring, Summer, Winter.

PSYC 93.01 - Senior Thesis in Neuroscience I

This course is designed to enable Neuroscience majors, usually seniors, to engage in laboratory or field research under the direction of a faculty member. Students must take two terms of thesis research (PSYC 93.01 and PSYC 93.02). No more than two terms of 70, 90, 93, or a combination of 70s, 90s and 93s may count toward the required courses for the major. Since thesis students take PSYC 93.01 and PSYC 93.02, one may count towards the

culminating experience requirement for the major and the second may count as an elective numbered above 20, but cannot be used to fulfill the major requirement for electives numbered above 40. Students are awarded one course credit for successful completion of this course once they complete the thesis requirements, generally at the end of the spring term. Students subsequently register for PSYC 93.02. A final grade will replace the “ON” for both this course and PSYC 93.02 upon completion of the thesis requirements.

Offered: Fall, Spring, Summer, Winter.

PSYC 93.02 - Senior Thesis in Neuroscience II

Neuroscience Senior Thesis students register for PSYC 93.02 as their second term of thesis research. Students are awarded one course credit for successful completion of this course once they complete the thesis requirements, generally at the end of the spring term. Students register for this course after PSYC 93.01. A final grade will replace the “ON” for both PSYC 93.01 and this course upon completion of the thesis requirements.

Offered: Fall, Spring, Summer, Winter.

Quantitative Social Science

Chair: Michael Herron

Faculty: Professor M. C. Herron; Assistant Professors H. Chang and E. Voytas.

QSS steering committee members: Professors Y. Horiuchi (Government), B. Nyhan (Government), D. Rockmore (Mathematics, Computer Science), R. A. Shumsky (Operations at Tuck Business School); Associate Professors J. Ferwerda (Government), F. Fu (Mathematics); Assistant Professors M. Costa (Government), E. Moen (Biomedical Data Science); Adjunct Assistant Professor J. Chipman (Geography and Earth Sciences)

The Program in Quantitative Social Science (QSS) brings together Dartmouth faculty and students who are interested in applying statistical, computational, and mathematical tools to social science questions. QSS offers undergraduates a minor and a major, both of which combine quantitative training with one or more of the social sciences. Through QSS, Dartmouth undergraduates can integrate the power of modern quantitative and computational methods with the substance of a social science discipline.

To view Quantitative Social Science courses, click here. (p. 690)

The Major in Quantitative Social Science

The major consists of courses to be selected from the following areas.

Six prerequisites

- *Programming: either COSC 1, ENGS 20, or another programming course approved by the QSS Chair*
- *Mathematics: MATH 3 and MATH 8*
- *Introductory statistics: either ECON 10, GOVT 10, MATH 10, QSS 15, PSYC 10, SOCY 10, or another introductory statistics course approved by the QSS Chair*
- *Intermediate statistics: either ECON 20, GOV 19.01, MATH 40, MATH 50, QSS 54, or another intermediate statistics course approved by the QSS Chair*
- *Mathematical modeling: either ECON 21, QSS 18, QSS 30.04, QSS 36, or another course approved by the QSS Chair*
- *Introductory social science: one of ANTH 1, ANTH 3, ANTH 6, ANTH 9, ECON 1, EDUC 1, ENVS 3, GEOG 1, GEOG 6, GOVT 3, GOVT 4, GOVT 5, GOVT 6, LING 1, PBPL 5, PSYC 1, SOCY 1, SOCY 2, or another course approved by the QSS Chair*

Core curriculum

The core curriculum for the major in Quantitative Social Science consists of [QSS 17](#) and [QSS 20](#).

Methods requirements

One of the following courses:

MATH 11, Accelerated Multivariable Calculus
MATH 13, Calculus of Vector-Valued Functions
MATH 22, Linear Algebra with Applications or COSC 70, Foundations of Applied Computer Science

One course from the following:

COSC 74, Machine Learning and Statistical Data Analysis
GEOG 9.01, Geographical Information Systems
GEOG 54, Geovisualization
MATH 50, Introduction to Linear Models
MATH 76, Topics in Applied Mathematics (to be approved by the QSS Chair)
QSS 17, Data Visualization
QSS 19, Advanced Data Visualization
QSS 30, Special Topics in QSS
QSS 36, Mathematical Models in the Social Sciences
QSS 41, Analysis of Social Networks
QSS 45, AI and Machine Learning

The special topics course, [QSS 30](#), may be taken more than once as long as different electives are selected. Moreover, with permission of the QSS Chair, students may substitute other courses offered at Dartmouth for the required courses listed above.

Social science requirements

Four non-introductory courses that focus on a social

science area of the student's choosing. A student pursuing the major in QSS should consider the extent to which his or her social science courses are coherent, and the QSS Chair will be available to offer guidance on this.

Research project requirement

To graduate with a major in QSS, a student must complete an independent research project. Each QSS major must choose one of two project options: either an intensive, one quarter project or a three quarters honors thesis. The honors thesis option requires approval from the program, and QSS honors theses are governed by guidelines established by the College. Per these guidelines, a student completing a thesis judged to be of sufficiently high quality will graduate from Dartmouth with Honors or with High Honors in QSS. A QSS major who elects the intensive project track will work on his or her project during the student's fourth year on campus. Participating in the thesis track requires work and engagement during the fall, winter, and spring terms of a student's fourth year. Students applying to write an honors thesis in QSS should have at time of application an overall grade point average of 3.5 or higher. In limited circumstances, a student pursuing a major in QSS will be permitted to change research project tracks during his or her fourth year. A student completing an intensive, one quarter research project will take QSS 82 in the student's last year on campus. A student in the honors thesis track of the QSS major will take QSS 81 in the fall of the student's last year on campus. For further details on the two research project tracks in QSS, consult the program chair.

The Minor in Quantitative Social Science

The QSS minor was designed based on the belief that quantitatively- and computationally-oriented students who have interests in social science should be taught a core set of skills. Such students need to know the basics of computer programming; they need a foundation in calculus; they need to know the basics of statistical inference; they need exposure to mathematical modeling; they need to be familiar with research design; and, they need hands-on exposure to the rewards and difficulties of research. The QSS minor embodies these objectives and empowers students to answer important empirical questions about the world.

The minor consists of courses to be selected from the following areas.

Five prerequisites

- *Programming: either COSC 1, ENGS 20, or another programming course approved by the QSS Chair*
- *Mathematics: MATH 3 and MATH 8*

• *Introductory statistics: either ECON 10, ENVS 10, GOVT 10, MATH 10, QSS 15, PSYC 10, SOCY 10, or another introductory statistics course approved by the QSS Chair*

• *Intermediate statistics: either ECON 20, GOV 19.01, MATH 40, MATH 50, QSS 54, or another intermediate statistics course approved by the QSS Chair*

• *Mathematical modeling: either ECON 21, QSS 18, QSS 30.04, QSS 36, or another course approved by the QSS Chair*

Core curriculum

The core curriculum for the major in Quantitative Social Science consists of [QSS 17](#) and [QSS 20](#).

Methods requirements

Two courses from the following:

COSC 74, Machine Learning and Statistical Data Analysis

GEOG 9.01, Geographical Information Systems

GEOG 54, Geovisualization

MATH 50, Introduction to Linear Models

MATH 76, Topics in Applied Mathematics (to be approved by the QSS Chair)

QSS 17, Data Visualization

QSS 19, Advanced Data Visualization

QSS 30, Special Topics in QSS

QSS 36, Mathematical Models in the Social Sciences

QSS 41, Analysis of Social Networks

QSS 45, AI and Machine Learning

The special topics course, [QSS 30](#), may be taken more than once. Moreover, with permission of the QSS chair, students may substitute other courses offered at Dartmouth for any of the two required courses listed above.

Research project

QSS 82, One quarter research project

QSS - Quantitative Social Science Courses

To view [Quantitative Social Science requirements](#), click [here](#) (p. 688).

QSS 15 - Introduction to Data Analysis

Instructor: Voytas

Methods for transforming raw facts into useful information. Directed toward students with an aptitude for mathematics. Emphasis is placed on the understanding, use, and both oral and written interpretation of exploratory data analysis within the rules of scientific method. With permission from the responsible department, QSS 015 may be used to satisfy some pre-medical, natural science, and

social science departmental requirements in mathematics, statistics, and methodology. Limited enrollment.

Because of the large overlap in material covered, no student may receive credit for more than one of the courses ECON 10, ENVS 10, GOVT 10, MATH 10, PSYC 10, QSS 15, and SOCY 10, except by special petition to the Committee on Instruction.

Prerequisite: MATH 3 or higher, or permission.

Offered: Fall.

Degree Requirement Attributes: QDS

QSS 17 - Data Visualization

Instructor: Horiuchi, Cooper

Big data are everywhere – in government, academic research, media, business, and everyday life. To tell the stories hidden behind blizzards of data, effective visualization is critical. This course primarily teaches R, a free software environment for statistical computing and graphics, which is widely regarded as one of the most versatile and flexible tools for data visualization and, more broadly, data science. Students completing the course will know how to “wrangle” and visualize data critical to their scientific endeavors.

Cross-Listed as: GOVT 16

Degree Requirement Attributes: Dist:TLA

QSS 18 - Introduction to Game Theory

Instructor: Herron

Game theory is used to study how individuals and organizations interact strategically, and this course introduces game theory with a focus on political science applications. Game theory is a standard tool in the social sciences, and insights from game theory are essential to understanding many facets of politics, such as political party competition, legislative politics, international relations, and the provision of public goods. Among other topics, the course will cover normal and extensive form games, Nash equilibria, imperfect information, mixed strategies, and, if time permits, the basics of games with incomplete information. A course in game theory will change the way that one views the world.

Cross-Listed as: GOV 18

Degree Requirement Attributes: QDS

QSS 19 - Advanced Data Visualization

Instructor: Cooper

Data visualization represents a crucial form for communication of scientific findings to the broader public. The QSS 19 advanced data visualization course maximizes students' abilities to communicate social science research through advanced graphical representations, including

many of the more advanced forms of visualization suitable for the web. Javascript, HTML widgets, dashboards, and animated plots designed for social media and the web will be covered at length. Students will execute projects, building their own web-based dashboards and visualizations designed to communicate patterns in data, translating and transforming the results of real-world research.

QSS 20 - Modern Statistical Computing

Instructor: Chang

This course is meant to build upon your introductory programming course and to equip you with the computing literacy to conduct social science research in the age of “big data.” This has two core components. First is learning the background tools (e.g., Github; Latex; working on the command line) to conduct transparent and reproducible research. Second is learning programming skills essential for social science in the big data era, with a focus on using Python for various applied tasks as well as R for tasks like data visualization and SQL for tasks like working with the relational databases that form the backbone of many real-world government and commercial datasets.

Prerequisite: COSC 1, ENGS 20

Cross-Listed as: PBPL 40.01

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:TAS

QSS 30 - Special Topics in Quantitative Social Science

This course focuses on a particular topic of interest to students pursuing coursework in quantitative social science. The topics covered by QSS 30 will span economics, political science, sociology, and other fields. The specific topic of the course will change with each offering, and students may therefore take this course more than once.

QSS 30.01 - Sports Analytics

Instructor: Hanlon, Herron

Sports organizations are becoming increasingly aware that analytics are an important component of team success. This course will introduce students to various statistical techniques used in modern sports analysis and in particular will teach participants how statistical methods can be used to analyze game outcomes and evaluate players and strategies. The course will include lectures, in-class exercises using the R statistical computing environment, and guest speakers from the sports industry.

Degree Requirement Attributes: Dist:QDS

QSS 30.02 - Computational Text Analysis for the Social Sciences

Instructor: Westwood

Language is the medium for politics and political conflict. Candidates debate during elections. Representatives write laws. Nations negotiate peace treaties. Clerics issue Fatwas. Citizens express their opinions about politics on social media sites. These examples, and many others, suggest that to understand what politics is about, we need to know what political actors are saying and writing. This course introduces techniques to collect, analyze, and utilize large collections of text for social science inferences. Students will also have the opportunity to develop their programming abilities.

We will explore a range of datasets from the text of *The Federalist Papers* to the millions of tweets sent to and from members of Congress.

Cross-Listed as: GOVT 19.05 MATH 05.01

Degree Requirement Attributes: Dist:TLA

QSS 30.03 - Experiments in Politics

Instructor: Costa, Nyhan, Crabtree

This class is a lab-style seminar in which we will design, field, and analyze an experimental study. Our goal is to publish a scholarly article about our findings in a peer-reviewed journal of political science - an ambitious project that will require a substantial commitment from each student. Flexibility will also be essential since the course will evolve during the semester based on the needs of the project.

The subject of the experimental study varies term to term and will be determined prior to the beginning of classes. Although the experimental study will vary each term, students may not repeat this course for credit.

Cross-Listed as: GOVT 83.21

Degree Requirement Attributes: Dist:QDS

QSS 30.04 - Evolutionary Game Theory and Applications

Instructor: Fu

Pioneered by John Maynard Smith and others, evolutionary game theory has become an important approach to studying a wide range of biological and social problems, such as microbial interactions and animal behavior. In evolutionary game dynamics, the fitness of individuals depends on the relative abundance of all individual types in the population, and higher-fitness individual types tend to increase in abundance. This course introduces basic concepts in evolutionary game theory, including evolutionarily stable strategies, replicator dynamics, finite populations, and games on networks, along with applications to social evolution, particularly to understanding human cooperation.

Prerequisite: MATH 3

Cross-Listed as: MATH 30.04

Degree Requirement Attributes: Dist:QDS

QSS 30.05 - Topics in Digital History: U.S. History Through Census Data

This course focuses on using data from historical censuses (1850-2000) to examine U.S. history. We will discuss what the census tells us about the past, the role of the census in policy-making, and the history of the census. The course comprises four units: race, (im)migration, work, and family. For each, you will learn how to find, analyze, and visualize census data using R and how to write about quantitative historical analysis in a digital medium.

Cross-Listed as: HIST 90.01

Degree Requirement Attributes: QDS; WCult:W

QSS 30.06 - By the Numbers: Race, Incarceration and Politics

More than half a century after the height of the Civil Rights Movement, inequalities between black Americans and white Americans persist. Across a myriad of measures--including health, employment, income, wealth, education, and incarceration--black Americans are fundamentally different than whites. Leveraging contemporary data and modern quantitative techniques, we evaluate black-white racial gaps by the numbers and among other things consider how racial inequalities in the United States might alter the American political landscape.

Cross-Listed as: GOVT 19.06

Degree Requirement Attributes: Dist:QDS

QSS 30.07 - Simulating Social Systems: Complexity and Society

Instructor: Frey

In this course we will learn the science and art of "agent-based modeling," the simulation of social phenomena with computer models. Social outcomes seem complex, but that complexity often results from many agents following very simple rules. We will discover the science of spontaneous social order, learning to program in a simple computer language for writing social simulations, and studying models by sociologists, economists, psychologists, political scientists, philosophers, historians, and even computer scientists and physicists.

Degree Requirement Attributes: Dist:SOC

QSS 30.08 - Misperceptions in Politics: When Do They Matter and Why?

Instructor: Flynn

Many citizens hold misperceptions about political facts. When and why do they matter? This course examines the causes and consequences of misperceptions, strategies for

correcting misperceptions, and the tools scholars use to study misperceptions scientifically. These tools include surveys, experiments, and a widely used statistical computing program (R). Students will work together (with the instructor) to design, execute, and report an original experimental study of misperceptions.

Cross-Listed as: GOVT 83.09

Degree Requirement Attributes: Dist:QDS

QSS 30.09 - Data Wrangling

Instructor: Yapalparvi

This course is a survey of methods for extracting and processing data. It will cover data architectures (ontologies, metadata, pipeline and open source resources), database theory, data warehouses, the electronic medical record, various file formats including audio, and video, data security and cloud resources. Students will gain skills working with Big Data using software such as SQL, APACHE Hadoop and Python.

Degree Requirement Attributes: Dist:TAS

QSS 30.12 - Quantitative Literary Criticism

Digitization of vast numbers of texts and rapid advances in computational methods are enabling new forms of criticism in all areas of literary study. Classics was an early adopter of digital technologies, and computation is now pervasive throughout the field, as illustrated by flagship projects such as the Perseus Digital Library. Beyond the familiar examples of digitized texts and simple word searches, scholars and students also benefit from an ever-growing array of sophisticated quantitative tools, and from increasing engagement with diverse technical disciplines – natural language processing, data science, even bioinformatics. Through a survey of recent research at the intersection of Latin literature and the digital humanities, this course will introduce you to the state of the art in quantitative literary criticism. To ground our methodological investigations, we will explore a diverse selection of Latin poetry, including epic (Vergil, Lucan, and Catullus), elegy (Catullus), and comedy (Plautus), and sample some less famous later authors, such as Paul the Deacon and Vitalis of Blois, who were influenced by classical antecedents. At each turn, we will examine the interplay between traditional (close reading, philology, theory) and data-driven analyses of Latin literature and consider how quantitative methods can support humanistic inquiry. Along the way, you will gain hands-on experience with powerful computational tools and be introduced to now ubiquitous critical approaches, such as intertextuality and reception studies. Assigned readings will be in English translation using bilingual Latin-English editions; in addition to reading all of the English, students with Latin will be responsible for understanding and translating

“micro samples” of the original texts. The course assumes no prior computational background.

Cross-Listed as: CLST 10.09

Degree Requirement Attributes: Dist:TAS

QSS 30.13 - Sociology of Mental Health

Instructor: Houle

Poor mental health and mental illness are often viewed as biological flaws. Sociologists, however, argue that mental illness is socially constructed, and that population mental health is profoundly shaped by social conditions. In this course, we will explore sociological understandings of mental health and illness. We will focus on a range of topics, including: the social construction of mental illness, how social inequality contributes to mental health, and how society responds to the mentally ill.

Degree Requirement Attributes: Dist:SOC

QSS 30.15 - Neighborhoods and Health

Just as conditions within our homes have important implications for our health, conditions in the neighborhoods surrounding our homes also can have major health effects. Social, economic, and environmental features of neighborhoods have been linked with mortality, general health status, disability, birth outcomes, chronic conditions, obesity, depression, injuries, violence, health behaviors and more. In this course, we consider whether and how the characteristics of neighborhoods shape the physical and mental health of individuals, and how neighborhoods contribute to persistent health disparities. Special attention will be devoted to conceptual and methodological challenges to detecting the prevalence and magnitude of ‘neighborhood effects’ on health. Not open to students who have received credit for SOCY 79.12.

Degree Requirement Attributes: Dist:SOC

QSS 30.16 - Cultural Analytics

Instructor: Dobson

This course is an introductory course and assumes no prior knowledge of literary studies, critical approaches, statistics, or data analysis. It provides an overview of emergent quantitative methods and theories used by humanists to study data in text and text as data. As we examine these objects, we'll ask questions about the differences, in terms of methodology and interpretive practices, between the social sciences and the humanities. In developing answers to these questions, we will explore recent quantitative methods alongside traditional methods of humanistic inquiry. The goal of the course is to enable students to evaluate data, methods, and interpretations produced from quantitative research in the humanities and to conduct their own research.

Cross-Listed as: ENGL 64.05

Degree Requirement Attributes: Dist:QDS

QSS 30.17 - Unstalling the Stalled Revolution: Gender (In)equality at Work and at Home

The nature of work, family life, and gender relations has changed dramatically over the last half century. This course examines these trends, with a focus on implications for gender inequality in society. We will focus on patterns in paid labor force participation and family life in the United States, and discuss the major debates surrounding the causes and consequences of such trends. We will also pay attention to how these patterns look across different races, ethnic groups, and socioeconomic status, as well as briefly examine how these trends compare to other countries. We will conclude by exploring the implication of gender inequality for families, as well as work-family policy debates.

Cross-Listed as: SOCY 061 WGSS 33.05

Degree Requirement Attributes: Dist:SOC; WCult:W

QSS 30.18 - Quantitative Approaches to Peace and Justice

Instructor: Voytas

In this course, you will be introduced to the quantitative study of peace, violence, and justice. We will cover the theories, methods, findings, and shortcomings in cutting-edge analyses of conflict resolution, transitional justice, and reconciliation. Throughout the process, we'll discuss issues of measurement, causal inference, and research ethics. You will also learn and begin to employ foundational skills in data science, R, causal inference, and statistical analysis.

Cross-Listed as: GOVT 50.20

Degree Requirement Attributes: Dist:INT or SOC

QSS 30.19 - Data and Bodies

In this course we will take a multi-modal approach to understanding relationships between “datafication” and human bodies. Today’s “Datafication” is a process of transforming diverse processes, qualities, actions and phenomena into forms that are machine-readable by digital technologies, but the act of turning humans and human bodies into quanta of information has a long history. We will be using art, new media, history, information science, and more to think through the impact that datafication has on how we understand ourselves and others. Particular attention will be paid to the ways in which data has historically been used in racializing and gendering ways, and the role that quantification of people has been integral to the development of the Western nation-state.

Degree Requirement Attributes: Dist:SOC

QSS 30.20 - Election Polling

Instructor: Barabas

The results of opinion polls often dominate election and campaign coverage and alter the behavior of politicians in modern democracies. Although surveys are more common than in the past, they vary considerably in terms of quality. To better understand the potential sources of error, this course introduces students to survey research methods with an emphasis on the election polling techniques used by social scientists to study political attitudes and policy preferences. A primary goal of the course is to help students understand fundamental concepts like sampling or responses rates as well as best practices for designing questionnaires and response options. The class will also cover advanced topics such as survey experiments, nonprobability panels, statistical power, and post-stratification weighting among others. During the course, students will explore and analyze public opinion patterns in survey data archives before ultimately writing and programming an original election-related study. Learning survey methodology should be particularly useful for anyone who plans to (A) take more advanced quantitative methodology courses, (B) write an honors thesis, (C) serve as a research assistant, (D) attend graduate school, or (E) work in professional areas that make use of opinion data, including campaigns and elections, consulting, law, journalism, education, business, health care, policy evaluation, or government.

Cross-Listed as: GOVT 037 PBPL 044

Degree Requirement Attributes: Dist:QDS; WCult:W

QSS 30.21 - Social Justice and Computing

This course draws on feminist and queer scholarship to examine the intricate relationship between datafication, ubiquitous computing, and social justice, highlighting the politics and impacts of data-driven processes and big data on human lives. One of the key highlights of WGSS engagements with computing history is the focus on the politics and impacts of data-driven processes and big data on human lives. The course will provide a brief introduction to histories of computing and data-driven practices within the Anglo-American tradition, including discussions of the roles that ethics and biopolitics play within these histories. We will explore ways that privacy/security, algorithmic processes, computational environmental impacts, and design have exploited the most vulnerable while increasing affordances for the most privileged. We will also spend significant time learning about new data/computational justice initiatives and develop a robust understanding of how social justice issues like prison abolition, climate change, and equitable health outcomes are at the core of understanding computational cultures. No Computer Science or Data Science background is required, but the course will entail learning about some of the technical history within both fields. Similarly, there are no WGSS prerequisites for the course but students will be responsible for learning about anti-racist feminist and queer methods and insights.

Degree Requirement Attributes: Dist:SOC

QSS 30.22 - Computational Comparative Literature

Instructor: Chapot

There are around 7,000 languages spoken across the world, yet only 500 of these are used in the digital world and even fewer are supported by fundamental digital infrastructures. Computational methods for analyzing language are being implemented across a growing range of domains, but do those methods work equally well for all types of languages and texts? And how can these methods be combined with existing ways of reading to illuminate how language works, what we can do with language, and what language does to us? In this course, we will apply insights from cultural studies and comparative literature to investigate how history, language, and culture shape our digital practices. We will develop a comparative and cultural critical perspective on digitization and text analysis practices as we learn about and contrast different methods of analyzing modern languages and literatures. No prior experience of programming, statistics or literary theory and criticism is expected.

Cross-Listed as: COLT 70.06

Degree Requirement Attributes: Lang:LRP; Dist:INT or LIT

QSS 30.23 - Ethnoracial Identities in Politics and Society

This course focuses on understanding ethnoracial identities that may not fit into preexisting ethnoracial categories and the unique quantitative challenges of studying and understanding these groups. The goals of the course are to have a more nuanced understanding of ethnoracial identities beyond existing categories, and how to apply those nuances to quantitative work. The topics we will focus on include: 1) Ambiguities of Whiteness, 2) Ambiguities of Blackness, and 3) Multi-ethnoracial identities. We will study these topics primarily through a quantitative lens. The culminating project will be centered on how to quantitatively study populations when labels do not exist to capture complex identities.

Cross-Listed as: GOVT 83.30

Degree Requirement Attributes: Dist:QDS; WCult:CI

QSS 30.24 - Advanced Policy Research

Lawmakers often craft public policies to address perceived problems. Determining whether policies or other types of social inventions truly *work* (i.e., cause the intended effects) entails program evaluation and related forms of policy analysis. This applied research seminar focuses on designing and conducting empirical programmatic evaluations with an emphasis on research design principles that make documenting cause and effect relationships more successful.

Cross-Listed as: GOVT 83.31 PBPL 089

Degree Requirement Attributes: Dist:QDS; WCult:W

QSS 30.25 - Science, Statistics, and Health Communication

Health messages in advertising, news and social media often fail to provide the basic information and context people need to make sense of claims and decide whether to believe them. Such poor communication matters because it may promote unrealistic beliefs about health risks and treatment effects, leading to wasteful or harmful decisions.

In this course you will develop and use critical thinking skills grounded in statistics and medical science to approach messages with healthy skepticism, skills that will help you become a more discerning consumer and communicator of claims in general.

Degree Requirement Attributes: Dist:QDS

QSS 30.26 - Digital Language Theory

It has long been a goal to merge computation with natural language, and by many measures the latest AI systems seem to have achieved this. But how do models like ChatGPT enable us to talk with our computers? While this is partly a technical question, AI's facility with natural language also presupposes a broader theory about what language is—and what, therefore, terms like “writing,” “communication,” and “understanding” (among others) mean. This course will survey various attempts to make language computable over the past two hundred years. We will consider the above terms as we sample from the history of natural language processing, various literary theorists and linguists, as well as artistic uses of language modeling. Readings range from semiotics and post-structuralism to computer science and language art, language models from Markov chains to GPT.

Cross-Listed as: ENGL 55.28

Degree Requirement Attributes: Dist:QDS

QSS 36 - Mathematical Models in the Social Science

Instructor: Lord

Disciplines such as anthropology, economics, sociology, psychology, and linguistics all now make extensive use of mathematical models, using the tools of calculus, probability, game theory, network theory, often mixed with a healthy dose of computing. This course introduces students to a range of techniques using current and relevant examples. Students interested in further study of these and related topics are referred to the courses listed in the Mathematics and Social Sciences program.

Prerequisite: MATH 13, MATH 20

Cross-Listed as: MATH 36

Degree Requirement Attributes: TAS

QSS 41 - Analysis of Social Networks

Instructor: DeWan

Students will gather and analyze data on a variety of networks (institutions, communities, elites, friendship systems, kinship systems, trade networks, and the like). Techniques of analysis may include graph theory, text analysis, multidimensional scaling and cluster analysis, and a variety of special models. Not limited to students in the major.

Degree Requirement Attributes: QDS

QSS 45 - Artificial Intelligence and Machine Learning for Social Science

This course introduces contemporary methods in machine learning for social scientific inquiry. The growth in AI has produced a technological arms race between the generation of information and media versus its analysis. As a consequence of this arms race, standard computational tools like text-mining approaches regularly used by social scientists to analyze data are often insufficient for many tasks that involve AI-generated material, such as identifying misinformation in podcasts and YouTube videos. Analyzing this data is crucial for the next generation of computational social science, and to understand evolving digital ecosystems.

Degree Requirement Attributes: Dist:QDS

QSS 54 - Change, Context, and Causality: Intermediate Quantitative Data Analysis for Sociologists

Instructor: Houle

Sociologists and other social scientists are often interested in understanding causal and dynamic social processes such as:

“How do the places we live, work, and play get under the skin and affect health and well-being across the life course?”

“Does upward social class mobility change one’s political attitudes?”

“What social currents are responsible for changes in support for same-sex marriage across historical time?”

“Are long-standing racial inequalities declining, persisting, or increasing in recent years?”

Many of these questions are methodologically difficult to answer with observational (non-experimental) data, and they require that we get a handle on the study of change, context, and causality. You likely have learned how to answer questions like these with standard OLS (linear) regression techniques and cross-sectional data, which remain useful tools in social scientists’ methodological toolbox. But these techniques are also quite limited, and impose strict assumptions that do not allow us to meet

many of our goals, adequately answer our questions, or provide stringent tests of our theories and hypotheses.

In this course, we'll pick up where introductory statistics courses leave off, and get an introduction to more advanced statistical methods for observational data, including but not limited to: regression for categorical dependent variables, fixed and random effects models, and hierarchical linear modeling. This course will be a mix of seminar and lecture, where we will be focused on understanding how we can use these methods to better meet our goals and answer our research questions. Put differently, this course is less focused on going "under the hood" and more focused on "how to drive"—specifically, we will interrogate the assumptions and use of these statistical methods in the social sciences and learn how to implement these methods using STATA. This will include: discussion of core methodological assumptions and limitations, how to apply these statistical methods in different settings, and learning when specific methods are appropriate tools and when they are not. We will explore these issues through student-led discussions, hands-on data analysis, and dissecting the application of these methods in academic journal articles. As part of this course, you will be exposed to (and critique) a wide range of sociological research published in our major disciplinary journals. The course will culminate in an independent research project where students will analyze data and use the one or more of the modeling techniques discussed during the term to answer a sociological research question of their choosing.

Cross-Listed as: SOCY 054

Degree Requirement Attributes: Dist:QDS

QSS 80 - Research Seminar in Quantitative Social Science

This course offers a qualified student the opportunity to undertake an original research project under the direction of a faculty member, either in seminar format if there are a sufficient number of students enrolled in the course during a given quarter or on an individual basis otherwise. Each student will write a formal paper embodying the results of the research and present it at the end of the quarter. QSS 80 is a required component of the Minor in QSS. Students are encouraged to take QSS 80 after completing other minor requirements, or concurrently with the QSS Chair's permission.

QSS 81 - Major Thesis Research

Instructor: Herron

This course is part of the two-track major in QSS. Students in the honors thesis track of the major register for QSS 81 in the fall quarter of their fourth year. Participating in this course requires thesis research and engagement during the fall, winter, and spring terms of a student's last academic year on campus. Students applying to write an

honors thesis in QSS should have at time of application an overall GPA of 3.5 or higher.

Students registering for QSS 81 receive a grade of "ON" (ongoing) at the end of the fall term. A final letter grade will replace the "ON" at the end of the term at which a student's thesis is completed. Students who wish to receive two credits for honors thesis research register for QSS 81 in the fall and then for QSS 88 in either the following winter or spring.

Offered: Fall.

QSS 82 - One Quarter QSS Research Project

Instructor: Cooper, Voytas

Students completing a one-quarter research project in QSS, either as part of a major or minor, must register for this course in their fourth year on campus.

Offered: Fall, Spring, Winter.

QSS 88 - Independent Study in Quantitative Social Science

Each QSS major must complete an honors thesis by taking QSS88 for credit at some point during the student's thesis year, and this course will in general be taken in the winter quarter. During the chosen quarter, each student will work on an independent research project under the direction of one or more faculty members, who will meet with the student regularly, usually weekly. All QSS theses will be graded and presented in accordance with Dartmouth College rules and guidelines that have been established by the QSS Steering Committee. This course is repeatable as many times as the student would like to repeat it. The guidelines are available at the QSS website.

The Nelson A. Rockefeller Center for Public Policy

The Nelson A. Rockefeller Center for Public Policy and the Social Sciences at Dartmouth College was founded in 1983 to commemorate the contributions of Vice President Nelson A. Rockefeller '30 to the life of the nation. The Rockefeller Center educates, trains, and inspires the next generation of public policy leaders, across fields, through multidisciplinary policy and social science-focused education, engagements and public lectures with distinguished visiting scholars and practitioners, policy-oriented research across the social sciences, and skills training. The Center connects experiences in and out of the classroom, and on and off campus, to achieve these goals.

The academic and curricular offerings of the Rockefeller Center provide a wide range of opportunities for students to engage with public policy in their areas of interest. In addition to enrolling in one of the more than 20 public policy courses offered each year, students have the ability

to complete a public policy minor for in-depth exploration of the policy process, policy research and analysis, and a targeted focus on a substantive policy area (e.g., law, health, environment, economics, foreign affairs, social policy). The Center sponsors the Policy Research Shop, a student-staffed, faculty-mentored research enterprise in which students conduct research at the request of New Hampshire and Vermont state, county, and local government officials. The Center also offers an exchange program with Keble College at the University of Oxford, and grants to students working on honors thesis research projects in the social sciences.

Outside the classroom, the Center provides students with robust programs designed to cultivate their leadership capacities and interests. These programs include the First-Year Fellows Program in Washington, DC; funding for off-campus internships and on campus research; the Judicial Fellowship Program; a Mini-Grant program for supporting student initiatives; and a sequence of leadership training programs including Dartmouth Leadership Attitudes and Behaviors and Rockefeller Leadership Fellows. The Center's Public Programs and Special Events also provide students with regular opportunities to meet and engage with distinguished visiting scholars and practitioners.

Public Policy Minor

Public Policy Minor Chair: Herschel S. Nachlis

Faculty: Center Director, Professor of Government Jason Barabas; Center Associate Director and Senior Policy Fellow, Research Assistant Professor of Government Herschel S. Nachlis; Center Executive Director and Senior Policy Fellow, Lecturer of Government Anna M. Mahoney; Policy Research Shop Director, Visiting Research Associate Professor of Sociology Kristin E. Smith; Judicial Fellowship Program Coordinator, Lecturer of Public Policy Julie L. Kalish; Senior Lecturer of Psychological and Brain Sciences and Adjunct in Public Policy, Government, and Education Melissa R. Herman; Postdoctoral Fellows and Lecturers Elizabeth Pfeffer, Naomi Nubin-Sellers, Claire Gothreau, and Samuel Williams.

To view Public Policy courses, click here (p. 697).

Public Policy Minor

The Nelson A. Rockefeller Center at Dartmouth offers the Minor in Public Policy, which is open to students from all academic backgrounds who seek to study public policy, broadly defined.

Drawing on faculty in the social sciences and interdisciplinary programs, the minor provides a variety of perspectives on policy questions, and it enables students to focus on a range of policy areas, and on domestic policy and international policy. In addition to fostering knowledge of the policy process and policy analysis, it

includes a substantive focus based on students' policy interests. The Public Policy Minor is intended to foster a critical understanding of policy issues and solutions.

Students who wish to pursue the minor generally should officially sign up for it no later than the third term prior to graduation.

The six courses required for the minor may not count toward a student's major(s) or toward another minor.

Course requirements: A total of six courses. The courses must include:

One (1) PBPL 5: Introduction to Public Policy course

Two (2) courses in a substantive policy track/area of study. Students may design their own policy track. Possible tracks include, but are not limited to:

Economics and public policy; Education and public policy; Environment and public policy; Gender and public policy; Health and public policy; Identity and public policy; Institutions, organizations and public policy; International relations and public policy; Law and public policy; Leadership and public policy; Research methods and public policy; Urban issues and public policy.

Two (2) public policy methods courses. Choices include, but are not limited to:

Economics 20, Engineering 18, Public Policy 40, Public Policy 41, Public Policy 40.01, Public Policy 40.02, Public Policy 40.03, Public Policy 42, Public Policy 43, Public Policy 44, Public Policy 45, Public Policy 46, Public Policy 47, Public Policy 48, Public Policy 49, Public Policy 82.08, other Public Policy 40-level courses, and other methodologically-relevant courses in the social sciences.

One (1) Public Policy Seminar-level course (offered in PBPL, or another Social Science) relevant to the chosen substantive policy track.

Prerequisite requirement: One course conveying quantitative or qualitative research methods. Options include, though may not be limited to: PBPL 10, ECON 10, GOVT 10, MATH 10, PSYC 10, SOCY 10, QSS 15, GEOG 9.01, GEOG 11, or SOCY 11.

PBPL - Public Policy Courses

To view Public Policy requirements, click here (p. 696).

PBPL 5 - Introduction to Public Policy

Instructor: Nachlis, Barabas

This course is designed as the gateway offering for students beginning to pursue a minor in public policy through the Rockefeller Center. The term will be divided into four main components: The Nature of Public Policy, Making Public Policy, The Policy Players, and The Policy Game. In the concluding section of the course, we will

pursue specific policy domains—environmental policy, education policy, health care policy, welfare policy, immigration policy, and defense policy.

Cross-Listed as: GOVT 025

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 7 - Leadership in Foreign Policy Decision-making

Do heads of state matter when it comes to making foreign policy decisions? We certainly act as if they do and we vote as if they do. But it's also possible that sometimes, structural conditions render leaders irrelevant—that any leader, when faced with the same constraints, could not help but make the same decision. Any responsible study of foreign policy will pay attention to questions of the conditions under which leaders matter as well as the constraints on foreign policy leadership. Therefore, in this course, we will study the essence of foreign policy decision-making with a special emphasis on the sorts of decisions that leaders can and do make. As we do so we will be introduced to a number of tools and models to help explain the process of foreign policy decision-making. These tools, concepts, and models will broadly include the political psychology of foreign policy decision-making, the dangers of decision-making during times of great crisis, and the role that various organizations play in foreign policy decisions.

PBPL 10 - Statistical Analysis for Public Policy

Instructor: Smith

Public policy analysis involves quantitative methods and statistical methods in particular. PBPL 10 introduces students to basic statistical techniques and to the statistical software package, STATA, with a heavy emphasis on application, from the initial stages of data exploration to presentation of results. Coursework will involve “real world” policies and problems and will utilize existing datasets from the public policy sphere. The course will also consider research design and the ethics of quantitative policy research. Because of the large overlap in material covered, no student may receive credit for more than one of the courses LING 10, PBPL 10, ECON 10, GOVT 10, MATH 10, PSYC 10, ENVS 10, QSS 15, or SOCY 10 except by special petition.

Offered: Winter.

Degree Requirement Attributes: Dist:QDS

PBPL 20 - Educational Issues Contemporary Society

Instructor: Williams

This course gives students a critical introduction to the public institution they know best – the American school. You have already spent at least twelve years “studying”

schools from the inside, though you have probably only considered a small piece of the broader education system. Public schools are one of the most important public policy levers for shaping society. We will examine the history and structure of public education in America. We will also study myriad topics related to creating “better schools”: recruiting and training teachers; charter schools and related institutional innovations; testing and accountability; school funding; racial and economic segregation. Overall, the course will explore how public education can contribute to a more informed, prosperous, and fair society.

Cross-Listed as: EDUC 020

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 21 - Crisis and Strategy in American Foreign Policy

Instructor: Rezvani

This course addresses the frameworks, patterns, and practice of America's strategic response to crisis. It will explore how institutions and policy traditions evolve in response to domestic and international challenges. It will examine some of the key political-military strategies that have been used by policy makers, including revisionism, hegemonic order building, engagement, retrenchment, and flexible integration. The course will also assess difficult challenges that will continue to confront America into the future in the Trump Administration and beyond, including relations with China, Russia, and the Middle East.

Cross-Listed as: COCO 025

Degree Requirement Attributes: Dist:INT or SOC

PBPL 22 - Regulation

Instructor: Welborn

This course examines the history, politics and economics of market regulation in the United States. Class discussions will focus on the arguments for and against state intervention in the market. We will also explore the meaning of “market failure” and “government failure” in the context of financial markets, transportation, the environment, health care, and public utilities. Special emphasis will be placed on how regulation affects prices and why regulated firms may demand regulation. Students will be graded on class participation as well as original research.

Cross-Listed as: ECON 016

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PBPL 23 - Political Misinformation and Conspiracy Theories

Instructor: Nyhan

Why do people hold false or unsupported beliefs about politics and why are so those beliefs so hard to change? This course will explore the psychological factors that make people vulnerable to political misinformation and conspiracy theories and the reasons that corrections so often fail to change their minds. We will also analyze how those tendencies are exploited by political elites and consider possible approaches that journalists and civic reformers could employ to combat misperceptions.

Cross-Listed as: GOVT 30.04

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

PBPL 24 - The 2024 Election

Instructor: Nachlis, Muirhead, Wohlforth

This course uses the 2024 election – in which many Dartmouth students will vote for the first time – to explore fundamental questions about U.S. and global governance. Many experts contend that this election – whoever wins – may reshape America’s democracy and its global role. Are these fears warranted by compelling arguments and evidence? What are the stakes for conservatism, liberalism, and the basic institutions and norms of U.S. democracy? What does the election portend for the role of the Supreme Court, political participation, dialogue and free speech, and critical policy issues like abortion and climate change? And in what ways does the U.S. role in the world truly hinge on this election, and with what consequences? Each week features analyses by leading scholars and public intellectuals, and class visits from distinguished academics, policy practitioners, and public advocates to discuss and debate these issues.

Cross-Listed as: GOVT 30.17

PBPL 26 - Health Politics and Policy

Instructor: Nachlis

Is health care a right? Why does the United States spend more than comparable countries on health care but experience worse outcomes, and also lack universal coverage? How might the health care system be reformed to increase access and quality, and reduce costs? We consider these fundamental questions and explore a range of key issues, including health equity, mental health care, overdiagnosis and overtreatment, drug regulation, state policies, comparative health care systems, and the COVID-19 pandemic.

Cross-Listed as: GOVT 30.14

Degree Requirement Attributes: Dist:SOC

PBPL 27 - Who Gets In? College Admissions Post Affirmative Action

Instructor: Herman

Given the US Supreme Court’s 2023 ruling on affirmative action, how can public and private policies adapt to meet the legal standards for choosing applicants to highly selective colleges and universities? Through a careful examination of legislation, executive policies, and legal action, this course looks at both the intent and the implementation of affirmative action, its history, its consequences, and its future. Students will consider why institutions of higher education are interested in recruiting a diverse range of students, why they have experienced lawsuits against their affirmative action policies, and how things are changing with the SCOTUS decision. Teaching methods include some traditional classroom techniques (text analysis, writing, discussion) as well as experiential education techniques (such as creating a public policy portfolio project, conversing with professionals who administer admissions programs at colleges and universities, and pitching proposals to a panel of policy experts). This course seeks open-minded people of all political persuasions to have robust discussions that will lead to policies with a chance of succeeding in our polarized environment.

Cross-Listed as: EDUC 035 GOVT 30.12

Degree Requirement Attributes: Dist:SOC; WCult:CI

PBPL 28 - Law, Courts, and Judges

Instructor: Nachlis

This course explores fundamental questions about American law, courts, and judges. Do courts administer “Equal Justice Under the Law,” as the Supreme Court’s facade promises, or are cases determined by “what the judge ate for breakfast,” as Judge Jerome Frank famously claimed? Are judges political? Can courts produce social change, or is law a conservative force? What incentives shape the legal profession? Issues addressed range from civil rights to small claims courts and street harassment.

Cross-Listed as: GOVT 30.09

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

PBPL 29 - Growth and Its Critics

Instructor: Clark

The purpose of this course is to explore economic growth as a broader human phenomenon. From being an unprecedented achievement with the Industrial Revolution, growth gradually became a policy lever for addressing a multitude of social and political objectives in the rich world, as well as a vital imperative for less developed countries. All the while, it never ceased to be a source of public controversy. What forces prevented the discovery of growth for so long? What factors bring it into being where and when it does emerge? What effects does growth have on those who experience it in a sustained way? Why has

such a breakthrough so regularly drawn such passionate criticism and resistance? Above all, how might a study of growth and its critics prepare us for the policy debates of the future?

In the Long Stagnation before the Industrial Revolution, humans were caught in a so-called Malthusian Trap, in which every temporary trend toward improved living standards was met with an increase in population that tended to restore subsistence living. After reviewing this historical background, the course will touch upon four triggers for debate over growth since the dawn of the industrial age: population, resource depletion, environmental stewardship, and climate change. For two hundred years, a steady stream of commentators have argued that economic growth has either generated these sorts of problems, or is at least unable to address them.

Cross-Listed as: GOVT 20.13 SOCY 79.14

Offered: Fall.

Degree Requirement Attributes: Dist:INT or SOC

PBPL 40 - Economics of Public Policymaking

Instructor: Wheelan

The course will use the basic tools of economics to analyze the most significant current public policy issues in the United States. Given the time constraints of the course, we will focus on the issues that the current presidential administration is likely to confront. The goal is to understand both the substance and politics of each issue. We will examine the effects of recent policy changes and analyze the likely effects of prospective reforms, particularly those that are likely to be debated in the political arena in the near future.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 40.01 - Modern Statistical Computing

Instructor: Chang, Chang

This course is meant to build upon your introductory programming course and to equip you with the computing literacy to conduct social science research in the age of "big data." This has two core components. First is learning the background tools (e.g., Github; Latex; working on the command line) to conduct transparent and reproducible research. Second is learning programming skills essential for social science in the big data era, with a focus on using Python for various applied tasks as well as R for tasks like data visualization and SQL for tasks like working with the relational databases that form the backbone of many real-world government and commercial datasets.

Cross-Listed as: QSS 020

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:TAS

PBPL 40.02 - Constitutional Law, Development, and Theory

This course covers some of the main themes of the American Constitution with a particular emphasis on constitutional history, structure, interpretation, development and theory. Areas covered include: federalism, separation of powers, judicial review, slavery and Reconstruction. Open to sophomores, juniors, and seniors.

Cross-Listed as: GOVT 66.02

Degree Requirement Attributes: Dist:TMV; WCult:W

PBPL 40.03 - Gender and Policy Leadership

Instructor: Mahoney

This course uses case studies to provide a window into the decision-making processes leaders face when balancing their policy goals against the constraints imposed by the processes and institutions which frequently determine policy outcomes. Policy areas discussed include sexual harassment, healthcare access, and international sex work. By the end of the term, students will have drafted their own case study related to gender and policy leadership on a policy issue or policymaker of their choosing.

Cross-Listed as: WGSS 66.33

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 41 - Writing and Speaking Public Policy

Instructor: Kalish

This course is designed for students who intend to use their writing and communication skills to effect tangible change. Course materials will draw from various areas of public policy, and students will develop policy arguments through position papers, strategy memos, public talks, multi-media tools, as well as op-ed pieces and "letters to the editor" to be submitted to local newspapers. Students will strengthen their understanding and practice of public persuasion, as well as their capacity to analyze the components of effective argument.

Prerequisite: PBPL 5 or permission from the Instructor

Cross-Listed as: WRIT 041

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

PBPL 42 - Ethics and Public Policy

Instructor: Swaine, Rose

The course will use the basic tools of economics to analyze the most significant current public policy issues in the United States. Given the time constraints of the course, we will focus on the issues that the current presidential

administration is confronting. The goal is to understand both the substance and politics of each issue. We will examine the effects of recent policy changes and analyze the likely effects of current reforms, particularly those that are being debated in the political arena now.

Cross-Listed as: GOVT 60.04

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

PBPL 43 - Social Entrepreneurship

This course provides an introduction to the theory and practice of social entrepreneurship, defined as the process of finding innovative, sustainable solutions to social problems, particularly those related to poverty. Students will learn about the nature and causes of poverty, both domestically and internationally, and about the role that social entrepreneurs play in addressing poverty. The course culminates with teams of students developing business models for their own social entrepreneurship ventures.

Prerequisite: ECON 1

Cross-Listed as: ECON 077

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 44 - Election Polling

Instructor: Barabas

The results of opinion polls often dominate election and campaign coverage and alter the behavior of politicians in modern democracies. Although surveys are more common than in the past, they vary considerably in terms of quality. To better understand the potential sources of error, this course introduces students to survey research methods with an emphasis on the election polling techniques used by social scientists to study political attitudes and policy preferences. A primary goal of the course is to help students understand fundamental concepts like sampling or response rates as well as best practices for designing questionnaires and response options. The class will also cover advanced topics such as survey experiments, nonprobability panels, statistical power, and post-stratification weighting among others. During the course, students will explore and analyze public opinion patterns in survey data archives before ultimately writing and programming an original election-related study. Learning survey methodology should be particularly useful for anyone who plans to (A) take more advanced quantitative methodology courses, (B) write an honors thesis, (C) serve as a research assistant, (D) attend graduate school, or (E) work in professional areas that make use of opinion data, including campaigns and elections, consulting, law, journalism, education, business, health care, policy evaluation, or government.

Cross-Listed as: GOVT 037 QSS 30.20

Offered: Fall.

Degree Requirement Attributes: Dist:QDS; WCult:W

PBPL 45 - Introduction to Public Policy Research

Instructor: Smith

This course focuses on strategies for, and actual practice of, conducting research relevant to public policy decision-making. Students will be exposed to a variety of research methodologies used in public policy analysis. This course is designed to be a core element of the Public Policy Minor and will also serve as a training ground for prospective applicants wishing to serve in the Rockefeller Public Policy Research Shop during the winter and spring terms.

Prerequisite: A course (1) employing mathematical reasoning or statistical methods (e.g. ECON 10 or GOVT 10).

Cross-Listed as: SOCY 49.29

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 46 - Policy Implementation

Instructor: Nachlis

Good policies are neither self-executing nor self-enforcing. Likewise, bad policies are not self-destructing. Indeed, when the President signs a law, this is but the beginning of a new set of equally important political activities and policy battles. This course explores central features of implementation, including bureaucratic activity, judicial review, and street-level administration, and central concepts including principal agent relationships, delegation, oversight, interpretation, maintenance, and erosion, through key cases, including police, health care, and civil rights.

Cross-Listed as: GOVT 30.11

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 47 - Leadership

Instructor: Jordan

What makes a great leader? Why would others follow you? A century of psychological research clarifies the traits, skills and behaviors of effective leaders, including how they attract, influence, develop and empower followers to excel in different situations. Readings will explain the psychological science; classroom demonstrations, guest leader interviews, case study discussions and small group challenges will illuminate it. Outside the classroom, weekly leadership practice assignments will reinforce core concepts, increase self-awareness, and develop leadership capabilities, all in support of a community impact initiative that each student will select, plan and lead (courage required). Your instructor will apply three decades of experience in

developing thousands of leaders at all levels on multiple continents, to guide and challenge you to develop your science-based leadership potential.

Cross-Listed as: PSYC 54.08

Degree Requirement Attributes: Dist:SOC

PBPL 48 - Policy Analysis and Local Governance

This course analyzes the public policy challenges faced by local communities. Particular emphasis will be placed on the problems of urban areas, including education, crime, poverty, economic development, housing, and transportation. Throughout the course, students will use their home towns (or another area of their choosing) as a case study of how specific communities have attempted to address these challenges. The course examines the roles of various actors - citizens, non-profits, and government agencies at all levels - in effecting positive change in local public policy outcomes.

Prerequisite: PBPL 5.

PBPL 49 - Environmental Policy Research Workshop

This course is designed to guide students in conducting research on environmental policy-based projects. These projects are based on requests from the Vermont and New Hampshire state legislatures. Students will be taught the basic theory and research methods in environmental social science, and spend the second half the course applying these skills in team-based settings to prepare proposal for research that could address the questions posed in the projects. The course will also prepare prospective applicants wishing to serve in the Rockefeller Public Policy Research Shop during the winter and spring terms.

Prerequisite: ENVS 2 or ENVS 3, or permission of instructor and a 10-level class (e.g., ECON 10, GOVT 10, PSYC 10, SOCY 10, PBPL 10)

Cross-Listed as: ENVS 70

Degree Requirement Attributes: DIST: SOC

PBPL 51 - Leadership in Civil Society

Instructor: Kalish

This course focuses on aspects of leadership dealing with the accumulation and utilization of social capital through societal organizations. The literature cover nonprofit leadership, grassroots mobilization, religious leadership, interest group influence, organizational maintenance and political representation, and leadership problems associated with collective action. Students also discuss the roles of political parties as aggregators of societal interests and as intermediaries between citizens and state. Students also evaluate leadership capacity of the media to create informed citizens.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 52 - Leadership and Political Institutions

This course explores how political leaders in the U.S. reconcile the constraints of public office with the opportunities to make major changes in society. Drawing from diverse materials on the executive, legislative and judicial branches of government, the course addresses the following questions: How does leadership differ in the public and private spheres? What personal skills and attributes affect the success or failure of leaders of political institutions? What criteria do/should citizens apply to public leaders? How do political context and historical contingency shape institutional leadership?

Cross-Listed as: GOVT 30.02

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 52.04 - Adolescent Risk Behavior and Policy: Corporate and Environmental Influences

Instructor: Sargent, Zeller

Chronic health conditions (like cancer and heart disease) kill the majority of people worldwide. Those diseases result, in part, from use of products—e.g., tobacco, alcohol, & convenience food—that are produced and marketed worldwide by multinational corporations. This course centers around how corporations influence unhealthy product consumption during childhood and adolescence. This course describes the theoretical basis for these influences, the science used to establish corporate products as a cause of youth behavior, and how governments try to limit the influence through regulation. The study will cover tobacco, alcohol, drug use, homicide/suicide, food/obesity, and risky sex.

Cross-Listed as: PSYC 52.04

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PBPL 53 - Entrepreneurship and Public Policy Workshop

Instructor: Avishai

The course will study entrepreneurship as both a strategic logic and a social fact. Students will simulate the business planning process in teams; and, as a class, they will consider public policy from the perspective of entrepreneurs—that is, consider why officials must understand the strategic questions aspiring entrepreneurs ask if government is to propose investment, standards, and regulations that encourage business development. Students will also benefit from a weekly lecture by a guest speaker.

Cross-Listed as: GOVT 20.11

Degree Requirement Attributes: Dist:SOC

PBPL 81.02 - Lawyers and Public Policy

Degree Requirement Attributes: SOC; WCult: W

PBPL 81.03 - Urban Politics and Public Policymaking

This course examines how and why cities attempt to address the problems that face them. It investigates who makes public policy in cities and why. The course then considers how and why these actors make policy. The final part of this class analyzes the effects of these policies. The class focuses upon urban education, housing, public safety, economic development, and other policy areas of significance to urban governments.

Degree Requirement Attributes: SOC

PBPL 81.05 - Poverty and Public Policy in the U.S.

Instructor: Stockstill

More than one in ten Americans lives in poverty according to official statistics. This course explores the nature and extent of poverty in the United States and the role of the government in addressing poverty issues. How do we measure poverty? Why does poverty persist? Why is there so little political discourse about poverty in America today? How effective are various poverty alleviation programs?

Cross-Listed as: SOCY 055

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 81.10 - From Jeff Bezos to LeBron James: The Politics of Philanthropy

Instructor: Schiller

Philanthropy is a political activity. It is shaped by public policies such as tax incentives, it reflects and reinforces norms of wealth accumulation and inequality, it supports social movements, and it funds the infrastructure of public life. This course will cover philanthropy's evolving relationship to democracy, its role in legitimizing capitalism and the privatization of the common good, and possibilities for reconciling the demands of justice with the ideal of pluralism in charitable giving.

This course will provide an in-depth understanding of the nonprofit and philanthropic sector, including its historical development, normative and structural elements, and modern role as a driver of social change, with a focus on sustainable development. By the end of the course, students will have knowledge of the history and structure of philanthropy and the nonprofit sector, the tradition of competing value commitments in civil society, and key issues in the current nonprofit and philanthropic sector. Readings for this class will span across political philosophy, civil society studies, public policy, law reviews, and popular journalism.

Cross-Listed as: GOVT 86.57

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

PBPL 82.01 - Military Statecraft in International Relations

Instructor: Press

Cross-Listed as: GOVT 85.12

Offered: Winter.

Degree Requirement Attributes: SOC or INT

PBPL 82.02 - Power, Politics and State

Is America in crisis? The nation is more deeply divided politically, economically, and ideologically than it has been for generations. Washington is in gridlock. Inequality and poverty have been rising. People have become polarized over racial, religious and social issues. Some say the politics of identity and self-interest have been unleashed at the expense of the nation's general welfare. Some disagree. This course explores these issues. It examines how political, economic and ideological power has been mobilized recently in the United States and with what consequences, including the conservative shift in American politics, the 2008 financial crisis, the election of Donald Trump, and possibly the decline of the United States as the world's superpower. The course draws on scholarly work in sociology, political science and economics.

Cross-Listed as: SOCY 053

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 82.08 - Field Research Methods: Methods and Practice

This course prepares Dartmouth students to undertake field research to answer a substantive policy question. Skills covered will include survey design, data analysis, stakeholder interviews, participant observation, literature review, and community-engaged research methods. This course is designed to prepare students to conduct independent field research in domestic or international settings. As part of the course, students will participate in the design of a field research project in rural Northern New England.

PBPL 82.09 - The Supreme Court, Public Policy, and the Ethics of Legal Argument & Decision-making

Instructor: Kalish

Can the states ban abortion? Can the EPA regulate for climate change? Can government mandate vaccines during a pandemic? Public policy is set in meaningful ways by the United States Supreme Court. This course introduces students to basics of constitutional law and analysis, sets a foundation for understanding legal arguments as they get presented to the Court, and raises the often thorny interplay between law, social norms, personal ethics, judicial philosophy, and public policy.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV

PBPL 82.10 - Congressional Investigations, Law, and Democratic Governance

The course introduces students to the purpose and practice of congressional investigations. Issues covered will include: the role of congressional oversight in our democratic system of governance; the reach and limits of Congress's constitutional authority to investigate; tools and tactics in congressional investigations; and how citizens and elected officials can best address current challenges to conducting effective congressional inquiries. Class discussion will frame these issues by focusing on the House Select Committee investigation of the January 6th Attack on the U.S. Capitol and other high-profile congressional inquiries, featuring video excerpts and personal perspectives from individuals involved with these efforts. The course emphasizes in-class exercises in which students tackle various oversight challenges in the role of congressional investigators, and ultimately students will stage a mock investigative hearing.

Cross-Listed as: GOVT 86.54

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 82.11 - Election Law

This seminar will provide students with an in-depth understanding of the laws governing American elections and citizen participation in the voting process.

This course will be useful to any student interested in law and/or politics. It will be taught similar to a law school class, with an emphasis on readings and in-class discussion. Reading materials primarily will consist of court opinions and related case materials to be provided, which students will be expected to analyze and to critique within a respectful class environment.

Cross-Listed as: GOVT 81.30

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 82.41 - Rockefeller Republicans

Instructor: Barabas

Nelson A. Rockefeller '30 was elected as a Republican to be governor of New York four times before ultimately serving as Vice President in the Ford Administration during the mid-1970s. Why are political moderates, including Nelson Rockefeller, not more common in American politics? More specifically, why don't centrists win more often and dominate the political scene? To explore these questions, this class considers the evolution of the Republican party through the experience of Nelson Rockefeller and those who followed him in America.

Cross-Listed as: GOVT 83.34

Offered: Winter.

Degree Requirement Attributes: WCult:W

PBPL 83.01 - Persuasion and the Policy Process

Instructor: Jerit

This class examines how people form policy preferences and the process by which those preferences do—or do not—get translated into public policies in the United States. The course will examine three aspects of this process: elite rhetorical strategy, the media routines that generate coverage of policy debates, and mass opinion. We will assess the way political elites, the media mass, and ordinary people interact to create policies that can be either intelligent or pathological.

Cross-Listed as: GOVT 83.28

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

PBPL 83.02 - Public Policy and Politics

Instructor: Barabas

This course explores political factors that influence the development of public policies as well as possible attitudinal and behavioral policy feedback effects on the population after their implementation. Public opinion will be central to the course with students encouraged to analyze survey data and polls. In most years, the class will have a topical issue focus (e.g., health care, climate change, retirement, immigration) depending upon world events and trends. Although the topical issue focus might vary each term, students may not repeat this course for credit.

Cross-Listed as: GOVT 83.27

Degree Requirement Attributes: WCult:W

PBPL 84.02 - Health Economics and Policy

Instructor: Colla

The goals of the course are: 1) to understand the economic forces that have created the current challenges in US healthcare; 2) to develop skills that enable you to determine what types of information, data, and analyses are needed to analyze the economics of health policies designed to expand coverage, improve quality, and contain costs; and 3) through in-class exercises and a project, to perform and present economic analysis of current topics relevant for state and federal health system reform. Not open to students who have received credit for ECON 071.

Prerequisite: Prerequisites - ECON 1 and ECON 10

Cross-Listed as: ECON 041

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 84.04 - Inequality and American Democracy

Instructor: Nachlis

Inequality – economic, political, and social – is among the most pressing and contentious issues of our time. What forms of inequality should we care about? How much is too much, or too little? What are inequality's causes and consequences, which dimensions should be addressed, and how? We examine inequalities of income and wealth, political representation, education, incarceration, health, race, gender, and the future of work, ranging from philosophical and historical foundations to contemporary politics and policy.

Cross-Listed as: GOVT 83.24

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 85 - Topics in Global Policy Leadership

This seminar will provide real-world international policy experience for students who will study a policy regime of a specific country during the fall term. The unique aspect of the course is that during the December break, the class will travel to the country of study and will spend two weeks meeting with policy leaders: politicians, academics, journalists, business leaders, diplomats, and other experts “on the ground” who can help to inform their topic of study.

PBPL 87 - Punishment, Inequality and Political Economy

Instructor: Pfeffer

Utilizing a political economy framework, we will explore how and why countries develop and maintain diverse criminal justice systems. Emphasizing cross-national comparison, we will investigate how citizen demands and policy responses depend on existing institutional conditions and impact areas from welfare and employment policy to economic equality and racial justice. By the end of this course, students will be thinking as researchers to evaluate how punishment functions as a deployment of state power.

Cross-Listed as: GOVT 84.43

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

PBPL 89 - Advanced Policy Research

Instructor: Barabas

Lawmakers often craft public policies to address perceived problems. Determining whether policies or other types of social inventions truly *work* (i.e., cause the intended effects) entails program evaluation and related forms of policy analysis. This applied research seminar focuses on designing and conducting empirical programmatic evaluations with an emphasis on research design principles

that make documenting cause and effect relationships more successful.

Cross-Listed as: GOVT 83.31 QSS 30.24

Degree Requirement Attributes: Dist:QDS; WCult:W

PBPL 91 - Independent Study in Public Policy

Instructor: All - Arrange

This course offers an opportunity for a student enrolled in the Public Policy Minor to do advanced, independent work under the direction of a faculty member in the area of public policy. The topic under study may relate to prior coursework in the Public Policy Minor, an off-campus internship, or a co-curricular activity sponsored by the Rockefeller Center. All students enrolled in Public Policy 91 in a given term should expect to meet regularly together for classroom instruction and discussion with Rockefeller Center faculty and staff. To enroll, a student must prepare a brief proposal that describes the topic to be studied, its relationship to the student's prior public policy courses or activities, and the student's goals for undertaking the research.

Prerequisite: PBPL 5 and the Research Methods course prerequisite to the Public Policy Minor

Offered: Fall, Spring, Summer, Winter.

Religion

Chair: Christopher MacEvitt

Professors R. Balmer, R. Baum, S. Heschel, C. H. MacEvitt, R. Ohnuma; Associate Professors Z. Ayubi, R. Feldman, G. Raz, D. Singh; Assistant Professors S. Swenson, D. Wilkinson; Visiting Professors E. Slingerland; Lecturers P. Lanfer, M. Long, G. Seton, J. E. Wright; Postdoctoral Fellows F. Rahman, C. Richard, R. Weiner.

To view Religion courses, click here (p. 707).

Requirements for the Major

PLEASE REFER TO THE ORC OF YOUR MATRICULATION YEAR FOR THE APPROPRIATE REQUIREMENTS

The major consists of ten courses, including:

1. At least two courses from the Introductory series on Religion (REL 1.xy through REL 19.xy).
2. At least one course from the Theories in the Study of Religion series (REL 20.xy).

3. At least two courses from the Intermediate series on Religion (REL 21 through REL 74.xy).
4. One seminar in Religion (REL 80.xy or REL 81.xy).
5. One Culminating Experience Senior Colloquium (REL 85.01 or REL 85.02; See also REL 84). Consult the Chair for more information.
6. The major must include at least two Religion Department courses from among those designated as fulfilling the Non-Western requirement.

However, no more than two iterations of REL 1 may be counted to satisfy the major. Major programs are subject to the approval of the Chair.

Requirements for the Modified Major

The modified major consists of twelve courses of which seven or more shall be in the Religion Department, including:

1. At least two courses from the Introductory series on Religion.
2. At least one course from the Theories in the Study of Religion series.
3. At least one course from the Intermediate series on Religion.
4. One seminar in Religion (REL 80.xy or REL 81.xy).
5. One Culminating Experience Senior Colloquium (REL 85.01 or REL 85.02; See also REL 84). Consult the Chair for more information.
6. The modified major must include at least one Religion Department course from among those designated as fulfilling the Non-Western requirement.

However, no more than two iterations of REL 1 may be counted to satisfy the modified major. The remainder may be courses in other departments provided that such courses constitute a coherent program of study in Religion. Approval of the modified major must be obtained from the Chair.

Requirements for the Minor

The minor consists of six courses to be selected as follows:

1. At least one course from the Introductory series on Religion.
2. At least one course from the Theories in the Study of Religion series.
3. At least one course from the Intermediate series on Religion.
4. Three additional courses in Religion (any level).

5. The minor must include at least one Religion Department course from among those designated as fulfilling the Non-Western requirement.

However, no more than two iterations of REL 1 may be counted to satisfy the minor. Approval of the minor must be obtained from the Chair.

Non-Recording Option

Religion courses 20-87 are out of bounds for the NRO.

Transfer Credit

No more than three transfer courses, which may include REL 70 or REL 71 (on D.F.S.P.), will be accepted for major credit. All transfer courses must be approved *in advance* by the Department.

Foreign Study

Courses taken at the University of Edinburgh on the Department's Foreign Study Program will normally be counted among the intermediate courses required for the major as listed above. The course offered by the Dartmouth faculty director is REL 74.

Religion Honors Program

Qualified majors may apply for admission to the Honors Program of the Department during the second or third terms of their junior year. Completion of the Honors Program is prerequisite to graduation with Honors or High Honors in the major subject.

The Honors Program of the Department of Religion is designed to encourage and enable a qualified major student to pursue a long-term independent research project on some topic of interest and importance. Through the project, as guided by a member of the faculty, the student should come to an understanding in depth of the content of the subject and the methodological procedures necessary to enable him or her to reach the desired goal.

In order to qualify for an Honors Program in the Religion Department, the student must have at the time of application an average of 3.0 in all subjects and 3.3 in the major.

During two terms of the senior year the honors student will pursue the project under the guidance of a selected faculty member by enrolling in REL 85.02 (Senior Colloquium for Honors Program) and REL 87 (Honors). The student is expected to produce a substantial thesis as the culmination of the project. A paper of seventy-five to one hundred pages would be considered usual, although the exact nature of the project might dictate a different length. The student will be expected to maintain at least a 'B+' level of performance throughout the two terms. Unless at least a grade of B+ is assigned the thesis and a cumulative

average of 3.0 is maintained in the major, he or she will not be considered to have successfully completed the project. If in the judgment of the Department the student has failed to perform at the minimal level, it will have the right to terminate the project at the end of the first or the second term.

Preparation and Submission of Thesis Proposal. Plans for writing a thesis must be made during the junior year. The interested candidate should, in consultation with a faculty adviser, decide on a course of study, reading, and writing. The thesis proposal should ideally be 3-5 pages and include what will be examined and why, the preparation, approach, and where possible, note and discuss anticipated results, and be accompanied by a tentative bibliography. After the proposal is approved by the faculty adviser, it will be submitted to the Religion Department for approval. Since the Department may request that the student rewrite the proposal, we recommend that a proposal be submitted to the Department by the seventh week of the spring term of the junior year.

Thesis Writing. A student must write a two-term thesis, for which two course credits may be received. A thesis written during the fall and winter must be submitted by the end of the first week in May. A thesis completed during the spring term must be submitted by the end of the third week in May. An oral defense will be scheduled to occur typically during the last full week of spring term classes; a public presentation will be scheduled to occur typically on the last day of spring term classes. The final printed and bound thesis copies are due to the department office no later than the Friday before Commencement.

The Honors Program counts as fulfilling the Culminating Experience requirement (see courses REL 85.02 and REL 87).

REL - Religion Courses

To view Religion requirements, [click here](#) (p. 705).

Introductory Courses

REL 1 - Topics in the Study of Religion

An introduction to the study of religion through topics from a variety of traditions and perspectives, including Buddhism, Christianity, Hinduism, Islam, and Judaism. Topics may be comparative or focused within a particular tradition and will allow students to understand the distinctive perspective the study of religion brings in both contemporary and historical contexts. Open to all classes.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.01 - What Matters

Instructor: Singh

What does it mean to say that something matters and how can we know that it does? This is an introductory course to modern religious thought, examining the quest for meaning, value, and significance as captured in religious, ethical, and philosophical language in Western tradition. The intent is to provide students with a broad exposure to the various ways humans in modernity have attempted to make sense of their condition. What are some of the changes brought about by life in the modern world that prompt new questions about human life and purpose? What new answers have been provided to explain our place in the cosmos and reason for being? We explore questions of belief, value, significance, meaning, suffering, love, and justice.

Degree Requirement Attributes: Dist:TMV

REL 1.02 - Contemporary Religion

This course examines how religious movements and ideas shape daily life, politics, and world events in the twenty-first century. It emphasizes the historical contexts out of which these movements emerged and how they continue to exert influence in contemporary culture. It contends that understanding the obvious, subtle, and unexpected ways that this influence manifests helps us engage more effectively with the pressing issues of our time.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.03 - Patterns of Religious Experience

Instructor: Long

A comparative study of some of the basic patterns of religion. The course will focus upon such themes as religious experience, myths of creation, stories of religious founders and heroes, the origin and resolution of human suffering, and the structure and meaning of religious community and ritual. Source material for these themes will be taken from the literary and artistic resources of the following religious traditions: Buddhism, Christianity, Hinduism, Islam, and Judaism. Open to all classes.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.04 - Beginnings and Ends of Time

Instructor: Raz

This course examines the visions of the emergence, decline, and extinction of the world in several religious cultures: Judaism, Christianity, Buddhism, Daoism, and contemporary USA. After investigating different ideas of how the world came to exist and various views of the end of time, we will compare different notions of salvation by which various religious cultures tried to assuage fears of the end of the world. With expectations for messianic redemption or visions of power these catastrophic

imaginings and ideas of salvation served as the basis for missionary work and conversion as well as impetus for social and political transformations, rebellions, wars, imperial programs.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.05 - Religion and Gender

Are all religions sexist? How can we know? This course is about approaches to the study of religions from the perspective of gender. We will read foundational works of religious history and feminist and queer theology that shed light on questions such as how normative masculinity, femininity, and sexuality are defined across religions, what is the difference between religion and culture in constructing gender and gender roles, and how are religious ideas gendered. In asking these questions we will focus on scholars' interpretive methods in order to understand how variant they are and how important they are in creating meaning out of religious texts and practices about gender and gender roles. Specific topics will include the body, embodiment of religious rituals, purity, menstruation, religious authority, marriage and divorce, sexuality and sexual ethics, and motherhood.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.06 - Getting Religion

This introductory course invites students to "get religion" as a historical and lived reality in the modern world by engaging religious belief, belonging, and behavior in the unfolding spiritual landscape of the Atlantic world, from the beginning of colonial encounters to the present era. Exploring how individuals, families, and groups of people "get religion" under free, un-free, and secretive conditions, students will examine key historical episodes of modern religious encounter, embrace, and exchange.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.07 - Getting It: Sex and Religion

In the minds of many (particularly Christians), religion and sex do not belong together. Religion is understood to direct the individual to the contemplation of the divine and provide a moral code; sex and sexuality is often perceived as too human and too tied to pleasure to have anything to do with the divine. But if we examine the relationship between sexuality and religion, we find that the two are inextricably intertwined. Indeed, the understanding of humans as sexed beings (that is, with differing sexual identities and as beings who engage in sex) is often grounded in religious texts, practices, and ideologies. Yet that religious grounding, while seemingly so solid, proves surprisingly flexible in practice. We will examine comparatively the ways in which religious stories, beliefs, and practices have shaped across several traditions. In addition to studying the *normative* ways that religions

constructed sex and sexuality, we also examine how communities and individuals have re-interpreted, reshaped, and refused the boundaries of normative religion.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 1.08 - The Religion of Things

Instructor: Wilkinson

Despite our tendency to associate religion with "belief", all religion is necessarily mediated through things. This course approaches religion as a fundamentally material phenomenon, introducing students to its analysis from the perspective of artifacts, rather than through texts and ethnographic accounts. A wide range of case studies will be considered, from consumerist religion in the modern United States, to the relics and icons of medieval Europe, to the indigenous shrines of the ancient Andes.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV

REL 1.09 - Religion and Drugs

Instructor: Wilkinson

Virtually no religious tradition is indifferent towards psychoactive substances. Wine is a sacrament in Christianity, as is cannabis in Rastafarianism. In the colonial Americas, the Catholic Church spent centuries attempting to suppress the use of indigenous crops like coca, which it perceived as diabolical. Ancient societies often deified alcohol and other mind-altering substances; Ninkasi, for example, was the Mesopotamian goddess of beer. Psychoactives (i.e. drugs) therefore offer a fascinating comparative lens from which to examine religion.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

REL 1.10 - Religion and Social Struggle

This course examines twentieth and twenty-first century social struggles through a religious lens. Karl Marx famously described religion as the "opiate of the masses." In practice, however, religion has been a resource for resistance as well as a mechanism of control. Drawing on case studies from the U.S. and Latin America, this course analyses how both sides of a conflict understand and deploy religious concepts. How do those in power approach religion? How does this differ from how those outside power structures mobilize it? How do uses of religion evolve to accommodate different cultural contexts and new political circumstances? These are some of the questions this course will consider in preparation for analyzing contemporary movements such as Standing Rock and Black Lives Matter.

Degree Requirement Attributes: Dist:TMV

REL 1.11 - Sisters, Sages, Seekers: Women and Religion

What might a Buddhist nun, a Jewish schoolgirl, and an Olympic swimmer have in common? This course explores how women around the world pursue self-transformation through religious and spiritual practices. Course materials include followers of Buddhist, Christian, Muslim, Jewish, Hindu, and Native American religious traditions alongside those who might be called "spiritual but not religious." We will consider how and why people use gendered self-disciplining practices – from meditation to athletics – while seeking life purpose and belonging. Open to all.

Degree Requirement Attributes: Dist:TMV

REL 1.12 - Race and Religion

Where does the notion of "race" come from? This course considers the role religious source texts and religious ideologies have played in the social construction of racial categories— ideas that have been used to justify slavery, genocide, and colonial conquest for centuries. Through comparative anthropological, historical, literary, and theological readings (addressing Jewish, Christian, Muslim, and Native American contexts) we will consider the dynamic interaction of religion with racial constructs, politics, economics, and science. This course will also challenge students to speak and write critically about contemporary racial justice struggles from a religious studies perspective.

Degree Requirement Attributes: Dist:INT or TMV

REL 1.13 - Sacred Movement

This course explores the role of ritualized bodily movements including pilgrimage, dance, processions, firewalking, yoga, and sports in religious traditions across time and space. Why is sacred movement so fundamental to the practice of religion and so persistent throughout human history? To answer this question, the course takes a comparative and interdisciplinary approach, exploring cross-cultural examples using religious studies, cultural anthropology, cognitive science, and archaeology. Students will also experientially engage in various ritual movement practices.

Degree Requirement Attributes: Dist:INT or TMV

REL 2 - Topics in the Religions of Southeast Asia

Courses under this rubric will focus in some depth on a particular aspect of religion in Southeast Asia—for example, a particular religion, country, time period, body of literature, type of religion, or religious movement. The topic will change with each course, and students may take multiple courses under this rubric. The topic will change with each offering, and students may take the course more than once. Sample topics include: Religions of Southeast Asia, Islam in Southeast Asia, and Religion in Contemporary Vietnam. Open to all classes.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 2.01 - Religions of Southeast Asia

Instructor: Long, Swenson

This introductory course surveys religion in Southeast Asian contexts. We begin by analyzing the terms "Religion" and "Southeast Asia" as products of global politics. Then, we examine contemporary case studies from seven Southeast Asian countries to explore how religions shape local communities and life experiences. Our course materials lead us to investigate how Spirit Religions, Buddhism, Daoism, Christianity, and Islam intersect and inform understandings of embodiment, health, power, nature, and death. Open to all.

Cross-Listed as: ASCL 51.05

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 2.02 - Religions of Vietnam

Instructor: Swenson

Come learn about religious practices in Vietnam and among Vietnamese communities globally. Religions have gained visibility and influence since Vietnam's 1986 policy reforms. Today, religions affect experiences of gender, sexuality, ethnicity, migration, class, and belonging, both in and beyond Vietnam's socialist context. Our course investigates case studies from Buddhist, Christian, Confucian, Cao Dai, and spirit traditions to examine how people build communities, find purpose, and claim power through religion.

Cross-Listed as: ASCL 51.11

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 3 - Topics in Indigenous Religions

Instructor: Wilkinson

This course will examine major issues in the study of indigenous religions. Different versions of the course will either take a particular geographic focus or address a specific theme. Students may take the course more than once. Sample topics include "Indigenous religions of the Americas", "Religion in the Andes" (i.e. a geographic focus) and "Indigeneity, Religion and Ecology" (i.e. a thematic focus). Open to all classes.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

REL 3.01 - Indigenous Religions in the Colonial Americas

Instructor: Wilkinson

This course is designed to introduce students to key themes in the study of the indigenous religions in the Americas since the arrival of European settlers. Major areas of discussion will include missionization, religious freedom and oppression, the emergence of new and hybrid spiritual movements, and contemporary traditions of activism and protest, in both North and Latin America.

Cross-Listed as: ANTH 50.32

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 4 - Religion of Israel: The Hebrew Bible (Old Testament)

Instructor: Lanfer

An introduction to the religion of ancient Israel through an examination of a number of the books of the Old Testament (Hebrew Bible), including Genesis, Exodus, Joshua, Samuel, the Psalms, Job, and the prophets. Attention will also be given to the religion of Israel's Phoenician and Mesopotamian neighbors. Open to all classes.

Cross-Listed as: JWST 004

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 5 - Early Christianity: The New Testament

An examination of primitive Christianity as witnessed by the writings of the New Testament. Emphasis will be given to the literary and historical analysis of the Gospels and Epistles and to an understanding of the pre-Christian and non-Christian religions of the Hellenistic world. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 6 - Judaism: Sacred Texts and Ritual Life in Diaspora

Instructor: Feldman

This course introduces students to the study of Jewish scripture, mystical, philosophical, and legal texts while also providing opportunities to observe Jewish ritual life in-person. The dynamic interaction between sacred text and ritual expression will be examined as students encounter Jewish themes of exile, diaspora, peoplehood, holiness, and 'tikkun olam' (world-fixing) across historical time periods and in a variety of Jewish cultural contexts (Middle East, North Africa, and Europe).

Cross-Listed as: JWST 006

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 7 - First-Year Seminars in Religion

Instructor: Singh

Offered: Spring.

REL 8.01 - Transformative Spiritual Journeys. Contemporary Memoirs of African American Religion

This course presents African Americans who have created religious and spiritual lives amid the variety of possibilities for religious belonging in the second half of the twentieth century and the early twenty-first century. By engaging an emerging canon of autobiographies, we will take seriously the writings of theologians, religious laity, spiritual gurus, hip hop philosophers, LGBT clergy, religious minorities, and scholars of religion as foundational for considering contemporary religious authority through popular and/or institutional forms of African American religious leadership. Themes of spiritual formation and religious belonging as a process—healing, self-making, writing, growing up, renouncing, dreaming, and liberating—characterize the religious journeys of the African American writers, thinkers, and leaders whose works we will examine. Each weekly session will also incorporate relevant audiovisual religious media, including online exhibits, documentary films, recorded sermons, tv series, performance art, and music.

Cross-Listed as: AAAS 027

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 9 - Hinduism

An introductory survey of the Hindu religious tradition of South Asia from 1500 B.C.E. down to the present day. Emphasis will be given to the historical development of elite, Sanskrit Hinduism and its constant interaction with popular and local traditions. Open to all classes.

Cross-Listed as: ASCL 51.01

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 10 - The Religions of China

Instructor: Raz

An introduction to China's three major religions—Confucianism, Daoism, and Buddhism—through the reading of classic texts. Also, a look at important elements in Chinese folk religion: ancestor worship, temples, heavens and hells, and forms of divination. Special attention will be paid to the importance of government in Chinese religious thought and to continuity and change in the history of Chinese religion. Open to all classes.

Cross-Listed as: ASCL 61.01

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 10.01 - Foundations of Chinese Thought

Instructor: Slingerland

This course introduces early Chinese thought (Confucianism, Daoism, Mohism, Legalism), its contemporary implications, and the role of philosophy/religion in human flourishing. Themes include the ideal of *wu-wei* (effortless action), the paradox of how “to try not to try,” and models of the self. We explore parallels with Western traditions, the relevance of Chinese thought for contemporary debates in ethics and political philosophy, and how early models of the self anticipate developments in cognitive sciences.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 11 - Religion and Morality

How can we claim that something is good, evil, right, wrong, just, or unjust? What is our basis for evaluation and judgment, and how can we hope to persuade others who hold different perspectives? This course explores the challenges of making moral judgments and offering ethical codes of conduct. We consider problems raised in Western philosophical and religious traditions primarily. Topics covered include foundationalism and post-foundational ethics, narrative and virtue ethics, and traditional vs. postmodern approaches. Issues explored may include: poverty and injustice, just war theory, race/class/gender concerns, biomedical ethics, business ethics, post-humanism, and environmental and animal rights. Open to all classes.

Degree Requirement Attributes: TMV

REL 11.01 - God and Money

Instructor: Singh

This course introduces students to the problems and concerns of the study of religion by examining the interaction between economic and religious discourse and practice. Money has long been an object of reflection in philosophical, ethical, and religious traditions. We will explore money as a social phenomenon, a way human communities construct meaning and relationships, deal with power and obligation, and communicate what matters to them. We seek to understand what money is, how it interacts with moral categories like guilt and human value, and how it shapes areas of life such as identity, friendship, love, and sex. We also examine perspectives emerging from religious and ethical traditions concerning the presence of money in modern life. In so doing, we grapple with issues of individual and communal meaning, identity, and value judgment, as well as the challenge of defining what counts as religion—concerns that are integral to the

discipline of religious studies and central to humanistic inquiry more broadly.

Degree Requirement Attributes: Dist:TMV

REL 11.02 - Modern Religious and Anti-Religious Thinkers

Critical examination of some of the most influential modern proponents and opponents of religious faith, with special emphasis on the question: what is involved in belief in God? Open to all classes.

Degree Requirement Attributes: Dist:TMV

REL 12 - Religion in North America

Instructor: Balmer

A survey of religion in North America, from colonization to the present, with attention to the ways that religion has shaped American history, culture, politics, and more. We'll examine the interplay of church and state, faith and skepticism, assimilation and particularity, as well as the role of religion in various wars and social movements, such as abolitionism, feminism, and civil rights. Open to all classes. Dist: TMV; WCult: W.

Offered: Summer.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 13 - Sports, Ethics & Religion

Instructor: Balmer

A survey of the origins and development of the culture of athletic competition in America, with roots in the “Muscular Christianity” movement of nineteenth-century England. We’ll examine the peculiar (religious?) passion that Americans invest in sports as well as the role that sports has played as an engine for social change. We look, finally, at some of the ethical issues surrounding organized sports. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 14 - Introduction to African Religions

This course introduces the study of Indigenous African Religions, their cosmologies, histories, ritual structures, and their relationships to other aspects of African cultures. Of particular importance will be ideas of gendered spiritual power, the spread of African-inspired religions to the Americas, and the nature of orally transmitted religious traditions. Conversion to Islam and Christianity and reconversion from these religions will also be studied. Finally, we examine the role of African religions in post-colonial African societies and the impact of globalization. Open to all.

Cross-Listed as: AAAS 18.03

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 15 - Christians, Christianity, Christendom: A History

An introduction to the variety of Christian beliefs, institutions, and practices from the first century to the end of the sixteenth century. Attention will be focused on understanding how Christian communities adapted and developed religious beliefs and practices in the face of changing historical circumstances. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 15.01 - Other Christs: Introduction to Eastern Christianity

Every church preaches its own Jesus: this course is devoted to the 'other Christs' of the Eastern Christian traditions. Some celebrate the liturgy in the language of Jesus, others in the language of the pharaohs, and their communities are spread across Egypt, the Middle East, Russia, the Caucasus, India and beyond. This course explores the rich, multicultural history of Christian communities whose origins reach back to early Christianity, and the challenges they face today.

Cross-Listed as: RUSS 38.14

Degree Requirement Attributes: Dist:TMV

REL 16 - Introductory Courses in the Islamic Religious Traditions

Religion 16 courses are introductions. They assume no previous knowledge of either Islam or the Study of Religion. These are courses introducing the Islamic religious tradition from various perspectives.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.01 - An Introduction to Islam

Instructor: Rahman (25F), Ayubi (26F)

This course will provide students with useful tools for reading about, thinking about, or otherwise engaging with Islam and Muslims. It is first a survey of important topics in the study of the religion of Islam, including the Qur'an and the Prophet, the role of Islamic mysticism, Islam and the state, Islamic law, and Islamic theories of family and person. We also discuss Orientalism and the western study of Islam, so that we can understand ourselves as students of the Islamic tradition.

Not open to students who have received credit for REL 8

Cross-Listed as: MES 06.02

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.02 - Modern Islam

In all the attention focused on Islam at present, a newspaper reader could be forgiven for supposing that between Muhammad and Usamah bin Laden, there has been no change in Islam. This course surveys developments in Islamic religious history, thought, and practice since 1800, with special emphasis on topics of current controversy, including the status of women, the nature of government, and the place of Islamic law. Readings will be mostly from primary texts written by contemporary Muslims, both modernists and Islamists. \f

Not open to students who have received credit for REL 16.

Cross-Listed as: MES 17.09

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.03 - Islam in America

This course is about Muslims in America, past, present, and future—how American Islam is an extension of global Islam and how it is uniquely American. As we study religious identity and understandings of Islam in enslaved Muslim narratives, the civil rights movement, waves of immigration, pre- and post- 9/11, current Muslim geopolitics, we pay close attention to theorizations of contested histories, race, gender, and class dynamics, intersectionality, model minorityhood, assimilation, discrimination. We will also study Malcolm X's visit to Dartmouth, and the significance of the Malcolm X murals in Dartmouth's Shabazz Center.

Cross-Listed as: AAAS 22.50 REL 026

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 16.04 - Radical Islam: Jihadis, Salafis, and Radical Reformists in the 20th and 21st Century

Many academics, including Muslim academics, assert that Jihadism is "not religious" or "not really Islamic." Nonetheless, members of these movements see themselves sincerely as the vanguard of the "real" Islam. This course is about how violent reformists fit into the Islamic heritage, and, as importantly, how they fit into global sociological, religious, and political tendencies characteristic of the modern world. Are these movements' "Islamic;" are they "modern?" Why are they simply irrelevant to most Muslims?

Cross-Listed as: MES 17.07

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.05 - The Qur'an and the Prophet

This course introduces students to the Qur'an through diverse perspectives, including through its revelation, assembly as a text, its interpreters, and the Qur'an as a material object. Students will learn about the life of the Prophet Muhammad in conjunction with the revelation of the Qur'an as well as the importance of the Prophet's own

sayings and example in Islamic law and practice. We will examine interpretations of the Qur'an from different chronological, geographical, and gendered perspectives. Students will leave the class with an understanding of the role of the Qur'an for Muslims and Islam historically and in contemporary times, as well as debates surrounding it. We will also examine contemporary expressions of Islamophobia, considering how misunderstandings of the Qur'an and its contents contribute to fears of the text and Islam. Open to all.

Not open to students who have received credit for REL 27

Cross-Listed as: MES 17.20

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.06 - Sufism: The Mystical Tradition of Islam

This course examines Sufism or what is often called the mystical tradition in Islam. In Western media and popular discourse, Sufism is often portrayed as the "soft-side" of Islam that is uninterested in rituals, norms, the law, or politics—in contrast to the harsh "legalism" of the Shari'u02BFa, or Islamic law. In this course, we will investigate this portrayal through a rigorous textual and conceptual study, using both primary Sufi texts and secondary sources. The course explores multiple aspects of Sufism including its institutional and intellectual history, metaphysics and cosmology, meditation and disciplinary practices, poetry and literature, modern debates over the limits of normative Sufism, and orientalist and neo-imperialist representations of Sufism. A major focus of this course will be on close readings of primary texts, all in translation.

Not open to students who have received credit for REL 25.

Cross-Listed as: MES 17.21

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.07 - Islam and Medicine from the Medieval to Modern Eras

What was the place of medicine in medieval Islamic societies? How does medicine inform the social, political and sexual experiences of Muslims living in modernity? In this course students will explore primary and secondary sources describing Islamic medical ethics, drug use, dieting, contagion and sexual practice. Students will learn how ideas of religious devotion, class, sexuality, gender and political legitimacy changed in the medieval to postcolonial Middle East while remaining in constant conversation with medicine. Open to all.

Not open to students who have received credit for REL 19.30

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.08 - Shi'i Islam

This course will explore the history, doctrines, and practices of Shi'i Islam, focusing on the Twelver Shi'i faith in particular. The Twelvers are the largest of today's three Shi'i faiths and comprise the majority of modern Iran's population, majorities in a number of Arab countries, and substantial minorities in others such as in India and Pakistan. Translated materials will be offered to allow students direct access to key Shi'i writings composed over the centuries. The issue of sectarianism conflict in Sunni/Shi'i history will be one of the course's subthemes.

Not open to students who have received credit for REL 28.05

Cross-Listed as: MES 13.14

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 16.09 - Magic, Miracles, and the Prophet Muhammad

Do you believe in miracles? What are they, anyway? And how did the Middle East's long history of miracle-working influence expectations of what Islam and the Prophet Muhammad would be like? Do modern Muslims still believe in and work miracles? In this course students will explore these questions through sources related to the prophetic history of the Middle East, the miraculous events of Muhammad's lifetime and the role of miracles in the Islamic world today.

Not open to students who have received credit for REL 19.35

Cross-Listed as: MES 13.12

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 17 - African Religions of the Americas

This class introduces the history and practices of African-derived religious traditions as they have developed in the Caribbean, Latin America, and Black American communities in the United States. These religious systems will be discussed with reference to their mainstream representation (as "voodoo") and analyzed according to the more complex realities of their practitioners' everyday lives. Three themes to be explored in each tradition include 1) gender identity; 2) racial identity and resistance; and 3) aesthetics. Open to all classes.

Cross-Listed as: AAAS 83.05

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

REL 18 - Indian Buddhism

Instructor: Ohnuma

An introductory survey of the Buddhism of South Asia from its beginnings in the 6th century B.C.E. to its eventual demise in the 12th century C.E. Emphasis will be given to

the major beliefs, practices, and institutions characteristic of Indian Buddhism, the development of its different varieties (Hinayana, Mahayana, and Vajrayana), and its impact upon South Asian civilization at large. Open to all classes.

Cross-Listed as: ASCL 51.03

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 19 - Special Topics in Religion-Introductory Level

The contents of this course will vary from term to term. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: TMV

REL 19.03 - Rethinking the Divine

Whether any gods exist; whether there is a divine power that created the world and/or controls what happens in it; whether a human being has a soul that is somehow connected to the divine: these were questions that puzzled intelligent people in ancient Greece and Rome just as they puzzle people today. In this course, we study the efforts of a range of ancient authors to think through these problems in a way that seemed intellectually satisfying. We look also at what these same thinkers had to say about the origin of religious beliefs in human cultures and about how a thinking person will want to interact with the beliefs and practices of his/her own culture.

Cross-Listed as: CLST 10.01

Degree Requirement Attributes: Dist:TMV

REL 19.06 - Modern Hinduism

The names “Hinduism,” a religion, and “India,” a nation, come from the same word. What’s at stake in mapping one onto the other? We will study the consolidation of Hindu traditions as a modern religion—how the “ism” got in the “Hinduism”—in historical context, examining the writings of thinkers like Gandhi, Radhakrishnan, and Vivekananda. One of the most compelling things about Hinduism’s global image is its association with nonviolence. But a major focus will be the development of Hindutva ideology, which recasts the religion in a militant, masculinized mode. Who speaks—within the academy and outside it—for Hinduism?

Cross-Listed as: ASCL 51.02

Degree Requirement Attributes: TMV

REL 19.14 - Cosmos, Justice, and Evil

Religious notions such as afterlife, resurrection of the dead, end-time, karma, and providence can all be categorized as claims that the universe must somehow be just. The course will analyze several modalities of this

claim, in popular and in philosophical forms, seeking to trace and to assess their source either to the demands of theodicy or to an intuition that life in an unjust universe is morally intolerable.

Degree Requirement Attributes: TMV

REL 19.19 - Religion and Technology

This class explores the conceptual and ethical challenges raised by the relationship between religion and technology. In what ways is technology a response to the difficulties of labor and work, the biological limitations of bodies and lifespans, or the unpredictable forces of nature, for instance? What do Western religious and philosophical traditions have to say about such forms of augmentation of life capacities and processes? What promises and perils arise from technological progress? Why is the problem of technology seemingly central to the question of modernity, and how does religion fit in, if at all? We explore a variety of themes, which may include: bodily enhancements, biomedical procedures, humans vs. machines, robotics and AI, as well as digital and virtual worlds, asking what hopes and concerns certain religious and philosophical traditions in the West bring to such developments, and why it matters to think deeply about such issues.

Degree Requirement Attributes: Dist:TMV

REL 19.20 - Lost Books of the Bible

Why do some Bibles include books that other Bibles omit, for example the Book of Enoch, the Gospel of Mary Magdalene, or the Apocalypse of Paul? Who decided which texts should be included or excluded from the Bible, and what criteria did they use? Were these texts somehow subversive, or did they reveal secrets that religious authorities wished to keep to themselves? This course will study the contents of various versions of the Bible and explain how Jewish and Christian communities decided which texts to include or exclude from their Bibles, decisions that played formative roles in shaping both communities.

Degree Requirement Attributes: TMV

REL 19.22 - Gender and Judaism

Instructor: Feldman

Examining the intersections between gender, religious practice, cultural identity, and personal belief, this class will draw upon contemporary gender theory, religious texts and contemporary interpretations of Jewish thought and culture to examine the construction of Jewish identity through a feminist lens. Authors will include Alder, Boyarin, Heschel, Gilman, Peskowitz, Levitt and Biale. The class will also investigate questions of race, ethnicity, assimilation and Jewish gender issues in popular culture, including films and the work of performers Cantor, Benny, Berg, Midler, and Sandler. Open to all.

Cross-Listed as: JWST 053 WGSS 33.03

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 19.23 - Ecology, Ethics and Religion

The biosphere has evolved a level of biodiversity unprecedented in earth history in a period (the last ten thousand years) known as the Holocene in which humans evolved from hunter-gatherers to agrarians and industrialists. Agriculture enabled the development of complex civilizations which had a tendency to press ecological support systems to the point of collapse. The latest of these – industrial capitalism – is now a global civilization and is putting pressure on the planet as a whole to the extent that the evolving and reparative capacities of life on earth are at risk. Despite a groundswell of environmental protest, and regulatory changes, mainstream conservation and climate science has not yet changed the direction of civilization in a more sustainable direction. Some in the conservation movement have joined forces with religious leaders such as Patriarch Bartholomew, and Pope Francis who penned an ‘environmental encyclical’ in 2015, in recognition of the enduring cultural power of religion and of its potential to promote pro-environmental beliefs and behaviors. In this course we will study the book which inspired the formation of the EPA in the United States, a survey of environmental ethics by the ‘founding father’ of the field, a history of ideas perspective on the cultural origins of the environmental crisis and possible faith-based repairs.

Degree Requirement Attributes: Dist:TMV

REL 19.24 - Ancient Magic and Religion

Bindings and curses, love charms and healing potions, amulets and talismans – from simple spells to complex group rituals, ancient societies made use of both magic and religion to try to influence the world around them. In this course, we shall examine the roles of magic and religion in the ancient Greek and Roman worlds, paying special attention to their local contexts and to the myths and actual techniques ancient practitioners used to serve their clientele. We examine descriptions of religious and magical practices in the multicultural contexts of ancient Greece and Rome. Our sources include literary accounts, legal documents, and material objects, such as inscriptions, amulets, tablets, and papyri.

Cross-Listed as: CLST 10.07

Degree Requirement Attributes: Dist:INT or TMV;
WCult:CI

REL 19.25 - Religions of the Caribbean

This is an introductory course that explores African-derived religious practices of the Caribbean. Drawing on works of fiction, social science and historical studies, the course uses the African and Caribbean diaspora as analytical frameworks to understand the role of religion in

diasporic communities. The course will explore the effect of New World slavery and migration and the process of creolization on Afro-religious practices. While the course focuses predominantly on the English-speaking Caribbean, we will also examine traditions in the French- and Spanish-speaking Caribbean, including Brazil. Open to all.

Degree Requirement Attributes: Dist:TMV

REL 19.26 - Pentecostalism & Social Change

The study of global Pentecostalism is a rich subject geographically, theologically, and culturally. This course examines the origins of the tradition and its socio-political context in various regions of the world. Through case studies, history, and theoretical readings, we will explore the roots and routes of Pentecostalism throughout North America, Latin America, Africa, and the Caribbean. In addition to learning about the core doctrines and liturgical practices, the course also addresses the implications of Pentecostalism for race, gender and sexuality, and globalization. Open to all.

Degree Requirement Attributes: Dist:TMV

REL 19.27 - Female Saints and ‘Feminine’ Spirituality

The Apostle Paul famously declared to the Galatians that “there is neither male nor female... in Christ Jesus,” (Gal. 3:28). Men, however, came to dominate the Christian ecclesiastical scene despite the apparent position taken by Jesus and Paul on female spiritual leaders and role models. Yet women continued, and continue, to play key and important roles in the development of Christian identity despite the apparent suppression of their voices. In this course, we consider major female saints and spiritual innovators in the late antique and medieval Latin West. We will read and discuss figures such as Tecla, Perpetua and Felicitas, Radegund, Duodha, Hildegard of Bingen, Clare of Assisi, Christina the Astonishing, Mechthild of Magdeburg, and Marguerite Porete.

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 19.29 - Women and Religion in Japan

This course examines how Japanese religious traditions (such as Shinto, Buddhism, and others) have informed the lives of women in premodern and modern Japan, and the roles that women have played as nuns, patrons, lay practitioners, and religious specialists. We will examine both what religious traditions said about women and womanhood, and how women interacted with religious views and practices, many of which denigrated or limited women’s participation.

Cross-Listed as: ASCL 61.05

Degree Requirement Attributes: Dist:TMV

REL 19.31 - Religions of Japan

This course examines the historical development of the various religious traditions of Japan, from prehistoric to contemporary times. While prehistoric artifacts indicate what early Japanese religion may have looked like, the bulk of Japanese history features interactions between native, local Japanese practices and beliefs and the influence of continental traditions such as Buddhism, Confucianism, Daoism, and geomancy. Here, we will consider how the Japanese have adapted, combined, and redefined religious traditions over the centuries while interrogating what the word “religion” means within the context of each religion, sect or locality. Open to all.

Cross-Listed as: ASCL 61.06

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 19.32 - Shinto: Foundations, Festivals, and Fox Shrines

Shinto has been called the way of the gods, a nature religion, a native Japanese religion, a nationalist religion, to name but a few of its many descriptions. In this class, we will spend a great deal of time figuring out what Shinto is and is not, debating the relative merits of these classifications. We will see that Shinto is, to say the least, a multifaceted tradition with a complex history and countless local variations. Open to all.

Cross-Listed as: ASCL 61.07

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 19.33 - Religion, Politics, and Secularism

Is it necessary to keep religion out of politics? Why do religious communities continue to be influential in the public sphere? Is secularism the best response to religion’s role in politics? This course will examine these questions through a study of religion and political secularism in the Middle East, Europe, and the United States. We will take an inter-religious and comparative perspective to examine how and why religions impact political sovereignty, societies, and justice.

Degree Requirement Attributes: Dist:INT

REL 19.36 - Putin's Sacred Reign

In 2020, a cathedral was built in Moscow that scandalized many Russians. For on its walls were mosaics of Joseph Stalin and Vladimir Putin, who were pictured receiving blessings from the Virgin Mary. Thirty years ago, it was unthinkable that Stalin, a man who murdered millions of Christians, would someday be depicted alongside the saints. How could the public memory of the twentieth century be reconstructed so dramatically, so quickly? In this interdisciplinary course, we shall learn that Russia is a country with an unpredictable past: one that is currently being exploited in order to sacralize the reign of Vladimir Putin.

Cross-Listed as: RUSS 38.16

Degree Requirement Attributes: Dist:TMV

REL 19.37 - After the Fall: The Faith of Modernist Poets

This course will offer an in-depth examination of the creative impulses, as well as psychic anxiety, unleashed in certain Modernist poets by World War One, as well as the prefigurations of war found in some earlier poets. Poets to be examined include W. H. Auden, Ezra Pound, W. B. Yeats, Gerard Manley Hopkins, T. S. Eliot, and Christina Rossetti. This course will involve in-depth discussion, extensive reading, weekly written reflections, and a comprehensive final exam.

Degree Requirement Attributes: Dist:TMV

REL 19.38 - Mythology of Otherworldly Journeys

Mythical journeys to otherworldly places are common in Mediterranean cultures and represent important points of intersection between the ancient Near East and Classical worlds. A fundamental aspect of these mythical journeys is the natural division between the realm of the living and that of the dead. These mythical journeys served various objectives in their respective cultures, including describing heroic actions of central characters (divine or human), symbolizing the quest for secret knowledge, explaining the mysteries of the universe, life, and death, or endorsing a political or economic system through divine precedent. These mythologies also express mortal and post-mortem moralities in the exploration of the foundational nature of divine justice.

Degree Requirement Attributes: Dist:TMV

REL 19.39 - Auto/Biography Across Buddhist Traditions

Instructor: Long

In a tradition that teaches that there is “no self,” who or what is the subject of a Buddhist auto/biography? How have Buddhists represented the beginnings, middles, and ends of lives that are shaped by cycles of rebirth? What kinds of practices and relationships do these stories inspire or constrain? This introductory-level course responds to these questions by examining diverse practices of telling life stories from across the Buddhist world and their ethical implications.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 19.40 - Heidegger and Jewish Thought

The German philosopher Martin Heidegger is a paradoxical figure that embodies the ambivalence of modern Western philosophy. *On the one hand*, Heidegger is one of the most influential philosophers of the 20th century, who already during his lifetime inspired

generations of students and many other great philosophers worldwide, in the fields of ontology, phenomenology, existentialism, hermeneutics and inter-cultural philosophy. He has more specifically been a key inspiration for many authors to explore ways of thinking beyond Western philosophy, in other traditions of thought, such as the Japanese, Chinese, Indian, Islamic and Jewish. On the other hand, Heidegger was involved in the early movement of National Socialism and held anti-Semitic positions, as recently published in the last decade. This seminar will explore the riddle of Martin Heidegger, first by exploring his basic ideas, as formulated in his most important work, *Being and Time* from 1927; and then by exploring ways in which these ideas influenced Jewish thinkers, who received and adopted them, but also problematized, criticized and adjusted them. We will see how the work of Martin Heidegger functioned – and functions still – as a source for a renewal of contemporary Jewish thought beyond Western philosophy.

Cross-Listed as: JWST 26.01

Degree Requirement Attributes: Dist:TMV; WCult:W

Theories in the Study of Religion Courses

REL 20.01 - Classic Works in the Study of Religion

Instructor: Singh

How do we study the evolution and development of religion in society? It was only in the late 19th century that “religion” became an object of academic study with such founders of sociology and cultural anthropology as Sir Edward Tylor, Émile Durkheim, Max Weber, and Mary Douglas, among others. This course invites you to become part of the discussion and to develop your own analysis and writing skills. Through critical readings and class discussions, the course is designed to provide a grounding in the methods and approaches that have created the academic field of “the study of religion.”

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

REL 20.02 - Magic, Science, and Religion

Can significant distinctions be drawn between religious and magical ritual? Do magic and religion thrive in opposition to the science of their time or in congruence with it? The course addresses such theoretical questions in the study of religion from perspectives of history, philosophy of science, anthropology, and cognitive science. The course will suggest a general theory of conditions under which religion tends to be or tends not to be magical. Students will be invited to challenge that theory.

Degree Requirement Attributes: Dist:SOC

REL 20.03 - Reason and Religious Belief

A study of the principal religious and philosophical arguments for and against religious belief. The first part of the course will consider the question of the justifiability of religious belief through an appeal to religious experience and mysticism, to rational theistic arguments, and to faith, showing the difficulties in each case. The second part of the course will cover alternatives to classical theism and the contemporary challenge of conceptual relativism and religious pluralism.

Degree Requirement Attributes: Dist:TMV

REL 20.04 - Theoretical Approaches to the Study of Myth: Interpreting Ancient Near Eastern Mythology

This course examines various theoretical approaches to the study of mythology that have been developed by scholars in the past century by considering the ways in which these theoretical models have been used in the interpretation of mythologies of two of the great cultures of the ancient Near East, Mesopotamia and Canaan. Readings will include all the major myths of Mesopotamian and Canaanite tradition; major articles by theoreticians of myth such as Bronislaw Malinowski, Clyde Kluckhohn, and Claude Levi-Strauss; and various essays that attempt to apply these theoretical studies to the ancient Near Eastern mythological materials.

Degree Requirement Attributes: Dist:TMV

REL 20.05 - What is Religion?

This course examines basic theoretical and methodological questions about the study of religion. We begin with several definitions and approaches to religion emerging from Sociology, Anthropology, Psychology and Cognitive science, to Comparative Religion. Next we explore the formation of World Religions, the emergence of New Religious Movements, and the problematic definitions of Asian religions. We also explore theoretical issues regarding ritual, mythology, sacred time and sacred space, the body and the cosmos.

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 20.06 - Shamanism: The Agony and the Ecstasy

Shamans are those who communicate with spirits. Or are they? In this course, we unpack various definitions of shamanism and the vigorous debate over this term (the agony). We consider the history of shamanism as a concept, looking at key theories and scholars. We explore shamanism around the world, drawing on scholarship, ethnographies, and lived experience of shamanic practices (the ecstasy). We delve into considerations of gender, medicine, colonialism and indigeneity.

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 20.07 - Archaeologies of Religion

Instructor: Weiner (26W), Wilkinson (27S)

Most of humanity's religious history is only accessible using archaeological evidence. Moreover, even where texts are available, they tend to reflect the perspective of elites. This course therefore explores how archaeological methods can help us better understand religious phenomena in past societies. Topics will include the religion (or lack thereof) of our hominid ancestors (e.g. Neanderthals), the state religions of ancient civilizations, and the complementary perspective that archaeology provides on the World Religions.

Cross-Listed as: ANTH 50.37

Offered: Winter.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

REL 20.08 - Ethnography and Religion

Instructor: Feldman

This course introduces students to ethnographic methodologies for the study of contemporary religion. We will read ethnographic case studies of religious communities alongside texts on methodology and research ethics. Students will practice the methods they are studying in class by conducting research on topics of their choice. "Mini-ethnography" assignments will introduce students to participatory observation, field note coding, interviews, photo and video documentation, and using empirical findings to construct compelling written narratives/arguments. Throughout the course, we will debate the ethical dilemmas that remain at the center of ethnographic research on religion (e.g. positionality, consent, power dynamics, decolonial and feminist praxis).

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

*Intermediate Courses***REL 21 - Religion and Western Thought**

To what extent has religion been a shaping factor in the West's development and can it be clearly distinguished from wider philosophical, sociological, and political trends? Students will begin to develop expertise in the study of religion and in theoretical literature addressing various questions and concerns raised by thinkers in the West in various historical periods. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 21.01 - Religion and Social Capital

Instructor: Singh

Why are relationships essential? Why does reputation matter? How does trust form, and is there something

"sacred" to social bonds? This course explores the concept of social capital and its relevance for understanding religion, culture, and society. We begin by examining what "capital" means when applied to relationships, exploring how social and cultural capital function as resources. We investigate how communities form, trust emerges, and symbolic power is cultivated, asking why such dynamics are often correlated with religion. We also explore concerns about the inequities surrounding access to social capital and its distribution. Through readings in religious studies, sociology, and anthropology, we consider gift exchange, reciprocity, and ritual as practices that forge connection while enforcing boundaries and ask how religious and ethical traditions portray such dynamics in both human and divine relationships.

Degree Requirement Attributes: Dist:SOC; WCult:W

REL 21.02 - Gods and Kings

This course provides an advanced introduction to the relationship between religion and politics in the ancient and medieval worlds, with particular attention to the Western tradition. We focus on Christianity, most centrally, while considering its relation to Ancient Near Eastern and Greco-Roman religions at specific moments. The course offers students with a basic historical and theoretical framework for thinking about the tensions and possibilities that emerge in the encounter between religious and political thought, institutions, and communities in these periods. This course challenges the assumption that religion and politics are self-evident and clearly distinct realms. Instead, we examine the ways that the boundaries between religion and politics have been continually blurred throughout history and across communities and traditions, and consider how "religion" and "politics" are interdependent and mutually reinforcing categories of thought and practice.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 21.03 - Religion and the Rise of Capitalism

Debates continue to rage about whether religion is compatible with a market society or whether it is opposed to it. Did Christianity, in particular, contribute to the rise of capitalism or has it constantly resisted it? How, if at all, did religious ideas play a part in the development of the market? This class delves into historical events and conversations that were central to new theories of commercial society, and provides students with a firm exposure to central ideas and institutions within capitalism. We examine the religious, theological, philosophical, and broader historical background to these elements, and well as their critical reception and impact. We consider thinkers such as David Hume and Adam Smith, as well as key modern interpreters such as Albert Hirschman, RH Tawney, and Max Weber.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 22 - Modern Judaism

Instructor: Magid

This course will trace the ways Jews in modernity made sense, challenged, adopted, and adapted modern thought, culture, and politics in their recalibration of Judaism. The role Jews played in modernity is well-known. But how did Jews re-think Judaism in ways that enabled it and them both to survive the challenges of modernity and also retain a sense of difference enough to enable Jews to assimilate yet not disappear. In this course we will look at some of the major trends and thinkers from the 17th through the 21st centuries as they struggled to reinterpret Judaism for the modern age. Open to all classes.

Cross-Listed as: JWST 61

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 23 - Jewish Mysticism

The course examines the nature of claims to mystical experience or knowledge that appear in various aspects of the Jewish tradition, with primary focus on the enchanted and demonic worlds of the Kabbala. Forms of ecstasy and magic will be studied, along with their theoretical and social backgrounds and their impact on elitist and popular Jewish practice. Open to all classes. Not open to students who have received credit for JWST 07.08.

Cross-Listed as: JWST 062

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 25 - Topics in the Philosophy of Religion

Courses under this rubric will focus in some depth on a particular aspect of central issues in the philosophical evaluation and interpretation of religious belief and practice. The topic will change with each course, and students may take multiple courses under this rubric. The courses will cover concepts from a variety of philosophical perspectives, and examples may include dealing with the justification of religious belief, the problem of evil, religious experience, religious language, the relationship between science and religion, and the nature and destiny of the human person.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

REL 28 - Intermediate Courses in the Islamic Religious Traditions

Students who take these courses will profit from previous exposure to the Study of Religion, the Study of Islam, the Gender Studies, or other suggested prerequisites as specified.

Offered: Spring.

REL 28.02 - The Islam of Morocco

This course is designed to introduce you to Islam as it occurs in the Moroccan environment. Each unit will include either visits from Moroccan scholars or practitioners of the aspect of Islam under consideration. Discussions may include *shar\u012B\u02BFah* and *shar\u012B\u02BFah-reform*, the King as Commander of the Faithful, Dialect Islam in Morocco, Gender and Sex in Moroccan Islam, the History of Islam in Morocco.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 28.03 - Muslim Feminism

Instructor: Ayubi

This course introduces students to the diversity of feminist approaches on a transnational scale, by examining the movements, activism, media, literature, and Islamic debates produced in predominantly Muslim countries and beyond. We will interrogate concepts of transnationalism, feminism and modernity in terms of historical developments, theoretical usage, the context of colonialism, Islamic theologies, and the modern Muslim nation states. We will explore similarities and differences in women's experiences and feminist methodologies across global Muslim contexts. Course materials will be made up of several primary sources in translation that deal with intersectional issues such as religious and cultural practices, educational systems, politics, race and racism, socioeconomic class, legal rights for men and women, and marriage and the family.

Cross-Listed as: MES 19.02 WGSS 41.04

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

REL 28.04 - Gender in Islam

Instructor: Ayubi

“Is Islam sexist?” “What does Islam really say about women?” This course seeks to dismantle the premises of these questions by asking who speaks for Islam, what makes something Islamic, and how are gender and gender roles constructed in Islamic texts and Muslim thought. We will make critical study of the constructions of gender, femininity, masculinity, sexuality, gender relations, marriage and divorce in classical and modern Islamic texts. In asking how Islamic notions of gender are constructed, we will examine both the roles religious texts have played in shaping Muslim life and how Muslim life in its cultural diversity affects readings of religious texts. We will read works of Muslim thought on gender relations in their historical contexts and in relation to one another. Through in-class discussions, critical reading exercises, and short essay assignments, students will strengthen their literacy on global gender issues, study religio-historical ideas on gender, analyze the role of texts in shaping gender in society, and vice versa.

Cross-Listed as: WGSS 43.06

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 28.06 - Medical Ethics and Islam

Religions and Religious authorities have long held control over the rights and rituals of the body from birth to death and in between. This course is about how Muslims have constructed medical ethics discourses, what are the major ethical problems that arise for Muslims seeking medical care, and how Muslims have managed religious and medical knowledge in healthcare decision making. Muslim Medical ethics is a story about gender, sexuality, race, religious authority, moral responsibility, God, colonialism, the state, capitalism, science and the practice of medicine. We will make critical study of all of these as we move from pre-modern to contemporary discourses and cover a variety of medical ethics issues in cases of reproductive health, abortion, organ transplantation, medical technology, end of life care, etc. We will also examine medical ethics theories/approaches and what might constitute *Islamic* theories/approaches for various Muslims.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 28.07 - Disease and Desire in Medieval Islam

This course investigates how Muslims from the medieval to modern eras made use of poetry, art, religious and scientific literature to understand their own bodies and those around them, especially in terms of disease and desire. Topics to be studied include how medieval Muslims described the allure and danger of different kinds of bodies, as well as their interest in homoeroticism, romantic love, the Prophet Muhammad's sex life, the thrills of travel and sexual enhancement.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 28.08 - The Qur'an in Europe from the Middle Ages to the Twentieth Century

Since the dramatic emergence of the Arab Empire in the seventh century, Byzantium and the emerging Europe were engaged in warfare, polemics, trade and a fruitful cultural exchange with Muslim polities and societies. This course is dedicated to Christian Europeans' engagement with the Qur'an from the twelfth century to the twentieth. The reasons Europeans read the "Alcoran" or "Turkish Bible" and the consequences of this perusal were as varied as their political, commercial, military and cultural encounters with the Muslim world. From the despised object of heated polemics, to a storehouse of philosophical and religious wisdom and a masterpiece of world literature, Europe's centuries-long engagement with and re-assessment of the Qur'an is a fascinating chapter in the history of Western thought. In addition to its pivotal importance for understanding the history of Christian-Muslim relations, it

offers us a unique vantage-point to study several developments in the religious and intellectual history of Christian Europe and both its pre-modern and modern approaches to religion, culture and non-Christians in Europe and beyond.

Cross-Listed as: JWST 36.04 MES 17.22

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

REL 29 - Modern Religion

Religion is a decisive force that shapes politics, culture, values, and everyday life. Courses taught in the Modern Religion rubric will focus on the distinctive features of religion as it shapes, and is shaped by, the world in which we live. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 29.01 - Religion in the Modern World

As late as the 1970s, academics were convinced that religion was dying, and that it was less and less relevant to the contemporary world. Then came the Iranian Revolution, the Rise of the Religious Conservatives in the US, the settler movement in Israel, the appearance of militant Buddhists in Sri Lanka, and then of course 9/11. In this introductory, reading and discussion-based course we will first try to understand what we mean by the term "modernity" and what features are characteristic of it. Then we will consider and discuss a series of topics related to modernity and religion. Readings are designed to include both topical cases and classic works in the study of religion and modernity. Open to all.

Degree Requirement Attributes: Dist:INT or TMV

REL 29.02 - Is God Back? Religion in Modern Europe

If God is not back, religion most certainly is. Religion arguably never went away in the USA, however the re-emergence of public religion is a European phenomenon. What does this re-emergence of religion mean? This course will explore how religion is contested and renegotiated in the public sphere, and the effects of these struggles on society, state, and religion itself. In discussing a broad range of empirical issues—such as the impacts of migration, national identity, religion and media, church-state relationships, and religion and welfare, the course puts a strong emphasis on situating European developments in a global context.

Degree Requirement Attributes: Dist:TMV

REL 30 - Sacred Cities

This course will explore the ways in which different religious traditions shaped and have been shaped by the sacred cities in which they are established. We will explore the way in which local topography, communities, and

tradition shaped the sacred urban landscape and how the local holy places of the city influence the larger religious tradition of which it is a part. Open to all.

Degree Requirement Attributes: TMV

REL 30.01 - Sacred Cities: Rome

A visit to the “eternal city” today is a visit to several cities at once; classical, medieval, and Renaissance versions of Rome are layered on top of each other and squeezed into the same space. This course seeks to explore the many Romes of the past through the city’s religious topography. How did the capital city of the Roman Empire become one of Christianity’s holiest cities? We will examine the history of Rome as revealed in the lives of emperors, popes, holy women, and aristocratic families as well as through the changing landscape of the city itself and its main religious monuments. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 30.02 - Sacred Cities: Jerusalem

According to G.A. Smith in his *Historical Geography of the Holy Land*, Jerusalem “stands aloof, waterless, [and] on the road to nowhere.” Yet, despite its geographic, agricultural, and economic limitations, Jerusalem has been transformed into a city of tremendous religious significance. This course will examine the cultural history of Jerusalem over three millennia, primarily as the symbolic focus of three faiths: Judaism, Christianity, and Islam. The course content will focus on the transformation of sacred space as reflected by literary and archaeological evidence by examining the artifacts, architectural monuments, and iconography in relation to written sources. In addition, this course will examine the creation of mythic Jerusalem through event and experience.

Degree Requirement Attributes: INT or TMV

REL 31 - Sex, Celibacy, and the Problem of Purity: Asceticism and the Human Body in Late Antiquity

Instructor: MacEvitt

Late Antiquity (c. 300-500 C.E.) was a time when Christians struggled to understand how gender, family life, and religion could intermesh. Did virgins get to heaven faster than those who marry? Can a chaste man and woman live together without succumbing to lust? Were men holier than women? What about women who behaved like men? This course examines the changing understanding of the body, marriage, sexuality, and gender within Christianity through reading saints’ lives, letters, polemical essays, and legal texts. Open to all classes.

Cross-Listed as: CLST 11.06; WGSS 43.02

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 32 - Topics in the Christian Tradition

In this course we will engage in an in-depth study of a particular issue in Christian history or Christian ideology. The topic will change with each offering, and students may therefore take this course more than once. Sample topics include “Intellectuals and Superstition: The Creation of the Witch in Medieval Europe” and “Heretics and Inquisitors: The Cathar Religion in Medieval Europe.” Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 32.01 - Christianity in Korea

This course examines Korean Christians’ beliefs and practices, which have shaped and brought tensions to current socio-religious phenomena. Topics include the Korean origins of Christianity, the encounter between Catholicism and Neo-Confucianism in the eighteenth century, Protestant missionaries’ role in medicine and education, the rise of nationalism and Christianity under Japanese colonialism, churches in North Korea, Pentecostalism under South Korea’s rapid industrialization and democratization, Korean missionaries around the world, and Christian musicians and entertainers in Korea, as well as the interface between gender and Korean Christian culture.

Cross-Listed as: ASCL 64.04 HIST 78

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 32.02 - Into and Beyond Dante's Inferno -

Instructor: Callegari

The work of Dante Alighieri (1265-1321) stages from beginning to end a struggle between personal desire, social obligation, and the conflicting cultures of Christian religion and the body politic. The unprecedented fusion Dante made of these elements in the *Commedia* [The Divine Comedy] has guaranteed his great poem a vast public, extending across world cultures and the seven centuries since it initially traveled among elite readers in north-central Italy in the early decades of the fourteenth century. This course will first examine the development of Dante’s poetic voice in *La vita nova* [The New Life, ca. 1293-94] and then focus on its subsequent expansion into an all-encompassing vision of life and death in *Inferno* [Hell, ca. 1306-09], the first of the three canticles of the *Commedia*. Situating Dante in his own time and place will be essential to our analysis of his poetry, but attention to the multiple ways that Dante’s work has been interpreted, translated, and appropriated in other periods, languages, and media will provide a critical framework for understanding its enduring appeal, why – in the words of Italo Calvino – it “has not finished saying what it has to say.” Readings, lectures, discussion, and written work – to include a mid-term exam, two short essays, and a final digital project – will be in English. Students taking the

course for major or minor credit will attend a weekly X-hour and write the two essays in Italian.

Cross-Listed as: ITAL 33.01

Degree Requirement Attributes: Dist:LIT; WCult:W

REL 32.05 - Second Vatican Council and its Theologians

This course introduces the history and the major accomplishments of the Second Vatican Council (1962-1965), and the writings of key theologians that gave shape to it behind the scenes. Fifty years on, this remarkable event still offers instructive insights for how we understand modernity, inter-faith dialogue, human rights, and the ongoing development of the Christian faith.

Degree Requirement Attributes: DIST: TMV; WCult: W

REL 32.06 - Jewish Views of Christianity

What do Jews think of Christianity? The two religions took shape under each other's influence as well as in repudiation of one another's claims, but while we often hear about Christian anti-Judaism, we rarely learn about the other side of the story. This course will examine an ancient Jewish version of the Gospels, medieval Jewish polemics regarding Christian dogma, Christian influences on Jewish mysticism, modern Jewish scholarship on Christian origins, Jewish artistic representations of Christian symbols, and post-WWII Jewish efforts to create new and positive relations with Christians.

Cross-Listed as: HIST 94.11

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

REL 32.07 - Medieval Practices of Ascension

This course considers medieval western Christianity through the lens of practices related to "ascending towards" or "becoming like" God. A central feature of western religiosity prior to the Reformation, men and women, secular and religious, sought to transcend the shackles of base matter in order to become new, spiritual creatures. In this course, we investigate their journeys, and we question why the Reformation sought to curb practices of ascent and whether or not it succeeded.

Degree Requirement Attributes: TMV

REL 32.08 - Catholicism & Orthodoxy in the Americas

A survey of Orthodox and Catholic expressions of faith in the New World, beginning with New Spain in Latin America, New France in Québec, and Russian Orthodoxy in Alaska to the present. Discussions will include treatment of Native Americans, immigration and nativism, debates about cultural assimilation, the role of women, liberation theology, the impact of Vatican II and *Humanae Vitae*, and clergy sex scandals.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 32.09 - Heresy and Authority

What makes "right belief" right? Who decides what is "orthodox" and what is "heterodox"? Who controls the label "heresy"? This course explores ideas of heresy and authority within the history of western Christianity by focusing primarily on the eleventh through the fifteenth century. Considering various struggles for secular and spiritual authority, we will also question the authority given (and taken) by the authors of history (both primary and secondary). Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 33 - Christians, Jews, and Muslims in the Age of the Crusades

This course will focus on the interactions of the three major religious communities of the medieval Mediterranean—Christians, Jewish, and Muslim—beginning with the First Crusade in 1096 and ending with the arrival of the Black Death in 1347. By examining topics such as pilgrimage, crusade, and jihad, the status of minority communities, and intellectual life, we will explore how Christians, Jews, and Muslims clashed, cooperated, influenced, and misunderstood each other. Open to all classes.

Cross-Listed as: HIST 91.01; JWST 36.01

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 34 - Vikings, Celts, and Saxons: Medieval Christian Imagination of the Pagan Past

Instructor: MacEvitt

This course explores the transformation of Christianity in the early medieval period. The conversion of 'barbarian' peoples in northwest Europe between the years 400 and 1000 meant Christianity had to adapt to a different environment than the Roman and Mediterranean one in which the religion developed. The northern world was without the Roman Empire, without cities, with different languages, cultures and notions of relations between the human and divine worlds. This course explores the impact the conversion of Germanic, early English, Celtic, and Nordic communities had on Christianity, as well as why communities of the northern world voluntarily chose to adopt this new religion. Open to all classes.

Cross-Listed as: HIST 91.02

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 35 - Religion and Science

The purpose of this course is to provide an overview of current developments in the natural sciences and religious or theological interpretations of them. Emphasis is given to

understanding an emerging consonance between religion and science in contrast to models of dissonance and conflict, or independence and dialogue. Particular attention is given to (1) evolutionary biology, (2) relativity physics, (3) cosmology, and (4) process theology and philosophy. Open to sophomores, juniors, and seniors.

Degree Requirement Attributes: TMV

REL 37 - Mountain Gods, Mummies and Messiahs: Religions of the Andes

Instructor: Wilkinson

This course provides an in-depth examination of the religious traditions of the central Andes (roughly modern Peru and Bolivia). The chronological scope of the course encompasses the past 3,000 years, with equal weight given to both ancient and modern Andean religions. Major themes to be studied include: ritual sacrifice, ritual sex, apocalyptic narratives, the veneration of mummified ancestors, Inca religion, the Spanish Inquisition in the Americas, Catholic anti-idolatry campaigns and colonial messianic movements.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 40 - Topics in the Religions of South and Southeast Asia

This course will focus in some depth on a particular aspect of religion in South or Southeast Asia—for example, a particular religion, sect, time period, body of literature, type of religion, or religious movement. The topic will change with each offering, and students may take the course more than once. Sample topics include: Gods, Demons, and Monkeys: The Ramayana Epic of India; Hindus and Muslims in India; and Contemporary Vietnamese Religions. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 40.01 - Gods, Demons, and Monkeys: The Ramayana Epic of India

The ancient Indian epic known as the Ramayana is a stirring, martial tale of gods, demons, and monkeys. Beginning with the classical Sanskrit version composed as early as 200 B.C.E., India has produced hundreds of different versions of the Ramayana, in different languages and media, with different agendas and for different audiences. We will examine this epic tradition in all of its complexity, making ample use of different forms of media.

Cross-Listed as: ASCL 51.07

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 40.07 - Hindus and Muslims in India

Hindu nationalist rhetoric in India today claims that India has always been an inherently “Hindu state,” and that “Hindu” and “Muslim” are two distinct, mutually exclusive, and oppositional identities locked in a relationship of eternal conflict. These claims raise a host of difficult questions: Was there any such thing as a collective “Hindu” identity prior to the arrival of Islam? What was the relationship between “Hinduism” and “Islam” during the medieval period? To what extent was British colonialism responsible for creating “Hindu” and “Muslim” identities in the modern period and then projecting them into the past? This course will examine “Hindu” and “Muslim” identities in both medieval and modern India. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 40.08 - Fear and Loathing in Religion: Contested Religious Belonging in South and Southeast Asia

Instructor: Long

Is religion a source of conflict or a resource for cooperation? How do Buddhists, Muslims, Christians, and Hindus relate to one another, and how have these identities and relationships changed over time and from place to place? What social processes produce violence, make peace, or enable justice? This intermediate-level course responds to these questions by investigating ethnographic case studies of multireligious spaces and communities in contemporary South and Southeast Asia.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41 - Topics in the Study of Buddhism

This course will focus in some depth on a particular topic in the study of Buddhism, either limited to a particular geographical region or across the Buddhist world. Topics may pertain to particular bodies of Buddhist literature, particular Buddhist movements, or aspects of Buddhist society, thought, or culture. The topic will change with each offering, and students may take the course more than once. Sample topics include: “Mahayana Buddhist Texts,” “Tantra in East Asia,” “Buddhism and Film,” and “Women, Monasticism, and Buddhism.” Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.01 - Mahayana Buddhist Texts

An in-depth, discussion-based exploration of the rich, imaginative world of Mahayana Buddhist literature, including both philosophical treatises and religious scriptures (including the Heart, Diamond, Lotus, and Vimalakirti Sutras). Open to all classes.

Cross-Listed as: ASCL 51.10

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.02 - Buddhism and Film

“What is Buddhism?” “How can it be something expressed in and through the medium of film?” and “What actually constitutes a Buddhist film?” After an introductory survey of central topics in Buddhism, this course will explore the cinematic presentation of Buddhist religion, philosophy, practices, saints, and institutions. By learning to watch films critically from a Buddhist perspective, students will explore the process through which we create the meaning in films and everyday life. Open to all.

Cross-Listed as: FILM 47.22

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.04 - Buddhist Meditation Theory

Instructor: Seton

The Buddhist theory of meditation was first articulated 2,500 years ago and has since been adapted to numerous cultural contexts in Asia and the West. This course offers a survey of the three traditional religious frameworks for meditation practice, but also pays some attention to the secularized applications of mindfulness techniques in modern society and to the current status of scientific studies on the effects of those techniques. The course primarily concerns theoretical questions and controversies surrounding Buddhist meditation, but students will get the chance to experiment with secular mindfulness techniques outside of class and to attend a field trip to a local Buddhist temple. Optional secular meditation, normally MWF 8am-9am.

Cross-Listed as: ASCL 70.20

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.05 - Tibetan Buddhism

An introductory survey of Buddhism in Tibet from its inception in the 8th century until the present day. Emphasis will be given to the central doctrines, practices, and institutions characteristic of Tibetan Buddhism, its development of various popular and elite religious ideals (householder, nun, monk, scholar, solitary hermit, crazy yogi, and female dakini), and its evolving identity in the West. Not open to students who have received credit for REL 19.21 or ASCL 61.02.

Cross-Listed as: ASCL 51.04

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.06 - Buddhism in Korea and Japan: From Tribute Missions to Temple Tourism

Buddhism has long been an established religious tradition and important aspect of cultural heritage in both Korea and Japan. However, there are key differences in how

Buddhism developed and how the religion functions today. In South Korea, most people classify themselves as Buddhist or Christian; in Japan, the majority consider themselves non-religious, yet visit Buddhist temples and hold Buddhist funerals; in North Korea, roughly 10,000 Buddhists remain in spite of religious persecution by the state. Clerical marriage is widely accepted in Buddhist sects throughout Japan, whereas the practice has been the subject of heated debate in South Korea since the 1950s. How did these differences emerge, and what common ground remains?

Cross-Listed as: ASCL 61.08

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.07 - Buddhism, Sexuality, & Gender in Southeast Asia

Instructor: Swenson

This intermediate-level course explores how Buddhist concepts of embodiment affect daily life and society in Southeast Asian contexts. We will also consider how cultural understandings of gender and sexuality influence local religious practices in the Buddhist-majority countries of Thailand, Vietnam, Cambodia, and Myanmar. Our materials will lead us to analyze how religion, sexuality, and gender intersect with one another, as well as how these intersections impact broader understandings of authority, wisdom, beauty, death, and loyalty.

Cross-Listed as: ASCL 51.06

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 41.08 - Buddhist Philosophy

Instructor: Seton

Buddhists see philosophy not just as a study of reality or the meaning of life, but as a useful step in overcoming all forms of suffering and realizing the existential happiness of a buddha. This course will survey the four main Buddhist philosophical schools; highlight the differences in their phenomenology, onto-epistemology, and ethics; and explore their views on the nature of consciousness, identity, perception, wisdom, and happiness. It will also touch upon Buddhist dialectical reasoning and analytical meditations aimed at developing insight into the nature of mind and its lifeworld.

Cross-Listed as: ASCL 51.08 PHIL 01.20

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 42 - Goddesses of India

Instructor: Ohnuma

This course will use both elite and popular Hindu religious texts in conjunction with contemporary sociological and anthropological accounts, scholarly analyses, visual art,

and film to explore the diverse identities and roles of India's many goddesses, both ancient and modern. Special emphasis will also be given to the relationship between goddesses and women. Open to all classes.

Cross-Listed as: WGSS 43.04

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 43 - Buddhism in America

Instructor: Ohnuma

This course will focus on the transmission, growth, and transformation of Buddhism in America—treating American Buddhism not as an Asian tradition transplanted onto American soil, but rather as a distinctive regional variety of Buddhism that has its own distinguishing characteristics. We will focus on the history of Buddhism in America, major varieties of American Buddhism (including Zen, Tibetan Vajrayana, Theravada, and Soka Gakkai), and contemporary issues in American Buddhism.

Offered: Spring.

Degree Requirement Attributes: INT or Dist:TMV; WCult:W

REL 46 - Daoism: Transformations of Tradition

Instructor: Raz

In this course we will explore the historical developments and transformations of Daoism from its ancient roots to present-day practices. We will begin by looking at early traditions of immortality seekers and self-cultivation and at the religious and philosophical ideas in the ancient Chinese texts of the Laozi, Zhuangzi, and Guanzi. We will also examine recent archaeological findings, imperial religious practices, and the complex interaction of Daoism with Buddhism. We will in addition look at contemporary Daoist practices in China and Taiwan. Along the way we will devote special attention to meditation and divination techniques; alchemy and sexual techniques for transcendence; the place of women and the feminine in Daoism. Open to all classes.

Cross-Listed as: ASCL 61.11

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 47 - Buddhism in China

Instructor: Raz

A study of the advent of Buddhism in China, its accommodating yet transforming response to Chinese traditions and values, the emergence of the authentically Chinese schools of T'ien-T'ai, Hua-yen, Ch'an, and Pure Land Buddhism, and the enduring Buddhist heritage of China. Open to all classes.

Cross-Listed as: ASCL 61.12

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 48 - Body and Sex in Chinese Religions

Instructor: Raz

In this course we will explore how different traditions in China conceptualized the relationship between the human body and the universe and how individuals can attain immortality and transcendence. After examining different conceptions of the human body in traditional China, we will focus on sexual practices advocated by the traditions of immortality seekers, Daoism, and esoteric Buddhism as ways to enlightenment and transcendence. In our explorations we will look at the earliest records of sexual practices found in tombs of the 3rd century B.C.E. and examine Daoist sexual initiation rites and secret rites practiced by emperors. We will consider how notions of cosmic powers and forces are expressed in sexual rituals and how society views such practices. We will also compare Chinese notions of the body and of sexual practices with those found in West. Open to all classes.

Cross-Listed as: WGSS 43.05

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 49 - Topics in East Asian Religions

In this course students will read and discuss the latest research on one of the religions of East Asia, or a particular sect, movement, or time period in the history of East Asian religions. The topic will change with each offering. Thus, students may take this course more than once. Sample topics include: Literature and Religion in China, Politics and Religion in China, and The Body in Japanese Religion. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 49.01 - Apocalyptic Thought

In this class we will examine ideas about the cataclysmic end of the world, possible ways to survive such calamities, or to bring them forth appear in several religious traditions in East Asia. This course examines a variety of such eschatological and salvific ideas, beginning with Daoist and Buddhist scriptures in medieval China, proceeding through various religious rebel movements to modern cults such as Aum Shinrikyo in Japan and Falun Gong in China.

Cross-Listed as: ASCL 70.26

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 53 - Religion, Healing, and Medicine

This class explores a range of religious approaches and traditional therapeutic responses to bodily suffering, with an eye towards examining the way medical cultures reflect and construct religious identity. Most examples of healing practices to be discussed are drawn from religious

communities and ethnic groups active in the contemporary United States. While addressing such topical issues as reproduction, sexuality, substance abuse, and dieting, the course also analyzes the taboos, values, and rituals of Western biomedicine. Open to all classes.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

REL 54 - African American Religion and Culture in Jim Crow America

Jim Crow segregation in the United States compelled many African American men and women to use their bodies—their hands, feet, and voices—to create sacred scenes, sounds, and spaces to articulate their existence in America. This seminar focuses on religious production to explore African American culture in the post-Civil War era. Students will analyze a variety of sources, including music, visual art, film, religious architecture, sermons, food, theater, photography, and news media. Not open to students who have received credit for AAAS 80.08.

Cross-Listed as: AAAS 22.10 AAAS 80.08

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 55 - Ancient Egyptian Religion

The great civilization of ancient Egypt, which spanned a period of almost 3000 years, has left us a wealth of literary, artistic, architectural, and funerary religious remains. This course will focus on three major aspects of Egypt's religious heritage: (1) the pantheon and the myths and stories about Egypt's gods; (2) temple complexes; and (3) tombs, especially the tombs of royalty and other nobles. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 56 - Women and the Bible

As contemporary Jewish and Christian communities of faith face the question of the role of women within their traditions, many turn to the Bible for answers. Yet the biblical materials are multivalent and their position on the role of women unclear. This course intends to take a close look at the biblical tradition, both the Hebrew Bible (Old Testament) and the New Testament, to ask what the Bible does—and does not say—about women. Yet the course is called "Women and the Bible," not "Women in the Bible," and implicit in this title is a second goal of the course: not only to look at the Bible to see what it actually says about women, but also to look at differing ways that modern feminist biblical scholars have engaged in the enterprise of interpreting the biblical text. Open to all classes.

Cross-Listed as: JWST 028 WGSS 43.03

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 57 - Readings in the Biblical Tradition

In this course we will engage in an in-depth study of a particular biblical book or of a particular biblical motif. The topic will change with each offering, and students may therefore take this course more than once. Sample topics include "The Exodus Tradition," "Job and the Joban Tradition," and "Apocalyptic Traditions." Open to all classes.

Offered: Summer.

Degree Requirement Attributes: TMV

REL 57.01 - The End of the World

This course will examine expectations of the end of the world with roots in the interpretation of the Hebrew Bible and New Testament. Students will survey ancient near eastern concepts of the cataclysmic end of history, understand the theological and social origins of apocalyptic literature, and examine the primary examples of the genre in early Judaism and Christianity. The course will also investigate modern apocalyptic movements guided by eschatological interpretations of the Bible.

Degree Requirement Attributes: TMV

REL 57.02 - The Jewish Jesus

Instructor: Lanfer

It is certain that Jesus of Nazareth lived in the first century C.E. and that his followers interpreted his life and death as harbingers of a new age. However, recent scholarship has made clear that Jesus was fully embedded in the Judaism of his time: the Jewish diversity of the period and Jewish resistance to the Roman Empire. This course examines the life of Jesus the Jew prior to the early Church's interpretation of Jesus as Christ; modern Jewish and Islamic views of Jesus, as well as his portrayal in contemporary film and art, will also be explored.

Cross-Listed as: JWST 74.01 MES 17.08

Offered: Winter.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 57.04 - The Dead Sea Scrolls

Arguably the most significant literary and archaeological find of the twentieth century, the Dead Sea Scrolls have forever changed our understanding of the Bible, ancient Judaism, and early Christianity. But what are they? Who wrote them? Why have they been so controversial? Do they contain secrets to unlock the Bible or the apocalyptic end of history they describe?

This course offers an in-depth examination of the Dead Sea Scrolls (in English translation) and the archaeological remains of Qumran in the complicated context of Judaism in the Second Temple Period and the emergence of Christianity. In addition to the scrolls, we will read from

the Jewish apocrypha, pseudepigrapha, the writings of Josephus, and the New Testament.

Degree Requirement Attributes: Dist:TMV

REL 57.06 - History of Heaven

This course presents an examination of the origins and early evolution of images of the afterlife among the ancient peoples of the Mediterranean basin and Near East. The course will focus on ancient Israelite, biblical, and early Jewish and Christian images. Later developments of these images within Western religions will also be discussed.

Cross-Listed as: JWST 072

Degree Requirement Attributes: Dist:TMV

REL 57.07 - Apocalyptic Imagination

Throughout the centuries individuals from vastly different cultures have sought to answer the question “what is the meaning of life?” through apocalyptic speculation. This survey of Jewish and Christian apocalyptic literature will explore the sociological significance of this tradition in the history of Western culture. This study will begin with biblical antecedents, cover several early Jewish examples, and treat some early Christian apocalypses. We will explore medieval Jewish, Christian and Islamic texts before turning our attention to modern apocalypticism. Open to all.

Degree Requirement Attributes: Dist:TMV

REL 58 - Topics in the Bible and Archaeology

In this course we will study the relationship between various biblical texts and archaeological discoveries from the ancient Near East, including ancient Israel, and from the Roman Empire during the period of Christian origins. Particular attention will be paid to the ways in which archaeological data can be used and abused in attempts to understand the Bible better. The specific topic of the course will change with each offering, and students may therefore take this class more than once. Open to all classes.

Degree Requirement Attributes: TMV

REL 58.01 - Bible and Archaeology

This course examines how the study of the Bible and Archaeology complement each other by a consideration of methodological and theoretical issues, grounded in an investigation of selected case studies that may include, for example, Khirbet Qumran, Herodian Jerusalem (in the time of Jesus), and Masada (last stronghold of the Jewish rebels against Rome), among others.

Degree Requirement Attributes: Dist: TMV

REL 59 - Topics in Comparative Religions

Courses under this rubric compare themes from religious traditions and spiritual practices around the world,

including perspectives from Buddhism, Islam, Judaism, Hinduism, Christianity, indigenous religions, and other cultural movements. Sample topics include Compassion, Violence, Nature, Loss, and Leadership. Students may take multiple courses under this rubric. Open to all.

REL 59.01 - Compassion: Religion, Giving, and Care

Instructor: Swenson

What inspires care for others? Is it possible to give, expecting nothing in return? This intermediate-level course explores how people approach care across global contexts. We particularly examine how religions influence virtues of compassion, generosity, and altruism. In defining these virtues, we also investigate how religions inform cultural understandings of suffering, happiness, power, responsibility, self and other. Our course materials include philosophical and anthropological texts intersecting Hinduism, Islam, Buddhism, Judaism, Christianity, Santeria, and indigenous traditions.

Degree Requirement Attributes: Dist:TMV

REL 60 - Reformations: Protestant and Catholic

This course examines the theological, social, psychological, and cultural motors driving change within the institutional church during the 16 and early 17th centuries, the Protestant challenge to Catholicism, and the Catholic response. Manifestations of the need for change are found in great literature of the era and also exemplified in art and film. Scope spans Europe and the Colonies. Open to all classes.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 61 - Religion and the Civil Rights Movement

This course presents the religious dimensions of civil rights activism in twentieth-century United States history. Students will explore the theologies of African American Protestants, liberal religious thinkers, and adherents to Gandhian philosophy as they waged nonviolent struggle against Jim Crow oppression in the United States. In-class discussions and exercises will examine the religious rhetoric and creative protest strategies of movement activists. Open to all.

Cross-Listed as: AAAS 022

Degree Requirement Attributes: Dist:SOC; WCult:CI

REL 62 - Religion, Politics, and the Presidency

This course examines the intricate relationship between church and state, religion and politics, throughout American history, beginning with the founders and how they have been interpreted—perhaps misinterpreted—throughout history. We'll look at the contentious election of 1800, examine the faith of several presidents, and then explore the rise and the influence of the Religious Right in recent years, concluding with a retrospective on religion

and presidential politics over the past half century. Open to all.

Degree Requirement Attributes: Dist:SOC; WCult:W

REL 63 - Mormonism

Instructor: Balmer

A survey of the history and theology of Mormonism, one of America's indigenous religions. We'll read selections from the Book of Mormon and chart the history of the movement, including its contentious relationship with the federal government. We'll look, finally, at some of the cultural expressions of Mormonism and examine the ways that Mormonism has transformed itself from what was essentially an outlaw religion in the nineteenth century to the embodiment of American ideals. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:W

REL 64 - Evangelicalism

A survey of the history and theology of evangelicalism, America's folk religion, from its origins in the confluence of the "three P's"—Puritanism, Presbyterianism, and Pietism—in the Great Awakening to the construction of the evangelical subculture following the Scopes Trial to the present. We'll examine evangelical millennial ideas as well as attitudes toward women, minorities, society, and politics. Open to all.

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 66 - Women, Religion and Social Change in Africa

This introductory, multidisciplinary course examines women's religious ideas, beliefs, concerns, actions, rituals and socio-cultural experiences in African societies and cultures from a comparative, historical and gender perspective. We will look at women's experiences of social change in African religions, the encounter with Islam, slavery, Christianity, and colonialism. We will analyze the articulations of economic and political power or lack of power in religious ideas as we ask questions such as: What are the different antecedents and circumstances in which women exercise or are denied agency, leadership, power and happiness in their communities? Texts will include nonfiction, fiction, and film narratives. Open to all students.

Cross-Listed as: AAAS 042 WGSS 44.03

Degree Requirement Attributes: Dist:SOC; WCult:NW

REL 67 - Religion And Imperialism

An examination of the impact of imperial expansion on the religious systems of the conquered. The course will focus primarily on the religious consequences of European expansion in North America and Africa but will also examine Jewish responses to Roman imperialism at the time of Jesus. We shall examine the attempts of traditional religious leaders to explain and control the imperial

presence as well as the development of new religious movements that grew out of spiritual crises of conquest. This course will examine various types of prophetic movements and revitalization movements that developed in response to conquest as people sought to preserve their cultural identities in the face of their forced integration into imperial systems. Issues of conversion to religions associated with the conquerors as well as the challenges of secular culture will be discussed. Open to all.

Cross-Listed as: ANTH 12.15

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

REL 69 - Religion and World Politics

Instructor: Baum

Modernization theorists confidently predicted that religion would cease to be a matter of public concern and would become limited to individual and private spheres by the end of the twentieth century. The Iranian Revolution put an end to such speculation. This course examines the relationship between religious pluralism and political affairs in European, African, and Asian nations. Case studies will include Northern Ireland, Nigeria, South Africa, the Middle East, and India.

Cross-Listed as: GOVT 20.07

Offered: Winter.

Degree Requirement Attributes: Dist:INT or TMV; WCult:W

REL 70 - Foreign Study in Religion I

Instructor: University of Edinburgh staff

Credit for this course is awarded to students who have successfully completed a religion course at the University of Edinburgh while a member of the Dartmouth Foreign Study Program in Religion.

Prerequisite: One course in Religion.

Offered: Fall.

Degree Requirement Attributes: TMV

REL 71 - Foreign Study in Religion II

Instructor: University of Edinburgh staff

Credit for this course is awarded to students who have successfully completed a religion course at the University of Edinburgh while a member of the Dartmouth Foreign Study Program in Religion.

Prerequisite: One course in Religion.

Offered: Fall.

Degree Requirement Attributes: TMV

REL 74 - Special Topics in Religion-Intermediate Level

The contents of this course will vary from term to term. Dartmouth Foreign Study Program (D.F.S.P.) courses are taught by the Dartmouth Faculty Director of the annual Religion Department Foreign Study Program at the University of Edinburgh, Scotland. See Off Campus Programs for applications and more information.

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:TMV

REL 74.04 - The Black Church and Black Bodies: Race, Sexuality and Class in Religious Culture

Black churches are challenged to better understand and respond to subjects that are often considered taboo. This course will focus on ideas and approaches that have informed the historic and current Black Church around race, sexuality, and class (and their nexus). Informed by Cultural Theory, it will consider how such churches have endeavored to understand, socialize, and in some instances, control Black bodies as well as some of the broader implications for critically assessing inequality, diversity, and social justice. Barnes.

Cross-Listed as: AAAS 81.04 SOCY 49.21 WGSS 43.07

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 74.07 - Ritual in Post-Modern Great Britain

This is a course on ritual. It is designed to expose you to the major theories that seek to define, explain and interpret ritual and to apply those theories to actual rituals in situ. This means we will be reading and discussing intensively in seminar. We will also be taking advantage of the rich multicultural environment of this exciting city to attend various rituals—religious and otherwise. Your papers and presentations will be observations and analyses of two rituals from among the multitude of religious rituals available in Edinburgh and the United Kingdom.

Degree Requirement Attributes: TMV

REL 74.09 - Religious Minorities in Britain

This course examines the history of minority religions in Britain from late Antiquity to the present-day. We examine the experience of minority status of adherents of indigenous religions of Britain, Jews, Muslims, Hindus, and followers of African and African Diaspora Religions. This is an inter-disciplinary course, utilizing historical, comparative, sociological, and literary perspectives to shed light on the ways in which these minority traditions interacted with the majoritarian Christian churches and were influenced by their minority experience.

Degree Requirement Attributes: TMV

REL 74.11 - The English Bible

In this course, we will study first the earliest Bibles produced in southern Scotland and northern England, focusing in depth on the most beautiful and most important: the Lindisfarne Gospels, the Codex Amiatinus, and the Book of Kells. Second, we will study the history of the rendering of these and other early Latin Bibles into English, culminating with the famous King James Version, commissioned in 1611 by King James VI of Scotland/James I of England. While on the Religion Foreign Study Program (FSP) at the University of Edinburgh, the course will include field trips to the island of Iona, the Holy Isle of Lindisfarne, Melrose Abbey, Durham Cathedral, and Edinburgh and Stirling Castles are integrated into our study.

Degree Requirement Attributes: Dist:TMV

REL 74.12 - Merchant of Venice: The Jew in the Protestant Imagination

This seminar is an interdisciplinary study of Shakespeare's *The Merchant of Venice* that will examine the history of Christianity's attitudes toward Judaism, the fate of Jews within Christian Europe, especially in England prior to the expulsion of the Jews in 1290, and the effect of these histories on the composition of the play, the representations of its main characters, particularly Shylock and Portia, and its reception through the centuries, with attention to its role in modern attitudes toward Jews and toward anti-Semitism. We will approach the material as scholars of history, literature, and religion. We expect to attend closely to the gendered and racialized representations of Jewishness and Christianness in the play and in English culture more generally. The impact of the play will be examined with particular reference to modern German and English literary traditions. We will also examine some major developments in the staging of the play, with particular attention to Yiddish versions, Israeli productions, and Nazi-era German stagings, as well as several film versions. A selection from the major critical literature on the play will be studied.

Cross-Listed as: ENGL 55.15 JWST 070

Degree Requirement Attributes: Dist:LIT; WCult:W

REL 74.15 - African Religions, Health, and Healing Traditions

This seminar examines the complex interaction of African, Christian, Muslim, and Western medical traditions in the understanding of, diagnosis of, and healing of illnesses within African societies. This is a capstone course for the AAAS major and minor and will include a major term paper. Cases will be drawn from anthropological, comparative religious, historical, literary, and artistic perspectives.

Cross-Listed as: AAAS 91.03

Degree Requirement Attributes: Dist:INT or TMV;
WCult:NW

REL 74.17 - Islam in Africa

Instructor: Baum

This course aims to introduce students to the formation of Islam in the Maghrib, Saharan Africa, and Africa south of the desert. Assignments will address continuities with and differences from the practices of Muslims in other parts of the world while emphasizing the central role the religion has played in the unfolding of history in various parts of Africa. Topics covered will include conversion, popular religion and mysticism, cultural formations, and social organization. Open to all classes.

Cross-Listed as: HIST 69 AAAS 53

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

REL 74.18 - Judaism and Ecology

Tracking between ancient, medieval and modern texts, we will consider the rise of Jewish “environmentalism” in the late 19th and 20th centuries, both as theory and practice, and the changing place in Judaism and Jewish life of themes such as agriculture, animals, nature, pantheism and anthropocentrism. The course offers a window into central but often marginalized aspects of Judaism and Jewish culture and society as they changed over the centuries; familiarity with some of Judaism’s major texts; a survey of some vital features of contemporary Jewish life and Jewishness.

Cross-Listed as: JWST 15.02

Degree Requirement Attributes: Dist:SOC; WCult:W

REL 74.19 - Islam in Diaspora: Colonial pasts and Decolonial Futures

This course takes advantage of being in Edinburgh: we will reflect on Scotland’s own history and location in the British Empire to inspire us to study colonial pasts of Muslim imperial subjects of the Empire, how colonialism has shaped diasporic Muslim modernity, and what decolonial futures might look like. The British and other European crowns colonized most of the world’s Muslim population and that experience irrevocably changed Muslim beliefs and practices, and even Islamic theology on a global scale. We will critique colonialist/orientalist frameworks of studying religion and culture of Islam/Muslims while using interdisciplinary tools of Religious Studies as a field to propose new frameworks. The central questions we will ask are how have religious beliefs and practices morphed throughout the experience of colonialism and how do they continue to change with the

added awareness of intersectional forces of identity formation.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 74.20 - The Meaning of Life

Instructor: Swenson

What is the meaning of life? Is it power, wisdom, sacrifice, or happiness? Is it rooted in relationships or self-fulfillment? This course investigates the meaning of life through materials from religious traditions and “spiritual but not religious” communities around the world. The FSP maximizes our location in Edinburgh through readings by local authors, field trips, and an interview-based project. Together we will explore values and practices that have inspired people and defined civilizations throughout history.

Offered: Fall.

Degree Requirement Attributes: Dist:TMV; WCult:CI

Advanced Courses

REL 80 - Seminars

The contents of this course will vary from term to term, see individual topic descriptions.

Offered: Spring.

Degree Requirement Attributes: TMV

REL 80.01 - Prophetism in the Black World

Instructor: Baum

This seminar utilizes interdisciplinary perspectives to examine the relatively widespread phenomena of prophetism in the black world. By utilizing historical, anthropological, and comparative religious perspectives, the seminar will explore the lives and prophetic careers of people who claimed direct revelation from the supreme being or lesser spirits in indigenous African religions, Islam, and African and African American Christianity. We will examine such movements before the European occupation of most of Africa as well as the colonial and post-colonial eras. We will also examine African American movements from the period of slavery and from the twentieth century. Topics will include women's prophetic movements, religious critiques of underdevelopment, the process of inculturation of Islam and Christianity, and the role of religion in Resistance to foreign or domestic domination.

Cross-Listed as: Identical to AAAS 90.02

Offered: Spring.

Degree Requirement Attributes: Dist:TMV; WCult:CI

REL 80.04 - Sacred Time

What is time? Was there a beginning to the world? When did the world begin? Will it end? How will it end? Can we control time? Does anything exist beyond life and death? All cultures have struggled with these perennial questions, and we continue to do so today. Religious traditions have offered us many different answers to these questions. This course examines various understandings of time in several religious cultures: Judaism, Christianity, Buddhism, and Daoism.

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 80.06 - The Creation of "Buddhism"

This seminar will focus on "Buddhism" not as a living religious tradition, but as an academic object—created, solidified, and defined by and within the Western academy. How was "Buddhism" created in the libraries and academies of the West, and how does this creation continue to define what "Buddhism" is today—both within the Western academy and among Asian Buddhists themselves?

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 80.08 - Maimonides

"The modern Enlightenment postulated that "All men were created equal," at least in the sense that an essential part of being human was being a moral agent, capable of rational choice, and, thus, equally worthy of respect. No serious medieval thinkers would have found that credible. Their moral and intellectual ideals were thoroughly elitist. Nevertheless, some of them were committed to progressive political ideals, which constitute the Enlightenment toward which they worked, often at considerable personal risk. Maimonides' work epitomizes this type of Enlightenment, both in its arguments and in the style of its esotericism. The seminar will strive to achieve a synoptic view of this classic of Western religious-political thought."

Degree Requirement Attributes: TMV

REL 80.09 - Bible, Sex, and Sexuality

In our society, when controversial issues about sex and sexuality arise (e.g., the nature of marriage; homosexuality), participants in the debate often refer to the Bible and claim it mandates certain points of view. But the Bible's position is not necessarily so clear-cut. This course will take a close look at representative biblical texts and relevant scholarly literature in order to examine the Bible's complex perspectives on topics such as marriage, homosexuality, adultery, prostitution, incest, and celibacy.

Cross-Listed as: JWST 075

Degree Requirement Attributes: Dist:TMV

REL 80.10 - Messengers of God: Prophetism in Historical and Comparative Perspective

Instructor: Baum

Using Western concepts of "prophets" and "messengers of God", we will examine this religious role cross-culturally, using examples from ancient, Hebrew, Muslim, African, Native American, and Chinese cultures, including both male and female prophetic leaders. Using comparative and historical approaches, we will interrogate the meanings of the terms, as well as study the historical conditions that facilitate their emergence, success, and/or failures. We will examine the nature of prophetic experience, teaching strategies, and organizational roles in various religious movements. We will also use a variety of sources ranging from sacred scriptures, to biographies and histories, to literary representations.

Offered: Spring.

Degree Requirement Attributes: Dist:TMV

REL 80.11 - Modern Black Spiritualities

This advanced seminar places contemporary black religions at the center of the study of African-descended peoples. Through recent books in the ethnography of Africana religions, spiritual communities in Africa, the Caribbean, and North America that have established communities in the United States will constitute the focus of our course readings and anchor our weekly discussions. As an advanced seminar, our meetings will allow participants to interrogate the authors of these ethnographies. We will assess how these accounts have conceptualized the African diaspora and the vantages ("insiders" and "outsiders") from which they describe religious beliefs, practices, and institutions. Beyond considering the commonalities and distinctions in form and practice that characterize various African diasporic religious practices, participants will also work to understand the constructions of race and belonging, ethnic identity, gender, sexuality, class, and geographic location that affect the lives of black religious adherents.

Cross-Listed as: AAAS 90.10

Degree Requirement Attributes: Dist:INT or TMV; WCult:CI

REL 80.12 - Religions on the Silk Road

For centuries, travelers, merchants, and missionaries of various religions crisscrossed Asia along the so-called Silk Road, trading silk, horses, and spices while exchanging ideas about gods, divine powers, and efficacious rituals for securing the living and the dead. This class explores a variety these religious traditions, including Buddhism, Daoism, Christianity, Islam, Manicheism, Zoroastrianism, and Judaism. These discussions will also explore how religions, languages, and ethnic identities were understood in traditional Asia.

Cross-Listed as: ASCL 80.12

Degree Requirement Attributes: Dist:TMV; WCult:NW

REL 81 - Dickinson Distinguished Scholar Seminar

The contents of this course will vary from term to term. This course is a unique opportunity for students to focus on the work of a distinguished scholar who has made a significant impact upon the study of religion. The Religion faculty designs the course annually and invites the scholar to visit the Dartmouth campus to engage the students, critique their papers, and present a public lecture to the community.

Degree Requirement Attributes: TMV

REL 81.04 - Buddho-Daoism: Religious Competition and Interaction in Traditional China

Buddhism and Daoism developed together in traditional China through complex interactions that produced various difficult to define religious phenomena. Daoists and Buddhists appropriated each other's ideas and practices so that many scriptures and rituals are sometimes nearly impossible to differentiate. Local religious communities followed practices that integrated ideas from both traditions. This course examines the various manifestations of Buddho-Daoist religious traditions in traditional China and their impact on modern Chinese religion.

Degree Requirement Attributes: TMV

REL 82 - Joint Research in Religious Studies

Two or more students may enroll in this course to pursue through independent reading and research a topic mutually agreed upon between themselves and the instructor. This course may be used in satisfaction of the seminar requirement. Permission of the Chair is required.

Offered: Fall, Spring, Summer, Winter.

REL 83 - Independent Study in Religion

The purpose of REL 83 is to provide opportunity for a student to do independent work on a topic that the student has studied in a regularly offered course, or to study a topic not normally covered in a regularly offered course. The interested candidate should, in consultation with a faculty adviser, decide on a course of study, reading, and writing and should then present these proposals in a petition for Departmental approval before the beginning of the term in which the course is to be taken. May be taken for more than one course credit, but at most, one election will count toward satisfaction of the requirements of the major. REL 83 can not be used to satisfy the culminating experience requirement.

Offered: Fall, Spring, Summer, Winter.

REL 84 - Advanced Independent Study in Religion

Open only to senior majors in Religion; by permission only. The interested candidate should, in consultation with a faculty adviser, decide on a course of study, reading, and writing that will culminate in a 25-page essay, and should then present these proposals in a petition for Departmental approval no later than the end of the Spring term of the Junior year. REL 84 may satisfy the culminating experience requirement only in unusual and extenuating circumstances — and then only by petition to the Chair.

Offered: Fall, Spring, Summer, Winter.

REL 85.01 - Senior Colloquium

Instructor: MacEvitt

As a culminating activity for all senior Religion majors, this colloquium serves as a forum for researching and writing the Senior Essay. Two faculty members convene the colloquium and guide the selection of essay topics. Other faculty and guest speakers may visit during the first five weeks of the term for discussion of common readings. The 25-page Senior Essay is expected (1) to display expertise in at least one cultural area, historical period, methodological approach, or body of literature, (2) to build upon previous course preparation, and (3) to engage with one of several approaches or readings discussed in the colloquium.

Offered: Winter.

Degree Requirement Attributes: TMV

REL 85.02 - Senior Colloquium for Honors Program

Instructor: MacEvitt

Open to senior majors only; by permission only. In order to qualify for the Honors Program in the Religion Department, the student must have at the time of application an average of 3.0 in all subjects and 3.3 in the major. The interested student should, in consultation with a faculty adviser, decide on a course of study, reading, and writing and should then present these proposals in a petition for Departmental approval no later than the end of the Spring term of the Junior year. During two terms of the senior year, the honors student will pursue the project under the guidance of a faculty adviser by enrolling in REL 85.02 (Culminating Experience) and REL 87 (Honors). The student is expected to produce a substantial thesis as the culmination of the project. REL 87 may be taken either before or after REL 85.02. See also the Requirements for the Major, Honors Program, in the ORC.

Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for REL-087 and receive a grade of "ON" (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace

the “ON” at the end of the subsequent term at which time the coursework must be completed.

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

REL 87 - Honors

Open to senior majors only; by permission only. In order to qualify for the Honors Program in the Religion Department, the student must have at the time of application an average of 3.0 in all subjects and 3.3 in the major. The interested student should, in consultation with a faculty adviser, decide on a course of study, reading, and writing and should then present these proposals in a petition for Departmental approval no later than the end of the Spring term of the Junior year. During two terms of the senior year, the honors student will pursue the project under the guidance of a faculty adviser by enrolling in REL 85.02 (Culminating Experience) and REL 87 (Honors). The student is expected to produce a substantial thesis as the culmination of the project. REL 87 may be taken either before or after REL 85.02. See also the Requirements for the Major, Honors Program, in the ORC.

Students are awarded one course credit for successful completion of this course at the end of the second term of work. Students register for REL-087 and receive a grade of “ON” (ongoing) at the end of the term. Students do not register for the subsequent term. A final grade will replace the “ON” at the end of the subsequent term at which time the coursework must be completed.

Offered: Fall, Spring.

Science and Technology Studies

Affiliated faculty: D. L. Anthony, D. T. Bolger, L. E. Conkey, M. R. Dietrich, N. K. Frankenberry, V. Fuechtner, M. Gleiser, A. V. Koop, R. L. Kremer, J. V. Kulvicki, J. H. Moor, A. L. Roskies, S. Suh.

Science and Technology Studies (STS) provides a curricular and extracurricular focus for students and faculty seeking to examine the historical, philosophical, and social traditions that have shaped the construction of science and technology, and the effects of science and technology on other intellectual, social, and political activities.

STS is not a department or a program, and does not offer a major. Rather, it identifies a core of Dartmouth faculty (Arts and Sciences, plus the professional schools) interested in the history, philosophy, or social relations of science and technology, and the interdisciplinary courses they offer in these areas. The faculty may also arrange extracurricular activities related to the content of these courses.

COURSE OFFERINGS

Social Science

To view Social Science courses, click here (p. 733).

SSOC - Social Science Courses

To view Social Science requirements, click here (p. 733).

Sociology

Chair: Jason Houle

Professors M. D. Dixon, B. Harrington, J. N. Houle, K. J. Lively; Associate Professors J. M. McCabe, K. B. Rogers, G. Sharp, M. Tine, E. C. Walton; Assistant Professors S. Allen, S. Kim, C. Stockstill, S. Upadhyay; Visiting Professor H. Clark, L. Grinberg, K. Smith.

To view Sociology courses, click here (p. 735).

Requirements for the Standard Major

The standard major in Sociology consists of eleven courses to be selected as follows:

1. One introductory level course, either SOCY 1 or SOCY 2.
2. Two methods courses: SOCY 10 and SOCY 11. With approval of the Chair, a major may substitute one of the statistical analysis courses offered by the other social science departments or programs.
3. One theory course: SOCY 15, or SOCY 16.
4. Students must take four Lower Division courses (numbered 20-49), two Upper Division courses (numbered 50-80), and one culminating experience course (see 5. below). Students may substitute an Upper Division course for one of the Lower Division courses.
5. Standard majors must satisfy the culminating experience requirement by successfully completing any one of the following options: The Sociological Imagination (SOCY 91), Community-Engaged Research Practicum (SOCY 92) or Honors Thesis (SOCY 98 & SOCY 99). Brief descriptions of each option may be found under the course listings. Please consult the Department regarding specific procedures for each option. The culminating experience may be counted as one of the seven additional courses in Sociology numbered 20 or higher that are required for completion of the major. Note: In rare instances, seniors who are unable to complete a sociology major may fulfill this requirement through the successful

completion of the Senior Independent Study Project (SOCY 90) with prior approval from the chair.

Standard majors must be approved by a department faculty member.

Requirements for the Modified Major

The modified major in Sociology consists of thirteen courses to be selected as follows:

1. One introductory level course, either SOCY 1 or SOCY 2.
2. Two methods courses: SOCY 10 and SOCY 11. With approval of the Chair, a major may substitute one of the statistical analysis courses offered by the other social science departments or programs.
3. One theory course: SOCY 15, or SOCY 16.
4. Students must take three Lower Division courses (numbered 20-49), one Upper Division course (numbered 50-80), and one culminating experience course (see 5. below). Students may substitute an Upper Division course for one of the Lower Division courses.
5. Modified majors, must satisfy the culminating experience requirement by successfully completing any one of the following options: The Sociological Imagination (SOCY 91), Community-Engaged Research Practicum (SOCY 92) or Honors Thesis (SOCY 98 & SOCY 99). Please consult the Department regarding specific procedures for each option.
6. Four related courses taken in one or more departments or programs.

Students establishing a modified major must submit a written statement of the proposed field or topic, plus a list of all courses to be taken for credit toward the modified major. Please see the form on the department website. The proposal should address the intellectual coherence of the proposed course of study. All modified majors must be approved by the Chair of the Sociology Department; and, when modified by a single department or program, by the chair of that department or program. Proposals for modified majors must be submitted to the department no later than the beginning of the third term prior to the student's graduation (for example, the beginning of fall term senior year in most cases). Extensions may be granted on rare occasions with permission of the Sociology Department chair.

Requirements for the Basic Minor

The basic minor in Sociology consists of six courses, to be selected as follows:

1. One introductory level course, either SOCY 1 or SOCY 2.
2. One theory course, either SOCY 15 or SOCY 16

3. Students must take three Lower Division courses (numbered 10 or 11, 20-49), one Upper Division course (numbered 50-80). Students may substitute an Upper Division course for one of the Lower Division courses.

Requirements for the Minor in Markets, Management and the Economy

The Minor in Markets, Management and the Economy consists of six courses, to be selected as follows:

1. One introductory level course, either SOCY 1 or SOCY 2.
2. One theory course, either SOCY 15 or SOCY 16
3. One of the following: SOCY 26, SOCY 66 or SOCY 69
4. Two of the following courses from the Lower Division
SOCY 21 Political Sociology
SOCY 22 The Sociology of International Development
SOCY 26 Capitalism, Prosperity and Crisis*
SOCY 27 Organizations in Society
SOCY 28 Health Care and Health Care Policy
SOCY 29 Sociology of Work
5. One of the following courses from the Upper Division
SOCY 50 Sociology of Law
SOCY 53 Power, Politics and the State
SOCY 66 Markets and Management*
SOCY 67 The Political Power of Ideas
SOCY 69 The Sociology of Globalization*
SOCY 70 American Labor Relations
SOCY 80 Independent Study (in Markets, Management and the Economy)

One Upper Division course may be substituted for a Lower Division Course.

* For the MME Minor, taking SOCY 26, SOCY 66 or SOCY 69 can be used towards either fulfilling requirement #3, OR requirement #4 or #5, but not both.

Requirements for the Minor in Social Inequalities

The Minor in Social Inequalities consists of six courses, to be selected as follows:

1. One introductory course, either SOCY 1 or SOCY 2.
2. One theory course, either SOCY 15 or SOCY 16
3. Three of the following courses from the Lower Division
SOCY 23 Social Movements
SOCY 25 Democracy and Democratization in Developing Countries
SOCY 26 Capitalism, Prosperity and Crisis
SOCY 31 Youth and Society
SOCY 32 The Social Meanings of Home
SOCY 34 Health Disparities
SOCY 38 Status and Power in Social Interaction

SOCY 42 Racism in Asian America
 SOCY 45 Inequality and Social Justice
 SOCY 46 Constructing Black Womanhood
 SOCY 47 Race and Ethnicity in the U.S.
 SOCY 48 Immigration, Race and Ethnicity

4. One of the following courses from the Upper Division

SOCY 50 Sociology of Law
 SOCY 55 Poverty and Public Policy in the US
 SOCY 56 Sociology of Gender (Cross-listed with WGSS 34.04)
 SOCY 58 Education and Inequality
 SOCY 60 Dangerous Intersections: Race, Class and Gender
 SOCY 61 Gender (In)Equality (Cross-listed with WGSS 33.05)
 SOCY 65 Social Psychology of Inequality
 SOCY 70 American Labor Relations
 SOCY 71 Race Matters (Cross-listed with AAAS 63)
 SOCY 80 Independent Study (in Social Inequalities)

One Upper Division course may be substituted for a Lower Division Course.

All minors must be approved by a departmental faculty member.

Off-Campus Study

Off-Campus Program in Copenhagen

Students in any social science major may apply to participate in the Sociology Department's off-campus student exchange program, which is held during the Fall term at the University of Copenhagen in Denmark. The University of Copenhagen offers a variety of social science courses taught in English by Copenhagen faculty. Students may choose courses in sociology, anthropology, government, psychology, and economics, and take the normal course load of a full-time student. Applications are received in early February and selections are made during that term. Students who apply are required to have an overall grade point average of at least 3.0. For further information, see Professor Harrington.

Sociology Honors

The Honors Program in Sociology consists of advanced independent study under the direction of a faculty supervisor, culminating in the completion and presentation to the department of an honors thesis. A major who successfully completes an honors thesis in Sociology will also satisfy the culminating experience in the major. The program is open to any major who satisfies the minimum college honors requirements, including a 3.0 GPA overall, has a 3.3 GPA in the major, and has completed all theory and methods requirements for the major prior to submission of the thesis proposal.

Toward the end of the junior year a prospective honors major should identify a faculty member in the department who is willing to serve as a thesis advisor in order to

discuss the proposed thesis. Advisors must confirm that they will be on campus during the two terms in which the student takes SOCY 98 and SOCY 99 (sociology honors credits) unless other arrangements are made. A written thesis proposal must be submitted to the advisor no later than the end of the third week of the third term prior to graduation (typically fall term, senior year), and preferably earlier. After the proposal has been approved by the advisor and a copy filed with the department the student is accepted into the honors program.

All honors majors must take SOCY 98 and SOCY 99 for thesis credit during the senior year, although exceptions may be permitted. SOCY 98 counts as one of the seven additional courses numbered 10 or higher that are required for completion of the major, taking SOCY 99 means that Honors students will typically take at least 12 course credits in Sociology. At the end of the SOCY 98 the student's progress toward the completion of the thesis is evaluated by the advisor in consultation with the department. If satisfactory progress is not being made, then the thesis project may be terminated and a grade given for the first term of thesis credit.

A preliminary draft of the thesis must be turned into the thesis advisor no later than the end of the fifth week of SOCY 99, and preferably earlier. Once revisions have been made, two (2) copies of the completed thesis draft must be turned into the thesis advisor no later than the end of the eighth week of SOCY 99. Upon completion of the final revised thesis, the student must provide 3 bound copies to the department: one for the Advisor, one for the Department and one for the Rauner Library. The thesis will be graded by the thesis advisor and a second reader appointed by the department. Students receiving a B+ (3.33) or higher on the thesis will receive honors recognition in the major. High honors may be awarded by faculty vote for truly exceptional work.

Students interested in participating in the program should obtain the handout "The Sociology Honors Program" from the Department Office. Students can also consult the website: <http://sociology.dartmouth.edu/undergraduate/honors-program>.

Transfer Credits

Upon approval by the Chair, a maximum of two course credits for work taken elsewhere may be counted toward the major and a maximum of one course credit for work taken elsewhere may be counted toward the minor.

Modified majors must complete at least five *sociology* courses at Dartmouth, beyond the prerequisite. Also, certain courses, such as SOCY 1, SOCY 2, SOCY 10, SOCY 11, SOCY 15 and SOCY 16 are almost always required to be taken at Dartmouth. Typically, transfer credit will only be approved for sociology courses not regularly offered by the Department. Students contemplating taking major, modified major and minor courses elsewhere should thus consult the Chair well in

advance, to assure that appropriate transfer credits will be accepted.

SOCY - Sociology Courses

To view Sociology requirements, click here (p. 733).

SOCY 1 - Introductory Sociology

Instructor: Dixon, Rogers, Stockstill

How have societies developed historically? How are societies stratified by wealth, income, and other resources, and how has this changed over time? How are the opportunities and outlooks of individuals shaped by the communities in which they reside? How do individuals come together to produce meaningful social change? This course provides answers to these and other questions in ways that provide a broad introduction to the field of sociology. We will cover how sociologists and other social scientists conduct research, key theories and concepts that guide the discipline, and explore a wide range of topics including race, class, gender, inequality, collective action and social change. In many cases, the topics covered in the course reflect the research interests and course offerings of faculty in the sociology department at Dartmouth. As a result, the course also provides an introduction to some of the curriculum offered in the department. Open to all classes.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 2 - Social Problems

Instructor: Allen, McCabe, Smith

Daily news reports direct much of our attention to social problems such as crime, poverty, prejudice and political corruption. Yet rarely are such reports accompanied by a discussion of the systematic causes of these problems. More often we become witness to an endless stream of media coverage reporting seemingly isolated incidents. Seldom are we informed of the decision-making process by which some social problems become selected for coverage, while others are ignored. The purpose of this course is to subject the coverage of modern social problems to an in-depth, critical analysis. We will attempt to answer such questions as: "how does a social problem become defined as such?" and "what are the causes or sources of various social problems?" Open to all classes.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 7 - First-Year Seminars in Sociology

Offered: Spring, Winter.

SOCY 10 - Quantitative Analysis of Social Data

Instructor: Kim, Smith, Sharp

This course provides an introduction to the methods and statistical techniques of quantitative analysis. The first part of the course deals with the methods of quantitative analysis (research design, conceptualization, operationalization, and measurement). The second part of the course introduces students to parametric and nonparametric statistics (frequency distributions, crosstabulations, measures of association, tests of significance, correlation, and bivariate regression). There is a strong emphasis in this course on applying the methods and techniques learned to actual social science data. No previous statistical or advanced mathematical training is assumed, but solid arithmetic and basic algebraic skills are necessary.

Because of the large overlap in material covered, no student may receive credit for more than one of the courses ECON 10, ENVS 10, GOVT 10, MATH 10, PSYC 10, QSS 15, and SOCY 10, except by special petition to the Committee on Instruction.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:QDS

SOCY 11 - Research Methods

Instructor: McCabe, Rogers

This course is designed to provide students with the practical tools of doing social science research and the theoretical background for scientific inquiry into social issues. In the first part of the course we will discuss the research process itself, as well as conceptual issues in theory building and hypothesis testing. In the second part, students will devise and carry out group and individual research projects around a substantive topic. Each project will involve a variety of research techniques, the exact use and applicability of which will be the topic of class discussions. In addition, we will discuss ethical issues and the relevance of social science research for policy making and for advocacy.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:SOC

SOCY 15 - Sociological Classics

Instructor: Dixon

This course introduces and criticizes the work of Karl Marx, Emile Durkheim, and Max Weber, three seminal writers whose ideas are still of enormous significance in shaping perspective and framing terms of argument among many major contemporary social and political thinkers. Among specific subjects to be covered are the following: class and class conflict; culture and ideology; forms and symbols of social solidarity; and questions of how shared

ideals or divisive interests affect not just the study of human society, but the course of history itself.

Prerequisite: SOCY 1 or SOCY 2, or permission of the instructor.

Degree Requirement Attributes: Dist:TMV

SOCY 16 - Constructing Social Theory

Instructor: Kim

This course offers an introduction to the sociological theories developed in the late twentieth century. Focusing on the works of Erving Goffman, Pierre Bourdieu, and Michele Foucault, as well critical race theory, postcolonial theory, intersectionality, queer theory, this course traces how sociology as a discipline produced concepts and frameworks to account for crucial issues of our time.

Prerequisite: SOCY 1 or SOCY 2, or permission of the instructor

Offered: Winter.

Degree Requirement Attributes: Dist:TMV

SOCY 20 - Population and Society

Instructor: Sharp

The world's population will more than double from 7 to 16 billion by 2100. In addition, some countries' populations are booming whereas others face rapid decline. What does this mean for public policy, population health and aging, fertility and reproductive health, immigration and social inequality? To gain insight into these questions, social scientists study some of life's most intimate moments – sex, illness and death, and moving from home to home. These components of population change (mortality, fertility, and migration) help us better understand the impact of population composition and change. In this class, we will first learn the basic tools that social scientists use to analyze broad population trends. We will then use these tools to gain insight into population patterns across the globe. At the end of the course, students will apply what they learned to the analysis of the population trends of a country of their choice, as well as compare and contrast population trends across different countries.

Degree Requirement Attributes: Dist:INT or SOC

SOCY 21 - Political Sociology

Instructor: Grinberg

Politics exists everywhere, when certain decisions affect two or more human beings. Immediately emerge political questions: who makes the decision, and how? Is it a result of dialogue and negotiations, or unilateral imposition of the most powerful? Who benefits? Who loses? Political Sociology studies processes of decision making and power relations at larger levels of society. In this Introductory course we will study basic questions of political processes,

starting with the historical formation of States in Europe during centuries of Wars, their violent expansion overseas by colonialism and settler societies, and the emergence of nationalism and democracy. We will study democratic decision-making processes, theories of power elites, pluralism and class domination. How democratic processes represent classes, ethnic groups and race, and how civil society, social movements and trade unions organize and demand representation, at local and global levels. Finally, we will discuss how globalization impacts democratic processes.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 22 - The Business of Development in Asia

Instructor: Upadhyay

From the economic miracles of the East Asian Tigers to the rise of the supersize economic powerhouses of China and India, the Asian continent has captured the world's attention as a dynamic site for economic growth and development. This course focuses on the diverse developmental experiences taking place on the Asian continent to offer students a critical examination of the theory and practice of economic development.

The course begins with the fundamental question – what is development? – and then delves into its fraught historical origins, first as a practice of colonialism and then as a mode of nation-building. We then cover some of the most influential paradigms of development theory, evaluating each with case studies from the Asian region. The course ends with a contemplation of some of the most critical challenges to developmental pursuits today: what does it mean to develop in a world facing ecological devastation and where inequalities are growing at breakneck speed? Open to all classes.

Cross-Listed as: ASCL 70.30

Offered: Fall.

Degree Requirement Attributes: Dist:INT

SOCY 23 - Social Movements

Instructor: Allen, Dixon

Social movements are collective attempts to promote or resist social change, from the way people live their lives, to how governments govern, to how economic systems distribute rewards. This course examines why and when social movements come about, the organizations and strategies they adopt, and the circumstances in which they are most impactful. We explore these issues by researching individual political movements and engaging larger theoretical explanations for their development.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 24 - The Impact of Poverty on Education

Instructor: Tine

Rising income inequality is undermining the ability of public K-12 schools to meet a foundational goal: to provide children from impoverished areas the opportunity to succeed. This course focuses on the forces that have translated the growing income gap into a growing education gap. We will examine primary research from various fields that details how poverty affects developing children, families, neighborhoods, and schools in ways that go on to affect educational outcomes. We will also consider how interventions strategically targeted at these contexts can improve the educational success of children growing up in poverty.

Cross-Listed as: EDUC 027

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

SOCY 25 - Democracy and Democratization in Developing Countries

The road to democratization in most countries in recent years has been marked by large-scale social movements. This course will begin with an examination of various theories of democracy and democratization. It will specifically analyze the role of class, culture, ideology, and religion in the democratization process. Finally, we will apply the theories to the three cases of South Korea, Indonesia, and Iran, three countries with mixed successes.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

SOCY 26 - Capitalism, Prosperity and Crisis

Instructor: Upadhyay

Capitalism in the last five centuries generated great wealth and prosperity in Western societies. In the last few decades, capitalism assumed a global character affecting social and economic life of the vast majority of the people in the world. Yet, capitalism has also been plagued by economic decline and failures, causing massive human suffering. This course will study the nature of capitalism, sources of prosperity and crisis, inequality in distribution of economic and political power.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 27 - Organizations in Society

Instructor: Harrington

Much of modern life takes place within a wide variety of complex, formal organizations, from multinational corporations, to churches, from social service agencies to volunteer organizations. In this course we will learn about the structure, internal processes, and environments of

different forms of organization. Our focus is on sociological theories and empirical research, from a macrosociological perspective. Our objective will be to learn about how organizations work, as well as to gain an understanding of the impact of organizations on society and in our lives.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 28 - Health Care and Health Care Policy

Instructor: Elder

This course examines the health care system in the United States, focusing on the roles and operations of health care institutions and providers. The objective throughout the course is to develop a comprehensive and critical perspective on current fields and issues in medical sociology. The course consists of five sections, progressing from macro-level to micro-level analyses of the delivery of health care, and returning to the macro-level to discuss recent policy changes and debates in the health care system.

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 29 - The Sociology of Work

This course examines the sociological dimensions of work, occupations, and employment relations. Specific topics may include: the structure of work, historical and contemporary changes in the organizational context of work, ways in which work both creates and reflects social divisions, occupations and professions, occupational socialization and choice, and the intersection of work and family.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 30 - Deviance and Social Control

Students of society seem always to have been fascinated with explaining why some members deviate from commonly accepted rules. This course examines the major sociological explanations of deviance. We will explore the identification of certain behaviors as deviant, the process of becoming deviant, the management of a deviant identity, and the development of deviant subcultures. The course concludes with an examination of societal reactions to and the treatment of deviance and deviants. Examples of deviant and social control activities that may be considered include prostitution, religious cults, youth gangs, witchcraft, the handicapped, and asylums. Open to sophomores, juniors and seniors only.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 31 - Youth and Society

Instructor: McCabe

This course explores central features of children's preschool, preadolescent, adolescent, and college peer cultures. We will discuss what it means to study youth from a sociological lens and research methods for doing so. Specific topics may include: historical views of childhood; how gender, socioeconomic class, race, ethnicity, and sexuality shape youth's experiences; what it means to be "popular"; identity development; extended adolescence; the role of culture (through games, books, television, etc.) in youth's lives.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 32 - The Social Meanings of Home

This course is an exploration of the economic, cultural, social and political dynamics of "home" in contemporary U. S. society. The concept, "home" invariably invokes multiple and sometimes conflicting ideas—a physical dwelling, family, economic property, birthplace, nationality, environment, haven, etc. We speak of "home sweet home," "dream home," "home is where the heart is," "sweet home Alabama" "homeland," "there's no place like home," and "homies." In the course, we will consider the home as a social context that profoundly shapes our personal and collective identities, gender roles and interpersonal relationships, class status and divisions, racial-ethnic memberships and conflicts, plus values and political ideals. The course will emphasize the homestead as economic property and the implications of its location, design, artifacts and domestic lifestyles for the cultivation of model subjects, consumers or citizens. Theoretical, empirical and interpretative materials in the course may touch on subjects as varied as housing and home ownership, shopping and hyperconsumption, food and kitchen culture, family values and the modeling of marriage and family life, the home improvement industry, and home and self makeovers on reality television.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 33 - Self and Society

Instructor: Lively

Social Psychology is the study of the relationships between the individual and society. It is an interdisciplinary field to which the work of sociologists, psychologists, and occasionally scholars from other disciplines is relevant. This course introduces students to social psychology primarily, although not exclusively, from a sociological perspective. First, the course will acquaint students with the range of theoretical perspectives that have been used to study social psychology. Second, it will familiarize students with empirical research that has been done to examine these theories. Third, it will permit students to explore particular social psychological issues in greater depth both within and across particular perspectives within social psychology.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

SOCY 34 - Health Disparities

Instructor: Sharp

Social, economic, and political forces powerfully influence who gets sick, the types of diseases that affect them, the treatments that are available, and the outcomes of those treatments. In this course, we will study how discrimination, marriage, and social ties may contribute to gender, racial and ethnic, and socioeconomic health disparities. We will also examine the ways in which neighborhood and community context shape health and access to health care services.

Degree Requirement Attributes: Dist:SOC

SOCY 35 - Sociology of Mental Health

Instructor: Houle

Poor mental health and mental illness are often viewed as biological flaws. Sociologists, however, argue that mental illness is socially constructed, and that population mental health is profoundly shaped by social conditions. In this course, we will explore sociological understandings of mental health and illness. We will focus on a range of topics, including: the social construction of mental illness, how social inequality contributes to mental health, and how society responds to the mentally ill.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

SOCY 36 - Sociology of Family

Instructor: Walton

The sociological study of the family involves our ability to take a step back to assess structures that pattern our personal experiences and how the private decisions that happen in families matter to society as a whole. We will examine how private affairs in family life interact with important public issues, particularly discussing intersections with gender, social class, race and ethnicity, marriage and cohabitation, divorce, remarriage and stepfamilies, childhood and adolescence, work, and social policy.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 38 - Status and Power in Social Interaction

Instructor: Rogers

How do our interactions with others cause and result from inequalities in society? This course explores how status and power dynamics shape social life, using theories and research from sociological social psychology. We will learn how status beliefs emerge from social differences in resources and power, and how they perpetuate inequalities over time by shaping our interpretations of events and our

behavior and emotions toward others. We will also consider how these inequalities can be overcome.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 39 - Black Sociology

Instructor: Allen

The discipline of sociology explores the reciprocal relationship between individuals and society to reveal how behaviors among communities at the micro-level generate macro-level social institutions. This course on Black Sociology centers African American social and cultural life. Beginning with an interrogation of the discipline's origin story at historically Black college and universities, the course will examine the various ways that sociological theories and methods have been used to make sense of Black life throughout American history and across the diaspora. Focusing on topics such as gender, ethnicity, class, culture, religion, and politics, each week students will gain an understanding of the intricate ways race is constructed in the lives of Black people and how these constructions can both oppress and empower Black communities as they move through society. In all, this course will examine the diverse ways of living, being, and knowing that exist within Black social worlds including intraracial conflicts, sources of solidarity, and efforts to produce social change.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 41 - Religion in a Global South Asia

Instructor: Upadhyay

What are the social and political functions of religion? How does religion shape our everyday experiences and the way we make meaning of the world? What is the relationship between religion and structures of power? This course travels to South Asia to tackle these questions. South Asia is home to large populations of the world's major religions as well as many local and syncretic religious traditions, making the region an illuminating site for investigating religion from a sociological perspective. The semester will begin with the theoretical interventions from classical social theorists like Marx, Weber and Durkheim. We will then move to critical perspectives on the social functions of religion, which will be based on empirical material and analysis that is rooted in the context and experience of post-colonial societies in South Asia. Students will have the opportunity to develop critical perspectives on different facets of religion and their intersections with structures of power, including imperialism, colonialism, class, gender, and race.

Cross-Listed as: ASCL 55.02

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

SOCY 42 - Racism in Asian America

Instructor: Walton

This course first considers the migration histories and racial experiences of Asian American groups in comparison to other groups. By highlighting the contexts of global and transnational migration, this course identifies the many ways in which Asian American groups have been both excluded and differentially included in politics and racial discourse—whether as colonial subjects, exploited labor, transnational immigrants, or diasporic groups. Next, the course considers a variety of contemporary experiences of Asian Americans, as they manifest in the media, food, gender, family, pop culture, transnational adoption, affirmative action, multiracial solidarities and more!

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 43 - Crossing Over: Latino Roots and Transitions

Instructor: Gomez

This course focuses on the histories and experiences of Latinx transnational migrants—from Mexico, Central America, Puerto Rico, the Dominican Republic, and Cuba—living in the United States. You will study the historical, political, and economic processes that have led to these migrations, as well as the varying ways in which race/ethnicity, class, gender/sexuality, and citizenship affect Latinx migrant lived experience. Given our focus on “crossing,” readings will foreground subjects that capture this theme, from the literal movement of people, to the constant back and forth that shapes Latinx lives, to the adjustments Latinx people make given their language, their proximity to other immigrants and communities of color, and their varying acceptance within the United States.

Cross-Listed as: ANTH 12.19 LACS 20.16

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 44 - Complexities of Latino Identity

Instructor: Gomez

The Latino population currently consists of approximately 40 million people in the United States; by the year 2050, the Census estimates that the Latino population will make up at least 25 percent of the total U.S. population. This diverse group traces its origins to a variety of countries. Their experiences and identities in the United States are quite varied. This introductory course examines the experiences of reception, settlement, and transnational lives of various Latino groups - Chicanos, Puerto Ricans, Cubans, Dominicans, Central and South Americans - in the United States. By using interdisciplinary research, this

course explores issues of race, class, gender, migration, and representation of group politics.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 45 - American Inequality

Instructor: Dixon

Social stratification refers to the unequal distribution of socially valued resources such as wealth, prestige, and power, across different groups in society. This course examines sociological research on the extent of these inequalities, how they are generated, and the consequences they bear. With an emphasis on historical and contemporary patterns of inequality in the United States, specific topics may include: wealth and income inequality; poverty; the intersection of class, race/ethnicity, and gender; educational attainment; and social change.

Degree Requirement Attributes: Dist:SOC

SOCY 46 - Constructing Black Womanhood

Instructor: Hayes

This course is a critical examination of the historical and contemporary status of black women in the United States, as presented in fiction, primary accounts, and social science literature. We will explore the nature, extent, and consequences of the multiple discriminations of race, sex, and class, as the context in which these women shaped their social roles and identities within the black community and the larger society. We will consider the themes of family, motherhood, and sexuality; educational, economic and political participation; aesthetics and religious traditions; self and social images.

Cross-Listed as: AAAS 025 WGSS 33.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 47 - Introduction to the Sociology of Race and Ethnicity

Instructor: Kim

To many eyes, racial distinctions are self-evident, natural, and objectively-defined. In this course, we problematize this practice of defining racial categories based on phenotypic differences, instead taking a sociological approach to understanding the ways in which racial differences are socially constructed. Throughout this course, we will explore how race matters by studying racial identity and experience, immigration and assimilation, diversity, and inequality.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 48 - Immigration, Race and Ethnicity

Instructor: Kim

This course examines twentieth-century immigration to the United States. This course pays special attention to issues

of race and ethnicity. The course begins with a brief history of US immigration and then thematically covers specific topics such as economic impacts and costs, social mobility, citizenship, transnationalism, assimilation, and religious issues and their relationship to the immigrant experience. We feature nativist reactions to immigration and highlight differences within and between Latino, Asian, and European groups throughout the course.

Cross-Listed as: LACS 25.14

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 49 - Lower Division Special Topics Courses

SOCY 49.02 - Theories of Democratization and the Case of Iran

Theories of democratization generally examine the nature of the state, economy, social structure, class, culture and religion. This course will begin with an examination of various theories of democracy and democratization. It will then apply these theories to the specific case of Iran. Despite two major revolutions and two movements, Iran is still facing problems democratizing. The latter part of the course relies on documentary films that contain actual footages of Iran's nationalist movement in the 1950s and the revolutionary struggles in 1979.

Degree Requirement Attributes: Dist:SOC; WCult:NW

SOCY 49.09 - Critical Political Economy

Instructor: Grinberg

Political economy was formulated as a central field of research since the 19th century, designed to comprehend both fields - politics and economics - and how they interact, at the local, regional and global level. Since the 2008 financial crisis it became a very popular field of research, highlighting varied and opposed theoretical approaches. The course will focus on critical perspectives to political economy, including a. class conflict, race and ethnic relations and the world system; b. state institutions and their relation to civil society, capital and labor organizations; and c. late developments of the neoliberal economy, the social and economic implications of inequality, and global protests of the 99%.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

SOCY 49.12 - Israeli Society—Structure, Institutions, Identities and Dynamics

Instructor: Grinberg

The goal of this course is to study Israeli society from a sociological perspective. The course analyzes the economic, political and social factors that shaped Israeli society from its inception, its historical transformation at

the structural and institutional levels, and in the changing relations among different social groups. This course examines the establishment of the state, absorption of immigrants, ethnicity, messianic politics, Palestinian uprisings, peace process, and redefinitions of nationalism.

Cross-Listed as: AMES 41.08 JWST 68.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 49.13 - Science and Religion in American Media

Instructor: Evans

The public life of science and religion seems to be characterized by intractable conflict. In this course we examine case studies from current controversies over stem cell research, reproductive genetics, environmental policy, human origins, and sexuality. We will explore who is creating and maintaining these public controversies and why. We will examine “science and religion” as a defining confrontation in the development of American democracy, and consider how the American public sphere shapes possibilities for political participation.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 49.15 - Sociology of the Israeli-Palestinian Conflict

Instructor: Grinberg

The course aims to comprehend Israeli-Palestinian relations from the first moments of Zionist-Palestinian encounter. It presents different approaches to the interpretation of these relations, the beginning of the conflict before the establishment of the Jewish State, and its further developments. The course will enter key debates on military-society relations, Jewish democracy, economic relations, and the failure of the peace process, ending with a discussion of options for the future.

Cross-Listed as: AMES 41.09 JWST 68.02

Degree Requirement Attributes: Dist:SOC

SOCY 49.17 - Religion and Political Economy

Instructor: Clark

What is religion’s role in the wealth and poverty of nations? Is there really a “Protestant ethic” and a “spirit of capitalism?” Or is human prosperity completely independent of religious belief, institutions, and “spirit?” How do Western and non-Western societies seeking their place in the modern world reconcile religious traditions with the demands of economic globalization? This course will explore a wide gamut of past and present perspectives on this important, controversial subject.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 49.18 - Third World Revolutions

This course presents a comparative analysis of the three major revolutions of the latter part of the twentieth century: Iran, Nicaragua, and the Philippines. The course begins with a discussion of major theories of revolutions, including works that focus on class analysis, ideological conflicts, and the state. In the second half of the term, the course explores the revolutions in Iran, Nicaragua, and the Philippines, focusing on the causes of the conflicts, the revolutionary processes, and their alternative outcomes: Islamic fundamentalism in Iran, revolutionary socialism in Nicaragua, and the restoration of liberal democracy in the Philippines. The latter part of the course relies on documentary films that contain actual footages of the revolutionary struggles and their outcomes in the three countries.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

SOCY 49.19 - Sport and Democratization in the Ancient and Modern Worlds

Instructor: Christesen

The relationship between democratization in society and in sports forms the subject matter of this course. We will begin to explore that relationship by looking at the various ways in which democratization in society and in sports influence each other in the modern world. Then we will turn our attention to the past and examine the relationship between democratization in society and in sports in sixth- and fifth-century BCE Greece, in nineteenth-century CE Britain, and in twentieth-century CE America. The course will end with a consideration of the lessons we have learned about democratization in society and in sports for public policy in the United States and elsewhere.

Degree Requirement Attributes: Dist:INT or SOC; WCult:W

SOCY 49.21 - The Black Church and Black Bodies: Race, Sexuality and Class in Religious Culture

Instructor: Barnes

Black churches are challenged to better understand and respond to subjects that are often considered taboo. This course will focus on ideas and approaches that have informed the historic and current Black Church around race, sexuality, and class (and their nexus). Informed by Cultural Theory, it will consider how such churches have endeavored to understand, socialize, and in some instances, control Black bodies as well as some of the broader implications for critically assessing inequality, diversity, and social justice. Barnes.

Cross-Listed as: AAAS 81.04 REL 74.04 WGSS 43.07

Degree Requirement Attributes: Dist:TMV; WCult:CI

SOCY 49.22 - Social Justice and the City

Instructor: Collins

This course explores issues of social justice and cities in terms of the spatial unevenness of money and power within and among cities, between cities and their hinterlands, and between cities of the world. We will examine how multiple dynamic geographic processes produce spatial and social inequalities that make cities the locus of numerous social justice issues. We will also look at how urban communities and social groups are engaged in working for social change.

Cross-Listed as: GEOG 025 WGSS 37.03

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 49.24 - Sociology of Human Rights

Instructor: Salam

In 1948, the *Universal Declaration of Human Rights* called on the world's nations to respect the "inherent dignity and...the equal inalienable rights" of all people. But while the declaration helped globalize human rights, the world continues to experience genocide, torture, slavery, discrimination, and the wide-scale displacement of people. The course seeks to gain a greater appreciation of the complex social forces that impede human rights while also imagining new strategies to address current-day human rights challenges. Students will critically examine human rights case law, develop a non-governmental organization, and participate in a simulation of the United Nations Security Council.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:W

SOCY 49.25 - Jews and Race

Instructor: Magrid, Caplan

The question of Jewish difference has been foundational in the formation of both Christendom and Islam. Of course, the question of race, and the racialization of the Jews, is often thought to be modern phenomenon when Race Science became prominent in the nineteenth century. But lately scholars have begun to re-think the category of race in connection with modernity and to reconsider race as a construct that extends back at least into the Middle Ages.

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This course will look at the long historical trajectory of Jews and race, beginning in the Middle Ages and focusing primarily on European modernity, America, including the complex alliance of Jews and Blacks from slavery to BLM, the role of race in the Israeli/Palestinian conflict and the rise of Islamophobia. The goal of this course is to better understand the nature of Jews as a *genos/race/ethos/people* as they are labeled by others as well as how they self-identify. Jews identified as a "race," and were identified as

such by others, until the 1930s, after which *ethnos* served as a substitute. The question of "whiteness" loomed large for Jews in America; are Jews white, and if so, what are the implications of their "whiteness"? Finally, we will explore more recent iterations of this vexing issue in contemporary politics that includes "Jews of Color," Zionism, Israel/Palestine, conversion to Judaism, and progressive politics in America.

Cross-Listed as: AAAS 65.06 JWST 013

Degree Requirement Attributes: Dist:INT or TMV;
WCult:W

SOCY 49.26 - Markets and Their Critics

Instructor: Clark

The purpose of this course is to explore the nature and implications of the market primarily as a political, but also as a social, economic and even moral phenomenon. From being a marginal, controlled, and secondary social institution in most early societies, markets have risen to become a central mode of social coordination and economic production, distribution and exchange in modern ones throughout the Western and non-Western world. What is the best way of thinking about this transformation in the prominence of the market in human life? Why has it happened, whom has it benefited, whom has it harmed, what functions has it served, what new problems has it created, and what if anything are the limits on the social utility of markets?

Cross-Listed as: GOVT 20.10

Degree Requirement Attributes: Dist:INT or SOC

SOCY 49.27 - Transnational Feminist Sociology

How does globalization reconstitute the positions of workers and subjects on the global margins? How do the intersections of gender, race, class, sexuality, citizenship, and religion play out in the context of transnational and global power dynamics?

This class invites us to think relationally, historically, dynamically and use intersectionality as a lens to critique the power exercised by global institutions, corporations, and political processes. By grounding our analysis in the perspectives of women and minoritarian subjects, we can think about new ways forward in building cross-cultural solidarities and coalitions that can inspire abolition and expand concepts of liberation around the world.

Cross-Listed as: WGSS 66.16

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

SOCY 49.28 - Sociolinguistics

Instructor: Stanford

The field of sociolinguistics deals with the ways in which language serves to define and maintain group identity and social relationships among speakers. In this course we will consider such topics as regional and social variation in language; the relationship of language and ethnicity, sex and gender; language and social context; pidgin and creole languages; language endangerment and the fate of minority languages in the US and other countries; language planning, multiculturalism and education. Open to all classes.

Cross-Listed as: LING 017

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 49.29 - Introduction to Public Policy Research

Instructor: Smith

This course focuses on strategies for, and actual practice of, conducting research relevant to public policy decision-making. Students will be exposed to a variety of research methodologies used in public policy analysis. This course is designed to be a core element of the Public Policy Minor and will also serve as a training ground for prospective applicants wishing to serve in the Rockefeller Public Policy Research Shop during the winter and spring terms.

Cross-Listed as: PBPL 045

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 52 - Insurgent South Asia

Instructor: Upadhyay

Within the short quarter century run of the 21st century, the world has witnessed a global upwelling of insurgency. Southern Asian sites, including but not limited to India, Sri Lanka, Bangladesh, and Nepal have been fertile grounds for tens of millions of insurgent publics protesting against austerity, rising living costs, student debt, corrupt governments, police brutality, and government neglect during the COVID-19 pandemic. Who are these Southern Asian insurgent publics? How does South Asia reflect – or depart from – global patterns of insurgency and other forms of social protest? Do we need to theorize southern insurgency differently from those occurring in other parts of the world?

Cross-Listed as: ASCL 55.03

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

SOCY 53 - Power, Politics and the State

Is America in crisis? The nation is more deeply divided politically, economically, and ideologically than it has been for generations. Washington is in gridlock. Inequality

and poverty have been rising. People have become polarized over racial, religious and social issues. Some say the politics of identity and self-interest have been unleashed at the expense of the nation's general welfare. Some disagree. This course explores these issues. It examines how political, economic and ideological power has been mobilized recently in the United States and with what consequences, including the conservative shift in American politics, the 2008 financial crisis, the election of Donald Trump, and possibly the decline of the United States as the world's superpower. The course draws on scholarly work in sociology, political science and economics.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 54 - Change, Context, and Causality: Intermediate Quantitative Data Analysis for Sociologists

Instructor: Houle

Sociologists and other social scientists are often interested in understanding causal and dynamic social processes such as:

In this course, we'll pick up where introductory statistics courses leave off, and get an introduction to more advanced statistical methods for observational data, including but not limited to: regression for categorical dependent variables, fixed and random effects models, and hierarchical linear modeling. This course will be a mix of seminar and lecture, where we will be focused on understanding how we can use these methods to better meet our goals and answer our research questions. Put differently, this course is less focused on going "under the hood" and more focused on "how to drive"—specifically, we will interrogate the assumptions and use of these statistical methods in the social sciences and learn how to implement these methods using STATA. This will include: discussion of core methodological assumptions and limitations, how to apply these statistical methods in different settings, and learning when specific methods are appropriate tools and when they are not. We will explore these issues through student-led discussions, hands-on data analysis, and dissecting the application of these methods in academic journal articles. As part of this course, you will be exposed to (and critique) a wide range of sociological research published in our major disciplinary journals. The course will culminate in an independent research project where students will analyze data and use the one or more of the modeling techniques discussed during the term to answer a sociological research question of their choosing.

Prerequisite: SOCY 10

Cross-Listed as: QSS 054

Degree Requirement Attributes: Dist:QDS

SOCY 55 - Poverty and Public Policy in the U.S.

Instructor: Stockstill

More than one in ten Americans lives in poverty according to official statistics. This course explores the nature and extent of poverty in the United States and the role of the government in addressing poverty issues. How do we measure poverty? Why does poverty persist? Why is there so little political discourse about poverty in America today? How effective are various poverty alleviation programs?

Cross-Listed as: PBPL 81.05

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 56 - Sociology of Gender

Instructor: McCabe, Beck

What is gender? This seminar examines multiple sociological perspectives on what it means to be a woman, man, boy, or girl in everyday life - including gender as a social structure, an identity, an ideology, and something people "do." Readings and discussions reflect a belief that diversity (race/ethnicity, class, age, sexuality, etc.) is central to the study of gender. Possible topics include: language, the body, science, the wage gap, education, and masculinity during young adulthood.

Cross-Listed as: WGSS 34.04

Offered: Winter.

Degree Requirement Attributes: Dist:SOC

SOCY 57 - Debating the Transition to Adulthood

Instructor: Stockstill

When does a person reach adulthood? Is adulthood reached when your frontal lobe matures, when you have a child, or simply when you feel mature? We will discuss competing scholarly perspectives on what adulthood means and learn how the transition to adulthood has changed since the 1960s. We will analyze how race, social class, and gender affect adulthood. Students will formulate their own ideas about adulthoods through informal writings, OpEds, and news analyses.

Offered: Spring, Summer.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 58 - Education and Inequality

Instructor: McCabe

How are schools organized and how do they organize society? What effects do schools have on individuals and what effects do they have on society? Using sociological theories and methods, we will examine the structure of schools and their effects on individuals and society. We

will explore both formal and informal education. This course will focus on inequalities, specifically how social class, race, gender, and sexuality both organize and are organized by educational environments.

Cross-Listed as: EDUC 024

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 60 - Dangerous Intersections: Intersectionality Beyond Boundaries

Instructor: Allen, Beck

Intersectionality has become a prominent framework for understanding how social categories shape lived experiences. As an interpretative tool utilized across the social sciences and humanities, intersectionality interrogates how power is distributed along and across axes of inequality and privilege. Course readings, discussions, assignments, and assessments will focus on a wide range of social locations connected to race, ethnicity, gender, class, sexuality, religion, language, and disability, while also accounting for the multiplicity, nuance, ambiguity, and contradictions in how these social identity markers intersect. Engaging both theoretical and empirical works, this course will examine how simultaneous and interdependent dynamics between axes of inequality impact identity formation and life chances, relationships of marginality and privilege, social continuity, social conflict, and social change. Additionally, this course will critically explore the challenges and advantages of intersectional analysis and the future of intersectionality's theoretical, methodological, and epistemological capacities.

Cross-Listed as: WGSS 66.34

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 61 - Unstalling the Stalled Revolution: Gender (In)equality at Work and at Home

Instructor: Smith

The nature of work, family life, and gender relations has changed dramatically over the last half century. This course examines these trends, with a focus on implications for gender inequality in society. We will focus on patterns in paid labor force participation and family life in the United States, and discuss the major debates surrounding the causes and consequences of such trends. We will also pay attention to how these patterns look across different races, ethnic groups, and socioeconomic status, as well as briefly examine how these trends compare to other countries. We will conclude by exploring the implication of gender inequality for families, as well as work-family policy debates.

Cross-Listed as: QSS 30.17 WGSS 33.05

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 62 - Love, Romance, Intimacy and Dating

Instructor: Lively

Why do you connect with some people and not others? What exactly is love? And how do you make smart romantic choices for yourself? In this course we examine the social aspects of love, romance, intimacy, and dating. Using sociological theories and methods, we will investigate how cultural beliefs and structural arrangements affect our most intimate feelings and experiences. Specific topics include virginity loss, adolescent sexual behavior, hooking up, dating, intimacy and polyamory.

Cross-Listed as: WGSS 33.07

Offered: Fall.

Degree Requirement Attributes: Dist:SOC

SOCY 64 - The Sociology of Emotion

Instructor: Lively

Most people think of emotions as a purely internal experience, composed solely of physiological elements. Recently, however, sociologists have begun to emphasize and explore the social side of emotion—for example, how emotions are shaped socially and culturally, how emotions are socially controlled, and the consequences of emotion for social life. We will examine these and other sociological aspects of emotional experience in this course, including exploring current debates about the social functions of emotions, especially as they pertain to the substantive areas of work and family. Topics include the social causes of emotion; cultural variations in feeling and expression norms (especially in regard to love and anger); changes in American norms over time; the shaping of children's emotions through socialization; individual and social techniques of emotion management; the social distribution of emotional experience; the social functions of emotion; emotional deviance; and the individual and social consequences of emotional display.

Degree Requirement Attributes: Dist:SOC

SOCY 65 - The Social Psychology of Inequality

Instructor: Rogers

Sociological social psychology examines the relationship between individuals and the larger social systems in which they are embedded, including interactions, groups, institutions, and cultures. This course will use key social psychological concepts (e.g., status, power, stigma, justice, identity) to explore how inequality is created, reproduced, and resisted. We will study how inequality operates in

different social and institutional contexts (e.g., work, family, schools), and for members of different social groups (e.g., race, class, gender, age).

Prerequisite: SOCY 1 or SOCY 2

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

SOCY 66 - Markets and Management

Instructor: Harrington

What is money? How do people find jobs? Are markets competitive or cooperative? This course examines these and other questions about how economic behavior is organized, operates and changes historically. It recognizes that economic activity is socially organized and guided by political, cultural and normative as well as economic principles. It explores how economic activity takes many forms, including groups of small competitive firms, large and powerful corporations, and diffuse networks of companies tied together through inter-firm alliances, business associations and other sorts of cooperative and competitive relations with each other, unions, government agencies and universities. It examines the organization and operation of different kinds of markets, different theories of how economic activity is organized, and the social factors that contribute to economic success or failure. It also investigates how managers, unions, policy makers and governments are coping with recent economic challenges, such as those posed by technological change and the globalization of economic activity. Because this is a course in economic sociology—not economics—no background in economics is required.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 69 - The Sociology of Globalization

Instructor: Eom

This interdisciplinary course provides a critical approach to global urban studies, with a particular focus on race, migration, and the built environment. By scrutinizing sites of “globalization”—ships, railroads, ports, islands, plantations, canneries, slums, camps, museums, ghettos, cemeteries, infrastructures, archives—students will explore themes such as segregation, slave trade, anti-blackness, urban violence, settler colonialism, urban renewal, necropolitics, and environmental racism. The course will engage in a historical and postcolonial dialogue to offer students critical methods to “spatialize” intertwined histories of racial closure across continents.

Degree Requirement Attributes: Dist:INT or SOC

SOCY 70 - American Labor Relations

Instructor: Dixon

This course examines the political, cultural, and economic sources of solidarity and mobilization among workers in

the US from the late 19th century to the present. Readings and discussion will focus on important historical developments among labor unions, from militant beginnings through an accommodationist phase after World War II and a deep decline, to recent attempts at revitalization. Students will consider the impacts of labor movements on social inequality, politics and on a range of cross-cutting issues around gender, immigration and race. We will conclude by examining the prospects for labor in light of the rapid and profound changes in the world of work and economic activity in the contemporary period.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 71 - Race Matters - "Race" Made to Matter

Instructor: Keaton

What is race? What are the effects of race in our everyday life? How has science shaped our understanding of race and human diversity? This course explores how and why race is a social construction with profound implications in our social world not only in the U.S. but also beyond its shores. Diverse sciences have established that human beings are well over 99% genetically identical, but race remains a potent vision through division that has been *made* and made to matter across multiple spheres of life. This ranges from ancestry testing to our identities to how we are categorized to where we live and whom we are taught to love and hate in society. How race intersects with socio-economic disparities related to inclusion and exclusion are among the topics examined in this course.

Cross-Listed as: AAAS 063

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 72 - Critical Community Sociology

Instructor: Walton

This class will focus on interrogating the drivers of inequality in rural and small-town communities. To understand this, we critically examine several interconnected issues: culture, health, racial equity, education, environment, infrastructure, social services, economic justice, and geographic isolation.

Prerequisite: Students who wish to enroll in this course should have previously completed either Introduction to Sociology or Social Problems. This requirement may be waived for students who have taken certain other sociology courses; contact the instructor to find out if you are eligible.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 73 - Economic Sociology: From Tax to Fraud

Instructor: Harrington

Just over a century ago, Austrian economist Joseph Schumpeter argued that human history, culture and politics

cannot be properly understood without taking fiscal events—such as taxation and state budgeting—into account. War, the development of industry, and of capitalism itself all stemmed, he claimed, from the evolution of a “tax state.” From this insight, a century of research has emerged, spanning a wide range of fiscal activities by states, as well as by private actors.

This course will review key themes of this subfield of sociology through four empirical topics: the world of high finance, including the social coordination and networks involved in the trading of securities and commodities; social organization and consequences of financial fraud in a variety of domains, including currency counterfeiting; social history of taxation, including social movements stemming from tax revolts; and system of offshore finance as a mechanism for reproducing inequality and elites.

Degree Requirement Attributes: Dist:SOC

SOCY 74 - Professionals, Policy and Practice

Instructor: Harrington

Professionals, Policy & Practice examines how professionals have come to be among the most influential actors in contemporary organizations and the global political economy. Professionals have long been the focus of research in organization and management studies, but interest in them crosses disciplinary boundaries; thus, the course will include readings from sociology, accounting, legal studies, finance, and political science. We'll draw on their varied theories, methods and approaches to examine how and why professionals coordinate and compete, shaping norms, standards and practices within and among organizations.

Degree Requirement Attributes: Dist:SOC

SOCY 75 - Neighborhoods and Health

Instructor: Sharp

Just as conditions within our homes have important implications for our health, conditions in the neighborhoods surrounding our homes also can have major health effects. Social, economic, and environmental features of neighborhoods have been linked with mortality, general health status, disability, birth outcomes, chronic conditions, obesity, depression, injuries, violence, health behaviors and more. In this course, we consider whether and how the characteristics of neighborhoods shape the physical and mental health of individuals, and how neighborhoods contribute to persistent health disparities. Special attention will be devoted to conceptual and methodological challenges to detecting the prevalence and magnitude of ‘neighborhood effects’ on health. Not open to students who have received credit for SOCY 79.12.

Degree Requirement Attributes: Dist:SOC

SOCY 76 - Race, Power, and Politics

Instructor: Kim

This course sets out to understand race and ethnicity as the product of, as well as a basis for, political struggles. The conventional sociological understanding of race and ethnicity focuses on difference. That is, although sociologists take pains to argue that racial and ethnic differences are socially constructed, the vast, long-standing inequality among racial and ethnic groups make it very tempting to perceive the status quo as inevitable, if not natural. In order to counter this trend, we have to center the concept of power and trace how racial and ethnic divisions came to emerge from the political struggles of the past. And in doing so, it is crucial to understand not only successes but also failures of white supremacy—namely that non-whites have always disrupted workings of the dominant system, sometimes through electoral politics and other times through direct action.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 77 - Sociology of Data and Algorithms

Instructor: Kim

While statistics and quantitative data are increasingly becoming important components of our lives, the specific social processes through which they are engineered remain elusive to many of us. We learn math, statistics, and quantitative methods in classes, but most often those courses glance over the social contexts in which the technology of numbers was developed. In this course, we trace the development of statistics and quantitative analysis through modern times in an attempt to understand how they have been used and perceived in society. We also address recent controversies surrounding their implementation in businesses and government institutions, especially in relation to algorithmic decision making. In the process, we will establish that statistics and quantitative data are not just abstract, formal tools whose meanings are absolute and obvious, but that they are social constructs embedded in particular institutions, such as the state and market.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC

SOCY 78 - The Micropolitics of Race

Instructor: Stockstill

This class explores racialized experiences and controversies that affect daily life in the United States. We use insights from sociology to analyze racial identity and public behavior. For example, why do many people of color often “code-switch” as they move from interacting with family and friends and into their workplace? Why are some Black people accustomed to giving “the nod” to other Black people they encounter in majority-white

spaces? Why are many Asian-Americans told that they “speak really good English” something social scientists would call a microaggression? We explore these issues and other controversial topics including interracial dating, neighborhood, gentrification, whiteness, and colorism.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SOCY 79 - Upper Division Special Topics Courses

Instructor: Varies

SOCY 79.04 - Drugs and Pharmaceuticals in Society

Licit and illicit drugs make illuminating case studies for our economic and political systems. We investigate the following questions: Are profit motives and humanitarian concerns in irresolvable conflict? Does the international network of illegal drugs show the future of globalization? Does pharmaceutical lobbying demonstrate the anti-democratic influence of money? Is the “war on drugs” political demagoguery or a rational response to human weakness?

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 79.06 - Sociology of the Body

Can social life exist without bodies? How can attention to the body influence our understanding of social processes of subjectivity, interaction, and practice? While the body has long been an “absent presence” in sociology, multiple approaches to theorizing and researching the body have emerged in recent decades. A sociological approach to the body and embodiment provides an opportunity to bridge the gap between everyday experience and analyses of broad social structures which can seem disconnected from daily life. In this course, we will examine the processes by which individual bodies are shaped by and, in turn, shape social life. Key questions to be explored include: how are bodies regulated by social forces; how do individuals perform the body and how does interactional context influence this performance; what is the meaning of the body in social life; and is there a “right” body?

Degree Requirement Attributes: Dist:SOC

SOCY 79.11 - Nationalism and the Radical Right

Instructor: Pasioka

This course will introduce you to recent social science contributions to the subject of neo-nationalism and radical right-wing activism. Beginning with terminology, historical context and methodological approaches, we will proceed to an analysis of recent socio-political developments, focusing on the interrelationship between radical right-wing activism and other social phenomena. We will interrogate the reasons behind the appeal of the far right, inquiring into various socio-economic contexts, the role of historical narratives in shaping far-right activism,

and the “mainstreaming” of far-right ideas. An overarching question for all these discussions will be that of the agency and motivations of the actors involved.

We will draw cases from numerous contexts around the world and will reflect on similar developments on the political left. The course will allow for discussion of the most recent developments, as experienced by class attendees and reported by mass media. Finally, we will discuss ethical aspects of studying right-wing (and, for that matter, any political) radicalism.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

SOCY 79.14 - Growth and Its Critics

Instructor: Clark

The purpose of this course is to explore economic growth as a broader human phenomenon. From being an unprecedented achievement with the Industrial Revolution, growth gradually became a policy lever for addressing a multitude of social and political objectives in the rich world, as well as a vital imperative for less developed countries. All the while, it never ceased to be a source of public controversy. What forces prevented the discovery of growth for so long? What factors bring it into being where and when it does emerge? What effects does growth have on those who experience it in a sustained way? Why has such a breakthrough so regularly drawn such passionate criticism and resistance? Above all, how might a study of growth and its critics prepare us for the policy debates of the future?

In the Long Stagnation before the Industrial Revolution, humans were caught in a so-called Malthusian Trap, in which every temporary trend toward improved living standards was met with an increase in population that tended to restore subsistence living. After reviewing this historical background, the course will touch upon four triggers for debate over growth since the dawn of the industrial age: population, resource depletion, environmental stewardship, and climate change. For two hundred years, a steady stream of commentators have argued that economic growth has either generated these sorts of problems, or is at least unable to address them.

Cross-Listed as: GOVT 20.13 PBPL 029

Degree Requirement Attributes: Dist:INT or SOC

SOCY 80 - Independent Study

Instructor: Houle

This course offers the qualified student an opportunity to pursue a subject of special interest, under the direction of a faculty adviser assigned to the student for periodic (usually weekly) conferences. Ordinarily at least one formal paper embodying the results of the reading or research is required. In special situations students may work as a team

on a single project. Occasionally credit may be given in SOCY 80 for a research project done in an off-campus term, provided arrangements are made well in advance and adequate off-campus supervision can be assured. Although every effort will be made to accommodate qualified students desiring to carry an independent study, there is no guarantee that independent study can be arranged for any given student in any given term, and preference is given to senior and junior Sociology majors. Normally no student may take SOCY 80 more than twice during the undergraduate career. By permission of a Sociology faculty member *prior* to registration.

Offered: Fall, Spring, Summer, Winter.

SOCY 90 - Senior Independent Study Project

Instructor: Houle

Independent work under the direction of a member of the Department and with Departmental approval may satisfy the culminating requirement in the major. Those interested should develop their plans with a prospective faculty adviser and must submit and have approved a written proposal at least one term prior to the term in which the course will be elected. Open only to senior majors. By permission of a Sociology faculty member *prior* to registration.

Offered: Fall, Spring, Summer, Winter.

SOCY 91 - The Sociological Imagination

Instructor: Lively

C. Wright Mills described "the sociological imagination" as that quality of mind with the ability to grasp the interplay of biography and history, of self and social structure, of private troubles and public issues. As we venture into the 21st century, various issues of class, race and gender inequalities and conflicts appear to dominate popular discourse and policy debates. This capstone seminar will explore current substantive and theoretical expressions of the sociological imagination for providing critical assistance in understanding some of the major social issues of our time. The seminar is designed to emphasize critical discussion through active participation and class presentations. Each student will complete a significant intellectual project which reflects her or his own sociological analysis about an important social issue. Open to senior sociology majors, and others only by permission of the instructor.

Prerequisite: Prerequisites: SOCY 1 or 2, 10, 11, 15 or 16

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 92 - Community-Engaged Research Practicum

Instructor: Houle, Rogers

Sociologists have a dual commitment to adequately understand society through rigorous observation and to better the society they live in. In this capstone course, we will work together as a class to answer a research question that helps a community partner address key social problems in the Upper Valley and offer solutions to these problems. We will draw upon shared knowledge of sociological research and theory accumulated over your Dartmouth career and seek out new knowledge, perspectives, and methods that help us answer our research question and better the community. As a capstone course, it is expected that students will take the lead during class meetings as well as in research design, execution, and analysis. Faculty will play an advisory role, providing methodological and substantive guidance along the way.

Prerequisite: Prerequisites: SOCY 1 or 2, 10, 11, 15 or 16

Offered: Winter.

Degree Requirement Attributes: Dist:SOC; WCult:W

SOCY 98 - Honors Thesis I

Instructor: Houle

Open only to, and required of all, Sociology honors majors, this course involves independent work under the direction of a faculty adviser, culminating in the preparation and presentation of an honors thesis. Sociology honors majors normally elect SOCY 98 during one of the two terms prior to their final term, followed by SOCY 99 during their final term. Exceptions to this pattern are, however, permitted if circumstances warrant. Honors students are normally expected to publicly present their thesis to the Department during the term in which it is completed. By permission of a Sociology faculty member prior to registration.

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Students are awarded one course credit for successful completion of this course at the end of the third term of study. Students subsequently register for SOCY 99, and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both this course and SOCY 99 upon completion of SOCY 99 at the end of the third term of coursework.

Offered: Fall, Spring, Summer, Winter.

SOCY 99 - Honors Thesis II

Instructor: Houle

Open only to, and required of all, Sociology honors majors, this course involves independent work under the direction of a faculty adviser, culminating in the preparation and presentation of an honors thesis. Sociology honors majors normally elect SOCY 99 during the last

term in residence. Exceptions to this pattern are, however, permitted if circumstances warrant. Honors students are normally expected to publicly present their thesis to the Department during the term in which it is completed. By permission of a Sociology faculty member prior to registration.

Students are awarded one course credit for successful completion of this course. Students who have registered for SOCY 98 register for this course and continue with their coursework into a third term. Students do not register for a third term. A final grade will replace the "ON" for both SOCY 98 and this course upon completion of this course at the end of the third term of coursework.

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Offered: Fall, Spring, Summer, Winter.

Spanish and Portuguese Languages and Literatures

Chair: I. Reyes

Professors: J. Aguado, R. E. Biron, J. M. del Pino, I. Lozano-Renieblas, I. Reyes; Associate Professors: N. S. Cirmigliaro, C. Cortez Minchillo, S. Díaz-Duhalde, A. Gómez, A. Martín, S. Muñoz, J. Quintana-Navarrete; Assistant Professors: Ingrid Brioso-Rieumont, M. Broner, Mauricio Herrera Acuna; Research Assistant Professor R. Rey Agudo; Senior Lecturers K. Antigua, P. Asensio, P. Carranza, R. M. Matorras, G. M. Mayo-Prada, N. Monetti, D. J. Moody, I. Saucedo; Lecturers S. Carter; M. C. de Greiff

To view Spanish courses:

<https://spanport.dartmouth.edu/undergraduate/courses/all-courses-spanish>

To view Portuguese courses:

<https://spanport.dartmouth.edu/undergraduate/courses/all-courses-portuguese>

Major and Minor

Complete information about Major/Minor/Modified Major declaration here:

http://www.dartmouth.edu/reg/guides/dartworks/declare_major_or_minor.html

The program in Spanish and Portuguese offers the opportunity to do intellectual work in the Humanities in a foreign language. Students may graduate in one of the following major concentrations: (a) Hispanic Studies, (b) Romance Studies, (c) Modified Major in Hispanic Studies, and (d) Modified Major in Lusophone Studies (Literature and Culture of Brazil and the Portuguese speaking world). The Department offers minors in Hispanic Studies, Lusophone Studies, and Hispanic and Lusophone Studies.

The areas of concentration developed in the Department focus on the languages, literatures, and cultures of Latin

America, the Spanish Caribbean, Spain, Brazil, and the Portuguese speaking world. Students are encouraged to explore the cultural, social, political, and economic specificities of these regions as well as the impact of Hispanic and Brazilian communities in the US. To that end, courses cover a variety of historical periods, regional traditions, modes of artistic expression, and forms of cultural critique. The major provides students with interpretive and writing skills that are key for careers in the Arts and Humanities, Education, Government, International Relations, International Business, Law, Medicine, and Social Service. It also directly prepares students to succeed in graduate school in such fields ranging from Hispanic and Brazilian Cultural Studies, History, Comparative Literature, to Medicine, and Law.

In consultation with a faculty advisor, students select their upper-level courses from a wide array of yearly offerings. Students are encouraged to meet with the Major Advisor in the Department of Spanish and Portuguese early in their studies to review course selections, discuss foreign study programs, and plan for an Honors Thesis on a topic of interest. Major programs usually include at least one term of study on a Dartmouth Foreign Study Program (FSP) in Spain, Latin America, or Brazil. All major and minor plans must be approved in person by a Major Advisor of the Department of Spanish and Portuguese after the student has submitted their online course of study. It is the responsibility of the student to contact the Major/Minor Advisor.

Student majors, minors and modified majors can take one course in English in the Department towards their plan.

NOTE: All major and minor plans must be approved by a Major/Minor Advisor of the Department of Spanish and Portuguese after the student has submitted their online course of study.

A. Major in Hispanic Studies

Prerequisite: SPAN 9 or SPAN 15 (or equivalent)

The major program in Hispanic Studies consists of at least 9 courses numbered 20 or higher. Courses for this major are taught in Spanish and English (one). Approval for this option will be granted and only for a course in English taken after a student has completed SPAN 20. Courses taken outside the Department need to be petitioned for approval.

Courses must be distributed as follows:

1. SPAN 20

SPAN 20 is required for majors and minors and counts towards the major and minor. It can be taken concurrently with other 30-level courses. It is a prerequisite for all upper-level courses (SPAN 40 and higher).

2. Spanish Survey Courses and Foreign Study Programs

a. Survey Courses: SPAN 30, SPAN 31, SPAN 32

These are introductory courses with a historical or survey approach. All students must take at least one of these courses.

Students not participating on a Foreign Study Program (FSP) may count up to two of these courses toward the major. Foreign Study Program students may count only one.

b. Foreign Study Courses: SPAN 33, SPAN 34, SPAN 35, SPAN 36

Prerequisites: Students may participate in a Foreign Study Program after having successfully completed SPAN 9 or SPAN 15 (or equivalent), SPAN 20, and one course from the 30, 31 and 32 survey sequence.

Students may count up to two Foreign Study Program courses (SPAN 33-36) toward the major. The total number of courses that Foreign Study Program students may count towards their major from the 30 sequence (SPAN 30-36) will never exceed three.

Note: Students studying on two Foreign Study Programs will consult with the Major Advisor and petition the department for individual adjustments.

3. Topics Courses: SPAN 40- 77

In consultation with the Major Advisor, students choose at least four of these upper-level courses from among the offerings of the department. Students who do not participate in a Foreign Study Program must choose at least five.

4. Independent Study: SPAN 83

One Independent Study (SPAN 83) may count as an upper-level course for the major. The Department projects its upper-level offerings up to two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

5. Culminating Experience: Senior Seminar (SPAN 80)

The Senior Seminar is required for all seniors. SPAN 80 allows students to explore, debate, and creatively produce written work or other forms of knowledge (plays, short films, photographic essays, etc.) on a topic relevant to Hispanic Studies, a process enhanced by the small group setting of the seminar. SPAN 80 fulfills the Culminating Experience required for the major and will be offered winter and spring of each academic year.

In special cases, the Culminating Experience may be fulfilled by a different upper-level course. In that case, students will be required to complete additional work as established by the course professor. A petition to the Major

Advisor and Chair must be made by the last week of the term prior to registering for this alternate course.

B. Major in Romance Studies

Prerequisite: SPAN 9 or SPAN 15 (or equivalent)

The major program in Romance Studies consists of ten courses taken in two of the Romance Languages offered at Dartmouth College (Spanish, Portuguese, French, or Italian), one serving as their primary language, the other as their secondary. Six of these courses will be selected among the course offerings of the primary language and four from the secondary. Students will work closely with the Major Advisor in coordinating their course of study. Courses for the primary language are taught in Spanish and English (one). Approval for this option will be granted and only for a course in English taken after a student has completed SPAN 20.

When Spanish is the primary language, the six courses in this language must be distributed as follows:

1. SPAN 20

SPAN 20 is required for majors and minors and counts towards the major and minor. It can be taken concurrently with other 30-level courses. It is a prerequisite for upper-level courses (SPAN 40 and higher).

2. Survey Courses (SPAN 30-32) and Foreign Study Program Courses (SPAN 33-36).

Students must take at least one of these courses. No more than two may count toward the major (except for students enrolled in a Foreign Study Program, who can count a maximum of three). The prerequisites for Foreign Study Programs also apply to majors in Romance Studies.

3. Upper-Level Courses (SPAN 40 – 77) and Independent Study (SPAN 83).

In consultation with the Major Advisor students choose the remaining courses from the upper-level course list.

One Independent Study (SPAN 83) may count as an upper-level course for the Major in Romance Studies. The Department projects its upper-level offerings up to two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

4. Culminating Experience: Senior Seminar (SPAN 80)

Students pursuing a major in Romance Studies whose primary language is Spanish must take the Senior Seminar (SPAN 80) as one of their six upper-level courses. This

course also fulfills the Culminating Experience required of all seniors.

The four courses in the secondary language must be selected from among courses that count towards the major or minor in that respective language.

When Portuguese is the primary language, the six courses in this language must be distributed as follows:

Prerequisite: PORT 9 or PORT 8 (or equivalent)

1. Survey Courses PORT 20

2. Upper-level courses (PORT 60 – 63) and/or one Independent Study (PORT 83). Students must take four of the courses on this list.

One Independent Study (PORT 83) may count for the Major in Romance Studies. The Department projects its upper-level offerings two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval by the last week of the term prior to registration for PORT 83.

3. Culminating Experience: Senior Seminar (PORT 80)

Students pursuing a major in Romance Studies whose primary language is Portuguese must take the Senior Seminar (Portuguese 80) or any other course designated by the major advisor, as one of their six upper-level courses. This course or the designated course fulfills the Culminating Experience required of all seniors.

The four courses in the secondary language must be selected from among courses that count towards the major or minor in that respective language.

C. Modified Major in Hispanic Studies

Prerequisite: SPAN 9 or SPAN 15 (or equivalent)

The modified major in Hispanic Studies consists of 10 courses, at least six of which must be in Spanish and the remaining four from appropriate major-level courses. Students will work closely with the Major Advisor in coordinating their course of study. Courses are taught in Spanish and English (one). Approval for this option will be granted and only for a course in English taken after a student has completed SPAN 20.

The six Spanish courses must be distributed as follows:

1. SPAN 20

SPAN 20 is required for majors and minors and counts towards the major and minor. It can be taken concurrently with other 30-level courses. It is a prerequisite for upper-level courses (SPAN 40 and higher).

2. Survey Courses (SPAN 30-32) and Foreign Study Courses (33-36)

Students must take at least one of these courses. No more than two of these courses may count toward the major (except for students enrolled in a Foreign Study Program, who can count a maximum of three).

The prerequisites for Foreign Study Programs also apply to modified majors in Hispanic Studies.

3. Upper-Level Courses (SPAN 40 – 77) and one Independent Study (SPAN 83)

In consultation with the Major Advisor, students choose the remaining courses for their Modified major from the upper-level course list.

One Independent Study (SPAN 83) may count as an upper-level course for the Modified Major in Hispanic Studies. The Department projects its upper-level offerings up to two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

4. Culminating Experience: Senior Seminar (SPAN 80)

Students pursuing a Modified Major in Spanish must take the Senior Seminar (SPAN 80) as one of their six required courses. This course also fulfills the Culminating Experience required of all seniors.

D. Modified Major in Lusophone Studies

Prerequisite: PORT 9, or PORT 8 (or equivalent)

The modified major in Lusophone Studies consists of ten courses, at least six of which must be in Portuguese and the remaining four from appropriate major-level courses.

The six Portuguese courses must be distributed as follows:

Survey Courses PORT 20

Upper-level courses (PORT 60 – 63) and/or one or more Independent Studies (PORT 83). Students must take four of the courses in this list.

One Independent Studies (PORT 83) may also count as an upper-level course for the Modified Major. The Department projects its upper-level offerings two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

3. Culminating Experience: Senior Seminar (PORT 80)

Students pursuing a Modified Major in Lusophone Studies whose primary language is Portuguese must take the Senior Seminar (PORT 80) or any other course designated by the Major Advisor as one of their six upper-level courses. This course or its equivalent fulfills the Culminating Experience required of all seniors.

Minor

A. Minor in Hispanic Studies

Prerequisite: SPAN 9 or SPAN 15 (or equivalent)

The minor in Hispanic Studies consists of at least five courses taught in Spanish and English (one). Approval for this option will be granted and only for a course in English offered by the Department and taken after a student has completed SPAN 20. The five Spanish courses must be distributed as follows:

1. SPAN 20

SPAN 20 is required for majors and minors and counts towards the major and minor. It can be taken concurrently with other 30-level courses. It is a prerequisite for upper-level courses (SPAN 40 and higher).

2. Survey Courses (SPAN 30-32) and FSP Courses (SPAN 33-36)

Students must take at least one of these courses. No more than two may count toward the minor, except for students doing a Foreign Study Program who can count a maximum of three.

3. Upper-Level Courses (SPAN 40 - 77) and Independent Study (SPAN 83)

In consultation with the Major/Minor Advisor, students choose the remaining courses from the upper-level offerings. The Department projects its course offerings up to two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor.

One Independent Study (SPAN 83) may also count as an upper-level course for the Minor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

B. Minor in Lusophone Studies

Prerequisite: PORT 9, or PORT 8 (or equivalent)

The minor in Lusophone Studies consists of at least five courses, which must be distributed as follows:

1. Survey Courses PORT 20

2. Upper-level courses (PORT 60 – 63) and/or an Independent Study (PORT 83). Students must take four of the courses on this list.

One Independent Study (PORT 83) counts for the Minor in Lusophone Studies. The Department projects its upper-level offerings two years in advance so that students can thoughtfully plan an individualized course of study in consultation with the Major Advisor. Students interested in pursuing an Independent Study must identify their topic and faculty advisor and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

C. Minor in Hispanic and Lusophone Studies

Prerequisites: PORT 9 (PORT 8 or equivalent) and SPAN 9 (or SPAN 15 or equivalent)

The Minor in Hispanic and Lusophone Studies consists of at least five courses, which must be distributed as follows:

1. PORT 20 and SPAN 20 - required for the Minor
2. Upper-level courses: two in Portuguese and one in Spanish, or two in Spanish and one in Portuguese. These courses can be taken in any combination, either on campus or abroad.

Portuguese courses on campus: PORT 60-63, 83

Spanish courses on campus: SPAN 30-32, 40-77

Spanish courses abroad: SPAN 33, 35 (FSP Buenos Aires), SPAN 34, 36 (FSP Madrid)

Transfer Credit

Only upon its approval will the Department of Spanish and Portuguese allow for a maximum of two transfer credits from comparable institutions. The Department does not give transfer credit for SPAN 1, SPAN 2, SPAN 3, PORT 11 or PORT 3.

Honors Program

Students who qualify for the Honors Program (described in the Regulations section of this catalog) and wish to pursue this Program in any of the major options offered by the Department must identify a topic of interest and a faculty advisor who will serve as the director of the Honors Project. Students will prepare a written proposal and submit it to their advisor and to the department for approval. The proposal must be submitted by the end of the term prior to registering for SPAN 90 or PORT 90. All students pursuing an Honors Program must take the Honors Course (SPAN 90 or PORT 90) and complete an Honors Thesis.

Complete information is available here:
<https://spanport.dartmouth.edu/undergraduate/honors-thesis-program>

Brazil Learning Immersion in Sao Paulo and Salvador

For 2025-26:

BLISS **Spring 2026:** Sao Paulo and Salvador, Brazil

Students with and without knowledge of Portuguese can join the program, and native speakers are also welcome.

For more information on the Portuguese course sequence, visit our course sequence document.

The Brazil Learning Immersion in São Paulo and Salvador (BLISS) program is run jointly by the Department of Spanish and Portuguese and the Department of Latin American, Latino & Caribbean Studies. BLISS is an innovative model of study abroad that combines advanced topic courses in English with Portuguese-language course options for all levels, from beginner to native speaker. Therefore, students do not need to have previous knowledge of Portuguese to join the program. Drawing from the social sciences and the humanities, BLISS provides a cross-disciplinary opportunity to study Brazil from multiple angles.

The academic training and experiential components expand and deepen students' knowledge about Latin America and the Lusophone world. Coupled with first-hand experience of living in Brazil, the two-topic courses develop a well-informed and rich understanding of the country's main features, problems, assets, and prospects. Curricular and co-curricular components are designed to complement each other and create a dialogue between classroom work and the surrounding natural, social, and cultural landscapes.

To promote a broader understanding of Brazil's historical, economic, ethnic, and cultural diversity, the program is held in two Brazilian cities. Students spend the first 5 weeks in São Paulo and the last 4 weeks in Salvador, Bahia. The program's project-based courses on urban studies and Afro-Brazilian culture capitalize on the environmental and social richness of each of those cities. This full immersion experience in an authentic cultural context will provide a unique opportunity for students to develop language skills and intercultural competencies.

Complete and deadline information for the BLISS program is available here:
<https://guarini.dartmouth.edu/programs/brazil-learning-immersion-sao-paulo-and-salvador-bliss>

Language Study Abroad

For 2025-26:

Spanish L.S.A. **Summer 2025:** Santander, Spain

Prerequisite: Minimum grade of B- in SPAN 2, or equivalent preparation; acceptance into the program.

Students live with families for one term in Santander, Spain.

A student may choose to satisfy the language requirement through a combination of two preparatory courses at Dartmouth and one term off campus on the L.S.A. The preparatory courses must be taken within six months of departure. Students who have not studied Spanish at Dartmouth or who have taken SPAN 2 more than six months before departure must attend a Special Drill (non-credit) designed to prepare them for the program. Students who have fulfilled the language requirement are not eligible for the L.S.A.

Upon successful completion of the program, credit will be awarded for SPAN 3, SPAN 5 and SPAN 6. The three courses complete the language requirement. Students who have completed an LSA may skip SPAN 9 and enroll in SPAN 20.

Students will be accepted on the basis of their application dossier; actual participation in the program is contingent upon the maintenance of satisfactory academic standing, satisfactory participation in the Special Drill (for those who must take it), and compliance with orientation procedures.

Complete and deadline information is available for the Santander LSA:

<https://guarini.dartmouth.edu/programs/spanish-lsa-santander-0>

Language Study Abroad Plus

For 2025-26:

Spanish L.S.A.+ Winter 2026: Buenos Aires, Argentina

Barcelona, Spain

Prerequisite: Minimum grade of B- in SPAN 9, or SPAN 15 or equivalent preparation; acceptance into the program.

The L.S.A. Plus is a program designed for students who have satisfied the language requirement and are prepared for a more advanced language study abroad experience. Students who have taken SPAN 9, or SPAN 15 or its equivalent more than six months before departure must attend Special Drill (non-credit) during the term prior to the program. Students live with families for one term in Barcelona, Spain, or Buenos Aires, Argentina.

Upon successful completion of the program, credit will be awarded for three courses, SPAN 20, 21, and 32 (Buenos Aires) or SPAN 20, 22, and 32 (Barcelona). SPAN 20 and 32 offer credit for all majors and minors in Spanish. SPAN 32 may also serve as the 30-level prerequisite course for the F.S.P. in Madrid, Spain or Buenos Aires, Argentina.

Students will be accepted based on their application dossier. Actual participation in the program is contingent

upon the maintenance of satisfactory academic standing, satisfactory participation in drill (for those who must take it), and compliance with orientation procedures.

Complete and deadline information for the L.S.A.+ Buenos Aires is available here:

<https://guarini.dartmouth.edu/programs/spanish-lsa-buenos-aires-0>

Program and deadline information for the L.S.A.+ Barcelona is available here:

<https://spanport.dartmouth.edu/foreign-study/campus-programs-spanish/new-spanish-lsa-plus-barcelona>

Foreign Study Program

For 2025-26:

Spanish F.S.P. Fall 2025: Madrid, Spain
 Spring 2026: Buenos Aires, Argentina

Prerequisite: Acceptance into the program and one course from SPAN 30, SPAN 31, or SPAN 32.

Students live with families for one term in Argentina or Spain. Courses are taught by local faculty and by the accompanying Dartmouth faculty member. Courses are designed to offer students experiences that are unique to on-site learning. Topics vary according to the specificity of each country, but they include the study of art in its many manifestations, sociological and cultural movements, urban cultures, etc. Importance is also placed on advanced grammar, oral, and writing skills. Demonstration of the importance of the program to the student's overall academic program at Dartmouth is a factor considered for acceptance.

Upon successful completion of the program, credit will be awarded for three courses (Argentina - SPAN 23, SPAN 33, SPAN 35; or Spain - SPAN 24, SPAN 34, SPAN 36). Two courses only at the level 30 may be counted towards the major or minor in Spanish.

Foreign Study may not be taken during a student's last term at Dartmouth.

Complete and deadline information for the Madrid FSP is available here:

<https://guarini.dartmouth.edu/programs/spanish-fsp-madrid>

Complete and deadline information for the Buenos Aires FSP is available here:

<https://guarini.dartmouth.edu/programs/spanish-fsp-buenos-aires>

SPAN - Spanish Courses

To view Spanish requirements, click here (p. 750).

SPAN 1 - Spanish I

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Introduction to spoken and written Spanish. Intensive study of introductory grammar and vocabulary with a focus on culture. Oral class activities, readings and compositions. Weekly practice in the virtual language lab includes viewing TV series and films and weekly drill sessions. Never serves in partial satisfaction of the Distributive or World Culture Requirements.

Offered: Fall, Spring, Winter.

SPAN 2 - Spanish II

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Continuation of SPAN I. Further intensive study of grammar and vocabulary with a focus on culture. Oral class activities, readings and compositions and continued practice in the virtual language laboratory. Weekly drill sessions. Never serves in partial satisfaction of the Distributive or World Culture Requirements. Open to first-year students by qualifying test and to others who have passed SPAN I.

Offered: Fall, Spring, Winter.

SPAN 3 - Spanish III

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Continuation of SPAN II. SPAN III provides additional, intensive study of grammar and vocabulary with a focus on literature and culture. Oral class activities, readings and compositions and continued practice in the virtual language laboratory. Weekly drill sessions. Completion of this course on campus or as part of the LSA constitutes fulfillment of the language requirement. Never serves in partial satisfaction of the Distributive or World Culture Requirements. Open to first-year students by qualifying tests and to others who have passed SPAN II.

Offered: Fall, Spring, Summer, Winter.

SPAN 5.03 - LSA Santander I

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Taught in the context of the Language Study Abroad program, this course in Hispanic culture reinforces listening, reading, speaking, and writing skills in Spanish. The thematic focus is on local and regional art history,

with special emphasis on the city as a dynamic form of cultural production through time. Attending to political, social, economic, and religious contexts, the course features brief presentations by local personnel as well as relevant field trips. Assignments include conversation, writing projects, oral presentations, and a final course examination.

Offered: Summer.

Degree Requirement Attributes: WCult:W

SPAN 6.03 - LSA Santander II

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Taught in the context of the Language Study Abroad program, this introductory course in Hispanic literature strengthens listening, reading, speaking and writing skills in Spanish. The reading materials are selected to help students develop their analytical strategies as well as to expose them to relevant cultural issues and major figures of the region in which they are studying. Assigned work may include brief research papers, oral presentations, a mid-term exam and a final course examination.

Offered: Summer.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 7 - First-Year Seminars in Spanish and Spanish-American Literature

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Offered: Spring, Winter.

SPAN 9 - Culture and Conversation: Advanced Spanish Language

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course serves as a bridge between SPAN 3 and SPAN 20. Through the intensive study of a variety of aural media (e.g., documentaries, TV and radio programs, films), grammar, vocabulary and speech acts as presented in the course packet, students will actively practice listening and speaking skills with the goal of reaching an Intermediate High Level (on the ACTFL scale). Additional written material may be added according to the professor's particular interests.

Prerequisite: SPAN 3; AP Lang 4 or AP Lit 4; local placement test 600+, or permission of the instructor. SPAN 9 serves as a prerequisite for SPAN 20.

Offered: Fall, Spring, Winter.

SPAN 15 - Latinx Writing and Composition

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course draws on the strengths of Latinx Language Learners in order to enhance their skills in writing and composition. Using a variety of media and genres, students will explore the cultural experiences of US Latinx communities and the Spanish-speaking world. The course will focus on structures related to languages and cultures in contact, and review grammar to expand students' range from informal to academic communication. The course will have an experiential learning component, including student projects throughout the term, and participation in events around campus related to Spanish-speaking communities. It can be used to fulfill the language requirement. It serves as pre-requisite for Spanish 20. May not be taken in conjunction with Spanish 9.

Offered: Fall.

SPAN 20 - Writing and Reading: A Critical and Cultural Approach

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Spanish 20 is the first course of the Major/Minor, and serves as transition between the skills acquired through the Spanish language courses (Spanish LSA or equivalent preparation) and those needed for all upper-division courses (30 and above). Through the study of critical and theoretical vocabulary, and the reading of short stories, poems, films, theatrical plays and journalistic articles, students will acquire analytic tools to comprehend and analyze several types of texts. This course is also designed to familiarize students with different textual genres and a wide array of literary and interpretative key concepts.

Prerequisite: Participation in one of the Spanish LSA programs; SPAN 9 or SPAN 15; exemption from SPAN 9 based on test scores (see Department web site); or permission of instructor. SPAN 20 may be taken in conjunction with 30-level survey courses. It serves as a prerequisite for all Spanish courses 40 and higher.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: LIT

SPAN 22 - Modern and Contemporary Spanish Artistic and Cultural Production

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course will make students fluent in some of the main topics relevant to modern and contemporary Spanish cultural production, with a particular emphasis on Northern Spain. The course will not count towards the major or minor.

Offered: Winter.

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 23 - Argentine Cultural Heritage

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course deepens the student's knowledge of the Argentine art and cultures through the study and discussion of the visual, architectural and plastic arts, as well as music and performance. The materials will expose the students to the main trends and topics of contemporary Argentine art, cultures and society.

Prerequisite: Acceptance into the Dartmouth Foreign Study Program, Argentina.

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 24 - Spanish Cultural Heritage

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course deepens the student's knowledge of the Spanish art and cultures through the study and discussion of the visual, architectural and plastic arts, as well as music and performance. The materials will expose the students to the main trends and topics of contemporary Spanish art, cultures and society.

Prerequisite: acceptance into the Dartmouth Foreign Study Program, Spain.

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 30 - Introduction to Hispanic Studies I: Middle Ages-17th Century

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course presents an overview of major literary trends and cultural productions from the Middle Ages to the 17th century in both their Spanish and Spanish American contexts. Students will read a representative selection of major literary works from that period, both Peninsular and Spanish-American, and discuss theoretical, aesthetic, and critical issues pertinent to the Renaissance, the Baroque, colonialism, syncretism, etc. Texts and other materials may be cultural and visual.

Prerequisite: SPAN 20

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 31 - Introduction to Hispanic Studies II: 18th and 19th Centuries

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course presents a chronological study of major trans-Atlantic literary trends and cultural productions, corresponding to the cultural and aesthetic movements of the eighteenth and nineteenth centuries. Students will read a representative selection of major literary works, both Peninsular and Spanish-American, from that period and discuss theoretical, aesthetic, and critical issues pertinent to modernity, empire, enlightenment, nationalism, gender, democracy, etc. Texts and other materials may be cultural and visual.

Prerequisite: SPAN 20

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 32 - Introduction to Hispanic Studies III: 20th-21st Centuries

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course presents a chronological study of trans-Atlantic major literary trends and cultural productions, corresponding to the cultural and aesthetic movements from the 1880s to the present. Students will read a representative selection of major literary works from that period, both Peninsular and Spanish-American, and discuss theoretical, aesthetic, and critical issues pertinent to modernismo, the avant-garde, revolution, post-modernism, etc. Texts and other materials may be cultural and visual.

Prerequisite: SPAN 20

Offered: Fall, Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 33 - Argentine Civilization: Society, Culture and Politics in Argentina

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course studies socio-political events in the Southern Cone that have shaped the contemporary configuration of society in Argentina. Emphasis will be placed on key political figures, social movements, oppositional tensions, dictatorship and democracy, and their articulation in the cultural field.

Prerequisite: Acceptance into the Dartmouth Foreign Study Program, Argentina.

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:NW

SPAN 34 - Society, Culture and Politics in Spain

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course studies socio-political events in the Iberian Peninsula that have shaped the contemporary configuration

of society in Spain. Emphasis will be placed on key political figures, social movements, oppositional tensions, dictatorship and democracy, and their articulation in the cultural field.

Prerequisite: acceptance into the Dartmouth Foreign Study Program, Spain.

Offered: Fall.

Degree Requirement Attributes: Dist:SOC; WCult:W

SPAN 35 - Studies in Spanish-American Literature and Culture

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course is designed to offer students an opportunity to study a topic of interest in Spanish American literature and culture through the reading of a wide variety of literary and cultural texts. Emphasis will be placed on Argentina and the Southern Cone. Topics may vary.

Prerequisite: Acceptance into the Dartmouth Foreign Study Program, Argentina.

Offered: Spring.

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 36 - Studies in Modern and Contemporary Spanish Literature

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course is designed to offer students an opportunity to study a topic of interest in the literatures and cultures of Spain through the reading of a wide variety of literary and cultural texts. Topics may vary.

Prerequisite: acceptance into the Dartmouth Foreign Study Program, Spain.

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 40.07 - Dark Mirror: Spanish Detective Fiction

This course examines Spanish contemporary society through the dissecting lens of one of the most popular literary subgenres: detective fiction or crime novel. Starting with some early examples, we will read and analyze short stories and novels published from the end of the Spanish Civil War (1939) to present. Authors will include Francisco García Pavón, Manuel Vázquez Montalbán, Javier Marías, Antonio Muñoz Molina, Lorenzo Silva, and Alicia Giménez Bartlett.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 40.13 - Modern Saints: Religion and Politics in Spain

The relationship between culture, politics and religion in Spain takes three main forms. First, institutional and informal religious enclaves successfully (try to) resist material and symbolic processes of modernization, that is, capitalism, democracy, and scientific thinking. Second, the process of secularization of public and private life gradually but irreversibly changes traditional ways of conceiving the nation, its past and cultural manifestations. Third, it could be argued that the “substance” of religion does not disappear but evolves and mutates, secretly sacralizing new sphere of social coexistence. These profane and civil “religions” (religions without a proper God) trigger new beliefs, rites, and moral codes that, quite often, present themselves as totally rationalized and mundane. From a critical, politico-theological perspective, we can instead perceive their many metaphysical blind spots. In this course, students will be exposed to a series of literary and filmic texts in which these three forms of interconnection between religion and politics are easy to retrace. The goal of *Modern Saints* is to investigate how, in modern Spain (like so many other countries), modernity reinscribes many ingredients of spiritual transcendence in secular contexts, figures and practices. We pay close attention to these new and disavowed forms of “sainthood” in which politics gain a lot of theoretical and practical traction.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 40.14 - The Shock of the Metropolis: Dalí, Lorca, and Buñuel

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

This course will explore the work of three major Spanish artists: the poet and playwright Federico García Lorca (1898-1936), the film director Luis Bunuel (1900-1983), and the painter and writer Salvador Dalí (1904-1989) in their relationship with the United States and the city of New York. The course will examine the cultural dialogue among painting, literature, and film during a foundational moment of the modernist and avant-garde period in Europe and America. We will examine the production of these artists from an interdisciplinary perspective, paying special attention to the influence exerted by the United States on Dalí, Lorca and Bunuel’s work, and conversely to their legacy in American culture and society.

Offered: Winter.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 43.07 - Spooky Spain: Modern Horror in Literature, Film and Art

Modern horror is usually the shocking effect of natural or supernatural events that both logical and scientific modes

of thinking cannot properly explain and control. Some of these events have an intrinsically human and social character, and others defy reason’s attempts to insert them into our historical and secular continuum (monsters, ghosts, physiological mutations). In this course, students will be exposed to a variety of horror genres and motifs in some Spanish literary texts, films, and paintings. In these works, we will explore issues such as the (female) body, economic and political crises, the family and the haunted house, religion and modernization, and Nature, among other sources of horrific affects. This will also help us understand the connection between horror, on the one hand, and the uncanny, anxiety, abjection, surprise, guilt, and pleasure, on the other.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 45.02 - Diaspora and Economic Imaginaries in Hispanic Caribbean Literature

This course will explore how colonialism, slavery, migration, and exile have influenced the way Cubans, Dominicans, and Puerto Ricans imagine themselves as social agents who have or lack the ability to change their economic conditions. Students will gain an understanding of the economic theories that find their articulation in fiction, theater, and film through the representation of lived experience, cultural contact and conflict, and political and social movements. Readings will be in both Spanish and English, while class discussions and written assignments will be conducted in Spanish.

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 45.04 - Under the Influence. Intoxicating Goods and Vicious Texts from Early Modern Spain

This course will explore the encounter with America in 1492 that radically transformed the Spanish marketplace. Previously unknown culinary delicacies, beverages and other novel intoxicating items from the New World (such as tobacco and chocolate) took Spaniards’ forms of consumption and consumerism to a new level. These novelties introduced in the Spanish diets and habits reinforced attitudes of orientalism towards America, and by the same token, shaped the Spanish identity and taste in new ways. We will concentrate on practices of intoxication that include, but are not limited to, sniffing tobacco, drinking excessive amounts of chocolate, and eating indigestible clay for cosmetic purposes. We will study literary and historical texts that describe, decry and sometimes celebrate early modern new fashions and bad habits.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 45.08 - Dreams and Nightmares of the Cuban Revolution

The course’s main objective is to examine how, when, where, and why opposing dominant narratives of the

Cuban revolution developed, and how those narratives (and their perceptions) shifted over time.

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 50.01 - Machos and Malinches: Gender and Sexual Identities in Latin/x American Literature and Culture

This course examines how gender and sexuality align with or contest local discourses on Latin/o American cultural autochthony and national identity, and explores gender and sexuality in the context of global culture and transnationalism. We will also analyze how gender and sexual identities are articulated in language, performance, and visual and aural media. Along with primary literary texts, film, art, and music, students will engage with scholarly texts that contextualize the historical, cultural, and linguistic traditions from which gender and sexual identities emerge, as well as those critical and theoretical interventions that deconstruct essentialist notions of the body and scrutinize the political implications of oppositional discourses on gender and sexuality.

Degree Requirement Attributes: Dist:LIT; WCult:CI

SPAN 50.02 - New Sexual and Social Identities in Hispanic culture

This course addresses changes in Spanish society since the end of the dictatorship. These include the relativization of family, love, drugs, sexuality, life, death, and democracy; and the devaluation of morals, history, and culture. Authors include Vazquez Montalban, Marias, Loriga, Montero, Riera, Almodovar, de la Iglesia, Amenabar, and Balaguero.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:LIT; WCult:CI

SPAN 50.05 - Eroticism, Love and Sensuality in Hispanic Film

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

The contemporary topics to be studied in this course should be approached with an open mind and with the willingness to challenge our prior knowledge of the concepts. In order to do so, critical thinking is of the utmost importance. In this context, critical thinking implies the ability to question and destabilize most—if not all—of our preconceived ideas about eroticism, love, and sexuality that are no longer functional, i.e., that do not help us better understand society and our fellow citizens. As we explore a variety of subfields within contemporary Hispanic film, the course will offer you a set of conceptual tools that will help you deconstruct some of the symbolic foundations of our existence. The course will address a series of topics ranging from: identifying ways that "personal choice" sometimes poses as a way of

implementing one, single, heteronormative, monogamous, sex/gender morally safe model of behavior; thinking about the historicity of the normative, the deviant, or the perverse; discovering that the intersectional framing of gender creates an avenue for strong political and existential alliances; and making sure that the identities that fall under the umbrella of the Queer Nation (LGTBiQ peoples) do not become a label of marginality but instead get universalized as a mode of praxis that expands those borders, hence our study of love in relation to monstrosity, ageing, queer identities, prostitution, and pornography under this paradigm.

Cross-Listed as: WGSS 66.19

Offered: Spring.

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 50.06 - Framing Ecology and Gender

At a time when women from Argentina to Mexico are at the forefront of a transnational fight for environmental justice, this course focuses on Latin America to explore how images of these struggles and others circulate and inform our perception of ecological crisis. As we study a range of media, we will attend to the ways in which visual objects illuminate the imbrications of gender and environment in order to investigate problems such as extractivism and neocolonialism. Concentrating on film, photography, television, visual art, and graphic novels, we will consider the potential of images to challenge, resist, or perpetuate environmental devastation and the concomitant marginalization of women and LGBTQIA persons. Whether by exposing the toxicity of agribusiness in the Amazon or foregrounding enduring connections between heteronormativity and colonialism, the media and critical texts we will examine ask us to notice the inseparability of social and environmental violence. As we pay special attention to ecofeminism and the activism of Indigenous women across Latin America, we will search for new perspectives that allow us to imagine alternatives to capitalist environmental exploitation. This course is taught in English.

Cross-Listed as: LACS 45.03 WGSS 66.32

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 53.01 - Introduction to the History of the Spanish Language

The objective of this course is to understand the origins of different linguistic phenomena and the variations of Spanish by exploring its history and geography. We will trace how Spanish derived from Latin, with particular regard for phonological and morpho-syntax development, and we will analyze the differences between Spanish as it is currently spoken in Spain and across Latin America.

Degree Requirement Attributes: Dist:INT or LIT; WCult:W; Lang:LRP

SPAN 53.02 - Spanish Linguistics, Rhetoric, Poetics and the Politics of Language

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course surveys the evolution of the Castilian language, with special emphasis on the influence of Arabic and indigenous languages of the Americas, Judeo-Spanish (ladino), Italianisms and Cultisms, Voseo, and the influence of English. A special emphasis is given to the period of standardization between the 17th and 19th centuries that leads to the Spanish we speak and write today. A second core of the course reflects on the politics of language by focusing on the history of Language Academies; the production of Grammars, Dictionaries, and Orthographies; the relation between Castilian and other languages in Spain and Latin America; the history of Hispanism; and the place of bilingualism in the United States.

Offered: Winter.

Degree Requirement Attributes: Dist:INT; WCult:W; Lang:LRP

SPAN 53.03 - Bilingualism: Cognitive and Sociolinguistic Approaches to Bilingualism in the Spanish-speaking World

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course examines bilingualism both as a linguistic and a social phenomenon. After taking this course, students will (a) gain a basic understanding of the relationship between cognitive development and language acquisition in bilingual speakers; (b) be able to identify and analyze linguistic patterns of language change and interaction in bilingual speech communities in Latin America, Spain and the United States; (c) reflect critically on issues related to language policy and bilingualism in education, and (d) examine representation of bilingualism in culture.

Offered: Spring.

Degree Requirement Attributes: Dist:INT; WCult:W; Lang:LRP

SPAN 55.05 - Indignant Spain: Crisis and New Social Movements Today

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course exams the notion of "crisis" as a creative paradigm for rethinking traditional experiences of the political, social, and cultural spheres in today's Spain. The course will focus on the deep connections between democracy and alternative ways of thinking about the political participation of citizens confronting the dismantling of their social, family, and individual welfare by global and national neoliberalist economic and social

policies. Students will read from a wide array of texts (literature, cultural and political theory) and also watch documentaries and films on the idea of "crisis" as it is currently playing itself out in Spain's 15-m and Indignados movements. Works by: Martin Patino, Alvarez, Thorton, Grueso, Lacuesta, Arce among others.

Prerequisite: SPAN 20

Offered: Spring.

Degree Requirement Attributes: Dist:SOC; WCult:W

SPAN 55.14 - Sports Studies in Latin America. Cultures and Cults.

Instructor: Díaz

This course offers a critical cultural approach to Sports as spectacle, commodity, business, and competition in Latin America, and serves as a review to major trends in sports studies. The relationship between sports and nation, social class, race, and gender will help students examine both professional and amateur sports in their national and transnational dimension. Topics include: the meaning of games and sports in Latin American cultures, baseball and the byproducts Latino-diasporas, soccer and 19th century British imperialism, mass cultures and politics in relations to sports, and a host of case studies that illuminate the cultures and cults around competition, sportsmanship, and athleticism in Latin-American. We will analyze fiction and non-fiction, films, photographic essays, and other media on baseball, soccer (*futbol*), basketball, rugby, boxing, *lucha libre* and MMA, running and motorsports.

Offered: Summer.

Degree Requirement Attributes: Dist:SOC; WCult:W

SPAN 60.04 - Caribbean Afrodescendancies: Identity, Culture, and Community

This course will address the centrality of black racial imaginaries in the conception of Caribbean identities throughout the twentieth and twenty-first centuries. Through the study of various cultural products such as literature, cinema, and music, we will analyze the way in which the senses of heritage and belonging, as well as those of resistance to phenomena such as racism, xenophobia and homophobia, have been shaping the notions of community both in the Latin American Caribbean and in its diaspora in the United States. Students are expected to actively participate in the activities of the Symposium "Afrolatinidades Afrolatinx." Readings will be in Spanish and English, while classes and assignments will be in Spanish.

Degree Requirement Attributes: DIST:LIT; WCult:CI

SPAN 60.05 - Rewriting the World: Afro-Latin American Radical Imaginations in the 20th and 21st century

This course will examine key moments of aesthetic production authored by or about African descendants in the Americas in the twentieth and twenty-first centuries. From the contradictory post-abolition process to recent debates about affirmative action and public memory in monuments, we will read, listen to, watch, and discuss how Afro-Latin American imaginations shaped, radicalized and rewrote the struggles for creative liberties, political transgressions, and social contestation in the region and beyond.

Degree Requirement Attributes: Dist:LIT; WCult:CI

SPAN 60.06 - Jewish Literatures in Latin America: Belonging Beyond Borders

This course presents a fresh and historically grounded exploration of the concept of belonging in Latin America, with a focus on the rich and varied body of the continent's Jewish literatures. Rather than relying on essentialist or strictly national definitions and perspectives, we will delve into the diverse ways Jewish experiences have been creatively represented in literary works across the continent.

Focusing on the 20th and 21st centuries, we will study texts connected to the Jewish communities in Argentina, Brazil, Chile, Cuba, and Mexico. Our readings will emphasize transcultural and intersectional approaches, with particular attention to the perspectives of women and gender.

The course will introduce both the history of events and the cultural history of Jewish experiences in Latin America, alongside a broader engagement with the continent's literary history. All texts will be provided in their original languages—Spanish, Portuguese, and Yiddish, which are the primary languages of Jewish communities across the continent. Additionally, English translations will be available for each text to ensure that all students, regardless of language proficiency, can fully engage with the material.

As we examine these literary works, we will place them within the broader context of Latin American history, exploring themes such as migration, the traumatic legacy of the 20th-century military dictatorships, and the ongoing efforts toward transitional justice in post-conflict societies. This approach aims to enhance your understanding of Latin America, a region whose rich Jewish cultural contributions have not always received the attention they deserve in both Jewish Studies and Latin American Studies, as well as in Comparative Literature.

By the end of the seminar, you will have gained not only a deeper appreciation of Jewish literatures in Latin America but also a nuanced understanding of the cultural and

historical contexts that have shaped these poetics of belonging.

Cross-Listed as: COLT 52.10 JWST 12.02

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 63.08 - The Many Faces of Brazilian Cinema

This course, directed to Spanish language students, aims to give a comprehensive vision of the richness and diversity of Brazil by introducing its culture and society through the study of Brazilian contemporary cinematic productions. Topics include: The Other's gaze in Brazil, redefinition of national identity and history, reassessment of African and indigenous roots, concepts of good and evil, rural and urban violence, popular culture, and representations of race and gender. Class discussion also focuses on documentaries, reviews, and critical articles. The course is conducted in Spanish. All movies are shown in Portuguese with Spanish or English subtitles.

Cross-Listed as: PORT 63.08

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 63.10 - Family Matters: Pedro Almodovar, Gender Reversals, and New Communities

Pedro Almodóvar Caballero, Spain's most internationally acclaimed filmmaker will be studied in this course as representative of what critics have termed the New Spanish Cinema Movement. Almodóvar's filmmaking, both in aesthetic and cultural terms, addresses issues which will appeal to students interested in understanding how culture, politics, and aesthetics get entangled in ways that "queer" gender identity, family structures, notions of community and the societal expectations and limitations surrounding them. The course will also compare his work with other contemporary filmmakers that have reconfigured in their films the boundaries of "family."

Prerequisite: SPAN 20

Cross-Listed as: FILM 43.02 WGSS 56.03

Degree Requirement Attributes: Dist:ART; WCult:CI

SPAN 63.11 - Blood Cinema. Spanish Movies from 1926 to 2019

In this course, we will watch and discuss some canonical Spanish movies that deal with the literal and metaphorical topic of blood. In fact, blood will work in this class as a constellation of intertwined themes: war, sacrifice, redemption, punishment, revenge, family bonds, vitalist excess, (destructive) passion, sexual desire, Catholic rituals, birth, martyrhood, biopolitics and national identity. Through the lens of the symbol of blood, we will tackle some of the most important political events and cultural problems that have conditioned modern Spanish history. We will also analyse the aesthetic keys and genre

characteristics of this heterogeneous genealogy of films. One important and constant paradox students will confront in these movies is the vacillation between experimental, innovative and looking-forward formal strategies, and regressive subject matters and primitive taboos. Brief essays and excerpts from books will be weekly assigned in order to help students properly contextualize the audiovisual works listed in this syllabus, as well as their directors and historical significance.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 63.12 - Got Las Meninas? Spanish Visual Culture and Baroque Imaginaries

Created in 1656 by the Spanish painter Diego Velázquez, 'Las meninas' is one of the greatest European paintings of all times, and by far one of the most analyzed, theorized, and adapted works of art in Modern history. Like many Spanish Baroque artifacts, 'Las Meninas' resembles a puzzle that calls for more than one strategy to assemble its pieces together. In this course students will approach El Prado Museum's most visited work using various strategies vis-à-vis literary classics from Baroque Spain and 20th/21st century scholarship on the Empire and Power, Domesticity, Gender and Sexuality, Court Life, Material Culture and Baroque art. We will also study textual and visual adaptations that rework some of Velázquez's obsessions. Our goal is to study political, cultural and practical contexts that shed light onto Velázquez's time and our own ways of interpreting it.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 63.13 - Black Crossroads of Cinema in Afro-Latin America

Inspired by the coexistence of contradictions, this course is designed to introduce students to the main questions concerning cinema, image and Afro-Latin American culture in the 20th and 21st centuries.

Degree Requirement Attributes: Dist:ART; WCult:CI

SPAN 65.12 - Reading Spain with Goya, the Eternal Provocateur

Francisco de Goya (1746-1828) lived in a period of intense political upheaval, civil wars and social turmoil. His early work showed the influence of the Enlightenment and had a critical point of view that aimed to not only please but also educate his viewers. As time went by, the ravages of illness, war, and political repression showed in his paintings through impactful and enigmatic imagery that upended the traditional role of an artist and that has earned him a relevant place in contemporary Spanish culture, as shown in his numerous films that bring him alive. Although he became a court painter and was well

connected to the monarchy, a closer look to his paintings reveals a critical stance that urges his viewers to reflect on the lack of meaning in modern society. From the royal tapestries and portraits, to the incisive *Caprichos*, the impactful *Disasters of the War* and the desperate *Black Paintings*, we will examine the history of Spain through Goya's major works, not only as subject but also as object of representation in literature and in films.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 65.15 - Cameras and Crisis

How do we capture a crisis, and how do we respond to one? In such critical circumstances, what stories can cameras share? This course considers some of the visual and audiovisual responses that have emerged in the face of crises from across 21st century Latin America. By carefully analyzing films and photographs, we will examine how artists interpret and even intervene in crises involving migration, the environment, political violence, gender rights, racism, and Indigeneity. As we contemplate narratives ranging from border crossings to the echoes of dictatorships to struggles against exploitative mining practices, we will pay special attention to production histories and always ask the following question: if a crisis demands a decision, how should we understand the creative choices made by filmmakers and photographers? Combining textual analysis with the study of artistic processes will also allow us to reflect on how images can simultaneously explore local crises and inspire transnational solidarity.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 65.16 - Got Las Meninas? Spanish Visual Culture and Baroque Imaginaries

Created in 1656 by the Spanish painter Diego Velázquez, 'Las meninas' is one of the greatest European paintings of all times, and by far one of the most analyzed, theorized, and adapted works of art in Modern history. Like many Spanish Baroque artifacts, 'Las Meninas' resembles a puzzle that calls for more than one strategy to assemble its pieces together. In this course students will approach El Prado Museum's most visited work using various strategies vis-a-vis literary classics from Baroque Spain and 20th/21st century scholarship on the Empire and Power, Domesticity, Gender and Sexuality, Court Life, Material Culture and Baroque art. We will also study textual and visual adaptations that rework some of Velázquez's obsessions. Our goal is to study political, cultural and practical contexts that shed light onto Velázquez's time and our own ways of interpreting it.

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 65.17 - Media and Environment

At a time of increasing reliance on technology to enhance and even transform the environment, how do media shape our perception of the world around us? This course introduces students to environmental media studies methods and concepts through a focus on contemporary Latin America. As we work comparatively across a range of media—including film, photography, visual art, and virtual reality—we will consider the specific ways in which each can reveal or reformulate conceptions of the environmental. Among key topics, we will discuss the stakes of defining nature as media, the ecological materiality of media formats, and the role of environmentalist media in present-day Latin America. The course culminates in a project that asks students to simultaneously analyze and create media.

Conducted in English; no previous media experience required.

Cross-Listed as: COLT 70.08

Degree Requirement Attributes: Dist:ART; WCult:W

SPAN 70.01 - Great Works of Hispanic Literature: Don Quijote

From the time of its publication in 1605 (Part I) and 1615 (Part II), *Don Quijote* has provoked radically different interpretations. Taking as point of departure both the comic and the romantic interpretations, the course will explore the meaning of the *Quijote* across the centuries. Its aim will be to understand the *Quijote* both as an autonomous work of literature and as a highly creative response to the literary and cultural forces from which it was forged. In addition to the historical context and social conflicts in the Hapsburg monarchy, the course will focus on the literary history and the novel as a literary genre and a product of the Medieval “mixtification” which flourished in the Renaissance.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 70.02 - One Hundred Years of Solitude

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

Few literary works have ever fascinated readers all over the world the way *One Hundred Years of Solitude* has. Gabriel García Márquez’s novel opens up a magical world where the boundaries that separate fantasy and reality, fairy tale and history seem to dissolve naturally. And yet, no fictional work has ever been more deeply grounded in the reality and history of a people. The book tells the incredible story of the Buendía family as it develops through the successive cycles of destruction and rebirth that shape history in the mythical world of Macondo. As the story unfolds it illuminates the wonders and terrors of

the history of Latin American countries, the complexities and contradictions that have defined their peoples, and shaped their cultures. In this course we will read and analyze *One Hundred Years of Solitude* as well as a selection of García Márquez’s short stories and journalistic works. The works will be discussed within the framework of major theoretical and historical issues and in constant dialogue with a variety of secondary sources.

Prerequisite: SPAN 20

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 73.09 - George Ticknor: The Legacy of a Dartmouth Hispanist

Two hundred years ago, George Ticknor returned to Boston after a life-changing four-year period of study (Germany) and travel (Spain, Portugal, France) in Europe. He accepted a position at Harvard University as the first professor of Romance Languages, a position that allowed him to integrate the study of Spanish, Portuguese and French into the core curriculum. In 1849, he published his influential *History of Spanish Literature*, a work that set the foundation for the modern study of the literature and culture of Spain. This course will explore the life and writings of this outstanding Dartmouth alumnus, as well as its legacy in the 21st Century.

SPAN 73.11 - Obscene Images: Intro to Visual Studies in Latin America

Violence, death, sex, disability, race, gender, poverty, and politics were regarded as unthinkable, intolerable, offensive, or simply obscene in different times and regions in Latin America. This course will provide a critical and theoretical approach to textual and visual representations from the 19th century to the present, which have generated controversy over their depiction of these cultural topics. Images of destruction, pictures of war, or paintings excluded by the mainstream culture will be used to familiarize the students with the production and consumption of visual and textual culture and the ethics of representation. The goal of the course is first, to introduce students to Visual Culture/Visual Studies in Latin America, second, to problematize the relation between representation and culture, and, finally, to evaluate the implication of these topics (sex, violence, race, gender, disability, etc...) in relation to power, knowledge, and ethics in Latin American culture. Not open to students who have received credit for SPAN 65.02.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 73.13 - America & the Oblique Gaze

The concept of the “oblique gaze” provides a lens through which we can examine how cultures in the Americas perceive one another—particularly in Portuguese and Spanish-speaking regions. Originating from comparative studies on Brazilian and Hispanic American literature, this critical concept highlights how these cultures often create distorted images of each other, marked by generalizations, ignorance, stereotyping, distrust, antagonism, and sublimation—essentially inadequate representations of the “other.” The course explores these “oblique gazes” by analyzing literature and film, drawing on examples from Brazilian and Hispanic-American works to deepen our understanding of these complex cultural dynamics.

Cross-Listed as: PORT 60.03

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 75.01 - Writing the Short Story

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

By asking students to both read and write short stories in Spanish, this course explores how narrating can yield new forms of knowledge about the world around us. As we approach creative work as a way to begin understanding the experiences of others, we will observe a productive constraint: to never write about ourselves. Instead, students will construct characters and find voices through literature as well as through art, ethnography, current events, and even the campus and surrounding areas. Each week, careful analysis of texts by authors such as Silvina Ocampo, Valeria Luiselli, and Liliana Colanzi will highlight the reciprocity between reading and writing, while creative “labs” will cultivate story ideas. Practicing techniques such as listening and interviewing will help students generate material, and during in-class workshops they will receive feedback on drafts of their short stories. The course welcomes students with a range of writing skills, and no previous creative writing experience is required.

Prerequisite: SPAN 20

Offered: Summer.

Degree Requirement Attributes: Dist:ART; WCult:NW

SPAN 75.02 - Creative Writing in Spanish

This course focuses on literary writing in Spanish and the construction and exploration of students’ creative voices. Students will learn to distinguish their personal voice based on the echo of prominent authors in Spanish and their creative processes. The literary work and exercises will be based on diverse traditions. Our way to perceive the world is one of the multiple paths to develop our own narrative and poetic perspective. We will read short stories and poems by authors from Latin America and Spain and

will study their narrative and poetic techniques as expressive models. During the term students will work on the development of several pieces that will open three creative spaces: a diary (non-fiction), narrations (fiction) and poems that will reinforce student expressivity, imagination and creative talent in Spanish.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 80 - Senior Seminar in Hispanic Studies

The capstone seminar in Hispanic Studies is designed to provide our majors with a small- group research and creative setting. Students will be encouraged to explore a core problem that will guide their research and creative intervention throughout the term. Conceived as a research laboratory, i.e., as a dynamic and experimental context, students will interactively develop a wide array of final projects. Essay writing, visual arts explorations, performance pieces, photography, blogs, graphic novels, or short films are some examples of potential culminating projects. The capstone seminar is open to juniors and seniors.

SPAN 80.15 - Indignant Spain Today: Crisis and New Social Movements

This course exams the notion of "crisis" as a creative paradigm for rethinking traditional experiences of the political, social, and cultural spheres in today's Spain. The course will focus on the deep connections between democracy and alternative ways of thinking about the political participation of citizens confronting the dismantling of their social, family, and individual welfare by global and national neoliberalist economic and social policies. Students will read from a wide array of texts (literature, cultural and political theory) and also watch documentaries and films on the idea of "crisis" as it is currently playing itself out in Spain's 15m and Indignados movements. Works by: Martín Patino, Alvarez, Thorton, Grueso, Lacuesta, Arce among others.

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 80.22 - The Boom Novels of Spanish America

This course examines Spanish America’s explosive entrance onto the transnational literary scene in the 1960s during the Cold War. The novelists most typically associated with this “Boom” in Spanish American literature include Gabriel García Márquez, Julio Cortázar, Mario Vargas Llosa, Carlos Fuentes, and Alejo Carpentier. We will explore the political, economic, and aesthetic phenomena that produced the Boom. We will also study the effects of this Boom on both the development of the novel as a genre and on the global dissemination of the idea of Spanish America as a single cultural and ideological entity.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:LIT; WCult:NW

SPAN 80.23 - Bullets and Letters: Basque Terrorism and the Arts

This course will focus on Basque culture produced in response to ETA terrorism. We will study the ideology that governs nationalist discourses, understand the relation between identity and violence, gender and power, and find in the arts (literature, film, painting, photography, and sculpture) a reason to make the humanities one of the legs upon which peace and reconciliation rest. Documents include interviews and writings by former ETA militants and understanding the final dissolution of the organization in 2018.

Globalization has caused an important paradigmatic shift in how "small" cultures are studied and addressed. Small in number but not in significance in current European discussions on democracy and terrorism, the Basque context is proof that the postnationalist turn that tends to govern how we think about ourselves in an ever more interconnected world actually clashes with how we experience our lives on the smaller scale of the everyday. The persistence of ETA terrorism (1959-2009), its death toll of nearly 1000 lives, and a very special turn to reconciliation and memory by many political and cultural actors makes this a timely course give how cultural productions and their textual strategies are contributing in new and exciting ways to processes geared towards peace and reconciliation.

Special emphasis will be placed on the Nanclares de Oca Prison Project and its reconciliation process and interviews by former ETA militants and victims of terrorism. Students will have the opportunity of meeting peace makers, the lead mediator, and possibly speak with victims of ETA violence firsthand at the "Unspeakable Truths" conference that will be held in Spring 2022.

Prerequisite: SPAN 20

Degree Requirement Attributes: Dist:LIT; WCult:W

SPAN 80.25 - Picturing the End of Extraction in Latin America

At a time of accelerating ecological devastation, how can images help us envision alternative futures? This capstone seminar explores the role that images play in both exposing urgent questions about extractivism, or the large-scale exploitation of nature as a resource, and pushing viewers to confront its effects in contemporary Latin America. We will consider the multilayered implications of extractive projects—from gold mining in Venezuela to soy monoculture in Argentina—as we analyze media including film, photography, and visual art. Paying special attention to the ways in which these objects suggest possibilities for life outside the politics of extraction, students will expand their understanding of how the study of media provides new perspectives on Latin America. Whether pushing for

the legal rights of nature, centering Indigenous sovereignty, or shedding light on the role of women as community activists, the media we will study offer images of resistance and change in threatened territories.

Degree Requirement Attributes: Dist:ART

SPAN 83 - Independent Study

A program of individual study directed by a member of the Spanish and Portuguese faculty. SPAN 83 will normally consist of a program of reading and research that is not covered in regularly scheduled course offerings. After consultation with the faculty advisor of the project, all Independent Study proposals must be submitted for approval to the Department. Only open to majors in Spanish or Romance Languages. Under normal circumstances, no student may receive credit for this course more than once. Students interested in pursuing an Independent Study must identify their topic and faculty advisor, and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

Prerequisite: Permission of the instructor.

Offered: Fall, Spring, Summer, Winter.

SPAN 90 - Honors Course

Instructor: Arrange

Supervised independent research under the direction of a designated advisor. Honors majors will normally elect this course as the first in the required sequence (90 and 91) for completion of the Honors Program. SPAN 90 is intended to prepare the student for writing the Honors thesis, through readings in primary and secondary texts, theory and methodology. The course will include periodic written assignments and culminate in a final paper.

Prerequisite: Admission to the Honors Program.

SPAN 91 - Honors Seminar

Instructor: Arrange

A prearranged program of study and research during any term of the senior year, on a tutorial basis, with individual faculty members (normally the thesis advisor.) A thesis and public presentation are the expected culmination of the course.

Prerequisite: Prior admission to the Department's Honors Program; clear evidence of capability to perform honors level work, normally indicated by completion of SPAN 90 with a grade of B+ or higher.

PORT - Portuguese Courses

To view Portuguese requirements, click here (p. 750).

PORT 2 - Portuguese II

Vf

Vf

Further intensive study of grammar and vocabulary with a focus on culture. Oral class activities, readings and compositions, and use of films, music and other media. Weekly drill sessions. *Never serves in partial satisfaction of the Distributive or World Culture Requirements. Open to first-year students by qualifying test and to others who have passed PORT I.*

Offered: Fall.

PORT 3 - Portuguese III

Instructor: Minchillo

PORT III provides additional, intensive study of grammar and vocabulary with a focus on literature and culture. Oral class activities, readings and compositions and continued use of films, music and other media. Weekly drill sessions. Completion of this course constitutes fulfillment of the language requirement. *Never serves in partial satisfaction of the Distributive or World Culture Requirements. Open to first-year students by qualifying test and to others who have passed PORT II.*

Prerequisite: PORT

Offered: Winter.

PORT 3 - Portuguese III

Instructor: TBD

PORT III provides additional, intensive study of grammar and vocabulary with a focus on literature and culture. Oral class activities, readings and compositions and continued use of films, music and other media. Weekly drill sessions. Completion of this course constitutes fulfillment of the language requirement. *Never serves in partial satisfaction of the Distributive or World Culture Requirements. Open to first-year students by qualifying test and to others who have passed PORT II.*

Prerequisite: PORT

Offered: Winter.

PORT 11 - Intensive Portuguese

Instructor: TBD

Portuguese 11 is a 1-credit course that combines Portuguese 1 and Portuguese 2 in one term. It is a fast-paced course that introduces students to the Portuguese language and the cultural and social aspects of Brazil and other Portuguese-speaking countries. Students will develop basic communicative skills through engaging activities that cover oral, listening, written, and reading practice. Standard grammar structures will be taught in tandem with idiomatic usage so that students will be ready to use the

language in formal and informal situations. Intensive use of films, documentaries, popular music, online news media, and social media will accelerate the learning of the language and provide a fruitful avenue for understanding cultural issues and current events regarding the Portuguese-speaking countries. By the end of this course, students will be able to communicate facts, ideas, habits, and feelings, using present, past, and future tenses. Upon successful completion of this course, students will be able to take Portuguese 3. *Never serves in partial satisfaction of the Distributive or World Culture Requirements.*

Offered: Winter.

PORT 20 - The Portuguese-Speaking World and its Literatures and Cultures: The Definition of an Identity

This course deals with colonial and modern Portuguese-speaking world, including continental and insular Portugal, Brazil, Lusophone Africa and Asia. Readings (both theoretical and fictional), film, music, and materials from the mass media that deal with the cultural identities and social roles of colonial and modern subjects are approached under different techniques of critical reading and interpretation. The second part of the course, with the disputed "definitions" of Brazilian identity, revises some "theories" or "myths" like that of "racial democracy". The basic reading in this part is *O Que Faz o Brasil, Brasil? (What Does Make Brazil Brazil?)*, by Roberto DaMatta, which focus on the core aspects of the Brazilian identity (or Brazilian stereotyped identity). Considerable emphasis will be placed on speaking and writing skills. Open to first-year students by qualifying test and to others who have passed PORT 9 (LSA) or have equivalent preparation. PORT 20 is a prerequisite for the Portuguese Foreign Study Program, and also counts towards the minor in Portuguese or the major in Romance Languages and modified majors.

Prerequisite: PORT 9

Offered: Fall.

Degree Requirement Attributes: Dist:LIT; WCult:CI

PORT 35 - Advanced Studies in Brazilian Culture and Society

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

A course in Brazilian culture and society taught in the context of the Foreign Studies Program. Lectures by local personnel concentrate on contemporary political, social, economic and religious institutions and issues and their historical background. Visits to sites supplement lectures when appropriate. Assigned work includes preparation of short papers, oral presentations and exams, assessed at the advanced level. Students will also write a research paper based on group visits requiring sessions additional to regular classes.

Prerequisite: Acceptance into the Dartmouth Foreign Study Program

Degree Requirement Attributes: Dist:SOC; WCult:NW

PORT 35.01 - Social, Political, and Cultural Trends in Contemporary Brazil

This class will be taught in English and will explore social, political, and economic issues in contemporary Brazil. Since 2013, the climate in Brazilian society has become more and more tense due to a series of street protests and polarized public debates on race, class, political representation, democracy, religion, gender, sexuality, environmental protection and economic justice. The present scenario in Brazil will be discussed in relation to historical and cultural contexts. Materials for the course will include films, documentaries, music, and a wide variety of readings (mainstream media, blogs, academic essays, official documents, fiction). Invited guests (scholars, activists, journalists, artists) will deliver lectures, in presentational or remote way.

Cross-Listed as: AAAS 86.04 LACS 35.02

Degree Requirement Attributes: Dist:SOC; WCult:NW

PORT 35.02 - Brazil: History, Culture, Politics and Systemic Racism

Instructor: Minchillo

This course provides a rigorous treatment of the dynamics of Brazilian racial relations. Students will learn about the economic, social and political history of slavery in Brazil and will be exposed to the leading racial relations and racism theories that have been produced in the social sciences and through social movements. The course explores the colonial legacy of servitude in post-abolition Brazilian society and examines the development of an Afro-Brazilian culture and identity.

Cross-Listed as: LACS 35.03

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

PORT 36 - Studies in Contemporary Brazilian Literature

This course explores trends in Brazilian literature from the 1960s to the present. Genres include novels, plays, short stories and poetry, as well as song lyrics of literary quality from various musical genres. Prominent themes include, but are not limited to, the socio-political experience of the dictatorship, urban and suburban life, and literature by women.

Prerequisite: Acceptance into the Dartmouth Foreign Study Program

Degree Requirement Attributes: Dist:LIT; WCult:NW

PORT 37.01 - Caring for the City: Activism, Diversity and resistance in Sao Paulo, Brazil

Instructor: Minchillo

Sao Paulo has a homeless population of about twenty-four thousand people. More than five million families live in Brazil's favelas, with little or no basic services and infrastructure. Two-thirds of Sao Paulo's population live on the outskirts, underserved areas of the city. This course discusses housing challenges in urban environments in Brazil. It focuses on the history of urban development in Sao Paulo and how it intersects with issues of race, gender, and migration.

Cross-Listed as: LACS 35.04

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

PORT 60 - The Portuguese-Speaking World: Literature and Culture by Period

Instructor: Please see website @ <https://spanport.dartmouth.edu/undergraduate/courses>

This course focuses on the study of the most important historical periods and cultural movements affecting the Portuguese-speaking world. It is organized according to chronological eras that are marked by distinct cultural and literary movements. Areas covered are the Middle Ages, the culture of the Renaissance and the Baroque, the period of Explorations, Colonial period, Enlightenment and Modernity, Nineteenth-Century, Romanticism and Realism, the Avant-Gardes, Postmodernism, and new developments in the contemporary period. One or more periods may be selected for study.

Prerequisite: PORT 9

Degree Requirement Attributes: Dist:LIT; WCult:W

PORT 60.03 - America & the Oblique Gaze

The concept of the "oblique gaze" provides a lens through which we can examine how cultures in the Americas perceive one another—particularly in Portuguese and Spanish-speaking regions. Originating from comparative studies on Brazilian and Hispanic American literature, this critical concept highlights how these cultures often create distorted images of each other, marked by generalizations, ignorance, stereotyping, distrust, antagonism, and sublimation—essentially inadequate representations of the "other." The course explores these "oblique gazes" by analyzing literature and film, drawing on examples from Brazilian and Hispanic-American works to deepen our understanding of these complex cultural dynamics.

Cross-Listed as: SPAN 73.13

Degree Requirement Attributes: Dist:LIT; WCult:NW

PORT 61 - The Portuguese-Speaking World: Genre

Prerequisite: PORT 9 or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult: NW

PORT 62 - Film Media, Performance, and the Arts in the Portuguese-Speaking World

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

Film, television, the visual and graphic arts, and music have redefined national space and identity in the Portuguese-speaking world. Individual offerings of this course may focus on one or more of the following: film, television and the politics of mass media; theater, performance and performativity; festivals, popular and folk songs, comics and the graphic arts; sports and national identity. Students will become familiar with relevant concepts in analysis, theory, and cultural studies and learn how issues of representation in those cultural productions are linked to their literary counterparts.

Prerequisite: PORT 9 or permission of the instructor.

Degree Requirement Attributes: ART

PORT 63 - Special Topics. Literary and Cultural Productions of the Portuguese-Speaking World

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This course is offered periodically with varying content so that writers, genres, historical contexts, or theoretical approaches not otherwise provided in the curriculum may be studied. The course can be offered any term and its distinct content, theoretical or methodological approach will depend on the interests of the instructor.

Prerequisite: PORT 9 or permission of the instructor.

Degree Requirement Attributes: Dist:LIT; WCult:NW

PORT 63.08 - The Many Faces of Brazilian Cinema

Instructor: Franconi

This course, directed to Spanish language students, aims to give a comprehensive vision of the richness and diversity of Brazil by introducing its culture and society through the study of Brazilian contemporary cinematic productions. Topics include: The Other's gaze in Brazil, redefinition of national identity and history, reassessment of African and indigenous roots, concepts of good and evil, rural and urban violence, popular culture, and representations of race and gender. Class discussion also focuses on documentaries, reviews, and critical articles. The course is conducted in Spanish. All movies are shown in Portuguese with Spanish or English subtitles.

Cross-Listed as: SPAN 63.08

Offered: Fall.

Degree Requirement Attributes: Dist:ART; WCult:NW

PORT 70.01 - Experiencing Brazil: Research in a Study Abroad Context

Instructor: Minchillo

This course offers native speakers and advanced students of Portuguese who join the study abroad program in Brazil an opportunity to develop a research project on the country's cultural and social features, problems, assets, and prospects. The purpose is to encourage students to take full advantage of being in the country by exploring local sources of information and learn from interpersonal iterations with scholars, entrepreneurs, artists, activists, and other subjects.

Cross-Listed as: LACS 35.05

Offered: Spring.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

PORT 80 - Seminar

Instructor: Please see website @
<https://spanport.dartmouth.edu/undergraduate/courses>

This seminar is designed to provide students specializing in Portuguese studies with a small group setting that facilitates in-depth exploration of key aspects of the discipline. The seminar will encourage students to research and explore relevant topics related to the literature and arts of the Portuguese-speaking world and experiment with the application of the different concepts under discussion in new and creative ways (essay writing, short story writing, visual arts projects, performance pieces, etc.). This course may serve in satisfaction of the culminating experience requirement for Romance Language and modified majors with a concentration in Portuguese.

Prerequisite: PORT 9 or permission of the instructor.

Degree Requirement Attributes: LIT

PORT 83 - Independent Reading and Research

A program of individual study directed by a member of the Spanish and Portuguese faculty. PORT 83 will normally consist of a program of reading and research that is not covered in regularly scheduled course offerings. After consultation with the faculty advisor of the project, all Independent Study proposals must be submitted for approval to the Department. Under normal circumstances, no student may receive credit for this course more than once. Students interested in pursuing an Independent Study must identify their topic and faculty advisor, and present a proposal to their faculty advisor and to the Department for approval no later than the seventh week of the term preceding the term they wish to undertake the Independent Study.

PORT 90 - Honors Course

Supervised independent research under the direction of a designated advisor. Honors students will normally elect this course as the first in the required sequence (90 and 91) for completion of the Honors Program. PORT 90 is intended to prepare the student for writing the Honors thesis, through readings in primary and secondary texts, theory and methodology. The course will include periodic written assignments and culminate in a final paper.

Prerequisite: Admission to the Honors Program.

PORT 91 - Honors Seminar

A prearranged program of study and research during any term of the senior year, on a tutorial basis, with individual faculty members (normally the thesis advisor). A thesis and public presentation are the expected culmination of the course.

Prerequisite: Prior admission to the Department's Honors Program; clear evidence of capability to perform honors level work, normally indicated by completion of PORT 90 with a grade of B+ or higher.

Speech**Speech**

Speech courses are open to all students, across majors and class years, and do not have prerequisites. Speech courses offer students the opportunity to engage in advanced study and practice of communication/rhetoric, with special emphasis on spoken/oral communication, including dialogue, across contexts (e.g., health, law), issues, and epistemologies.

SPEE - Speech Courses

To view Speech requirements, [click here](#) (p. 820).

SPEE 20 - Public Speaking

Instructor: Compton, Drummond, Grushina

This course covers the theory and practice of public speaking. Building on ancient rhetorical canons while recognizing unique challenges of contemporary public speaking, the course guides students through topic selection, organization, language, and delivery. Working independently and with peer groups, students will be actively involved in every step of the process of public speaking preparation and execution. Assignments include formal speeches (e.g. to inform, to persuade, and to pay tribute), brief extemporaneous speeches, speech analyses, and evaluations. Limited enrollment. No prior speaking experience is necessary.

Degree Requirement Attributes: ART

SPEE 25 - Persuasive Public Speaking

Instructor: Compton

This course explores persuasive public speaking and helps students learn to craft messages of influence. Approaching persuasive public speaking as transactional, students will engage in audience analysis during speech invention, organization, language choices, and delivery. Assignments include formal speeches (to convince and to actuate), brief extemporaneous speeches, speech and argument analyses, and peer speech evaluations. Peer group work will facilitate speech preparation and provide a forum to audition arguments and ideas. Limited enrollment. No prior speaking experience is necessary.

Degree Requirement Attributes: ART

SPEE 26 - New Media Communication

Instructor: Grushina

This course investigates social media, virtual worlds, transmedia, digital art and NFTs, and other new media technologies through critical reflection on the ways these technologies are shaping and reshaping our personal and professional lives. We will draw on communication and media studies as well as rhetorical theory and research to help us understand and analyze these contexts. You will engage with new media via projects that invite you to participate in existing contexts, create new ones, and display and create knowledge through speeches, writing, and communication design.

Prerequisite: No prerequisites.

Degree Requirement Attributes: Dist:ART

SPEE 27 - Intercultural Communication

Instructor: Drummond

In our increasingly diverse world, cultural and intercultural literacy is an urgent necessity, not an option. To help fulfill this exigency, the goal of this class is for students to explore how diverse underlying cultural orientations and patterns influence communication behaviors within and between cultures. Theoretical and practical aspects of intercultural communication will be addressed with a focus on how students can apply alternative communication strategies that result in deliberate and fruitful intercultural outcomes. No prerequisites. Limited enrollment.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SPEE 30 - Speechwriting

Instructor: Compton

This course explores speechwriting as a process. Students will work independently and in peer groups to write speeches for themselves and for others. Students will also deliver speeches. Throughout the course, students will compare speechwriting with other types of writing,

celebrating the unique challenges of writing for the ear. Limited enrollment. No prior speaking experience is necessary.

Degree Requirement Attributes: ART

SPEE 31 - Rhetoric of Social Justice: Public Advocacy and U.S. Social Justice Movements

Contemporary social movements in the U.S. bear strong resemblance to those in the past in that social protests have, and continue to be, definitively rhetorical. This course focuses on theorizing the relationship between rhetoric and social movements from a historical and contemporary perspective. Our focal point will be rights-based campaigns of movements seeking socio-political legitimacy and equality. The course will also explore the pivotal role strategic communication plays in effective advocacy. No prerequisites. Limited enrollment.

Degree Requirement Attributes: Dist:ART; WCult:CI

SPEE 33 - Political Humor Rhetoric: Contemporary Television

Instructor: Compton

It is tempting to dismiss late night television comedy as inconsequential. And yet, empirical research reveals that political humor affects knowledge, attitudes, and behaviors. In this class, we will survey extant research findings to evaluate late night political humor's content and effects, using social scientific and rhetorical theories to better understand how, and in what ways, late night television political comedy matters. Speaking and writing projects will be used to achieve course objectives. No prerequisites.

Degree Requirement Attributes: SOC

SPEE 34 - Image Rhetoric: Image Attack, Image Repair, and Image Promotion

Instructor: Compton

Image is an important and complicated part of communication. Rhetoric can build image, and rhetoric can tear down image. Rhetoric can attack image, and rhetoric can defend image. Each focus of this course (image attack, image repair, image promotion) builds on classic and modern work in *apologia* and persuasion, including studies of politics, entertainment, and commerce. Speaking and writing activities will broaden our ideas about image. No prerequisites.

Degree Requirement Attributes: SOC

SPEE 35 - Rhetorics of Stuttering

This course is about voice. We will explore how voice can be inextricably entwined with identity, self-image, and speaker *ethos*, and what can happen when voice does not meet conventional ideas of a "good" voice—when the voice stutters and stops and stalls as a direct affront to

fluency and flow. At the same time, this is a course about dialogue and communication, about persuasion and influence, about meaning making and politics and health and psychology and rhetoric—the role of voice, and the stuttering voice, in these areas and more. Whether or not you stutter, taking this class will offer an exploration of the deeply personal, often public process of sharing ideas through speech, offering insight into how we might listen more carefully to underheard voices.

Degree Requirement Attributes: Dist:SOC; WCult:CI

SPEE 36 - Organizational Communication and Sustainability

Instructor: Grushina

This course examines the theories, discourses, and practices of organizational communication and sustainability. We will draw on communication and rhetorical theory and research to understand the complex dynamics of contemporary organizational contexts. We will use case studies to interrogate the challenges and opportunities that global organizations face in pursuit of sustainable development and learn as well as develop theory-based strategies for maximizing such growth and improving the communication of organizations and their stakeholders. Discussions will focus on concepts of global teamwork, glocalization, civil regulation, agency, and corporate social responsibility (CSR), among others.

Prerequisite: No prerequisites.

Degree Requirement Attributes: Dist:SOC

SPEE 37 - Health Communication

Instructor: Drummond

This course is designed to provide a broad introduction to human communication in a health-care context. We will examine basic medical models, the roles of health professionals, patients and caregivers, social and cultural issues, communication in health organizations, and the role of mass media. Emphasis will be on the social analysis of social support, ethics, organizational culture, planning health promotion campaigns, cultural conceptions of health and illness, and social scientific theory.

Prerequisite: No prerequisites.

Degree Requirement Attributes: SOC

SPEE 40 - Resistance To Influence: Inoculation Theory-Based Persuasion

Instructor: Compton

This course revisits a classic theory of resistance to influence: inoculation. Inoculation theory is unique. Instead of offering ways to enhance persuasion, inoculation offers resistance to persuasion. We will trace inoculation's development; reconsider some of its assumptions; explore its application in contexts of health,

politics, and marketing; and discuss ethics of resistance-based message strategies. Writing and speaking projects will guide our consideration and analysis of this underexplored dimension of rhetoric. Limited enrollment. No prior speaking experience is necessary.

Degree Requirement Attributes: SOC

SPEE 80 - Independent Research

A tutorial course focused on an independent research project in speech, communication, and/or rhetoric to be designed by the student with the assistance of a member of the Speech faculty, who will serve as the project's supervisor. A student wishing to enroll in Speech 80 must submit a proposal and plan of study, approved by the supervising faculty member, to the Chair of the Speech at Dartmouth Steering Committee during the term prior to taking the course.

Student-Initiated Seminars

In 1976 the Executive Committee of the Faculty voted to introduce a system of student-initiated seminars.

Students may propose to the Faculty Committee on Instruction seminars on special topics. Student initiators solicit the sponsorship of one or more faculty members and develop a syllabus and formal structure for the proposed course in consultation with the sponsor(s). In sponsoring a student-initiated seminar, a faculty member commits to regular participation in the seminar and assumes responsibility for assigning grades in the course. After the course has been approved by the appropriate Divisional Council, the Committee on Instruction may then approve, for a single offering, a student-initiated seminar which will be carried as a regular course. This seminar may serve in partial fulfillment of the Distributive or World Culture Requirements by prior approval of the Divisional Council and the Committee on Instruction, and in potential partial satisfaction of major requirements when previously authorized by the department or program concerned. Preliminary proposals should be directed by the initiators to the Chair of the Committee on Instruction at least two terms in advance of the proposed term of offering.

Before considering approval of a seminar the Committee on Instruction will require a full account of the nature of the requested seminar, justification for offering it, and assurance of active faculty support, availability, and time. The maximum enrollment shall be sixteen and the minimum, six. At the end of a seminar the faculty member assigns grades in normal fashion.

Studio Art

Chair: Tricia Treacy

Professors S. S. Park, E. M. Riley, T. Treacy; Associate Professors D. Petros, C. Sollars, Z. Toloudi; Assistant

Professor A. Romero; Adjunct Assistant Professor J. K. Lee; Senior Lecturers G. D. Auten, J. L. Caine, K. Kawiaka, J. D. Wilson; Lecturers: A. Ancliffe, J. Dannin, T. Ferrara, J. Foster, O. Gardner, D. Genadry, L. Mink, Z. Schumacher, M. Siegle, V. Witkowski, Z. Zhang

The Department of Studio Art offers all undergraduates the opportunity to take courses in studio art. Graduate students may enroll in courses not filled by undergraduates. Requirements for the major and minor are outlined below.

To view Studio Art courses, click here (p. 773).

Artist-In-Residence

Through endowments established in 1962, artists have resided at Dartmouth throughout the year. These professionals are actively involved in the making of their art on campus. They lecture on their work in and outside of the classroom and respond to student work on an individual and group basis.

Visiting Critics

Each term professional artists lecture on their work and critique student work. These visits present a serious model of involvement within the discipline. There can be as many as three visiting critics a term. Attendance at the talks of visiting artists is required of all students enrolled in a Studio Art course.

Enrollment

All courses are limited in size. Pre-enrollment via computer registration is encouraged. Studio Art courses are closed when they reach full enrollment, and remain closed even if students drop. If a course is closed during pre-enrollment, students are put on a bounce/wait list, and given priority when classes begin. Students must contact their course instructor for permission to enroll. If permission is granted, students receive notification via e-mail. They must then go to Banner Student and enroll. Students not enrolled when the term begins are encouraged to attend the first class to see if a space is available.

Studio Art courses are open only to Dartmouth students who are enrolled full-time in the College. This enrollment includes special undergraduates at Dartmouth on the Twelve-College Exchange. Graduate students may enroll, if there is space in the class, and they receive the instructor's permission. No Studio Art course may be audited.

Requirements for the Major

The Studio Art major consists of 10 courses. The Department offers courses in architecture, drawing, painting, photography, printmaking and sculpture. Drawing I is prerequisite to Painting I and to upper level drawing courses. *There are no prerequisites for Drawing I, Photo I, Printmaking I, Architecture I, Sculpture I, or Special Topics.*

Since class sizes are limited and enrollments are heavy, Drawing I should be completed as early as possible.

Additional requirements for the major: SART 16, SART 20, SART 25, SART 76, SART 77, one Art History course, and three of the following: SART 17, SART 21, SART 22, SART 23, SART 26, SART 27, SART 28, SART 29, SART 30, SART 31, SART 65, SART 66, SART 68, SART 71, SART 72, SART 73, SART 74, SART 75 or SART 90 (p. 780). Figure Drawing may substitute either for the Drawing II or Drawing III requirement for the major. Figure Sculpture may substitute either for the Sculpture II or III requirement for the major.

SART 76 and SART 77 serve as the culminating experience in the major. Students are strongly encouraged to complete at least 3 course levels in one area of focus before taking senior seminar. The Senior Seminar work will be evaluated by the Studio Art Department faculty and outside examiners. Participation in a senior exhibition is a required part of the major.

Requirements for the Minor

Seven courses in Studio Art, with SART 15, SART 16, and SART 25 required. Four additional courses, two of which must be in any one of the following six areas: architecture, drawing, painting, photography, printmaking, or sculpture.

Requirements for the Minor in Architectural Design

The Minor in Architectural Design consists of 7 courses.

Required: SART 65, SART 66, SART 68 and at least one of the following: SART 16 or SART 17.15.

Electives (3 courses total): *Representation and Making Methods electives (Choose one of the following)* - SART 15, SART 17.08, SART 25, SART 27, SART 29, ENGS 11, ENGS 12, ENGS 75, COSC 22, COSC 23.01, COSC 25.01, THEA 44, FILM 44.09. *Structures and Engineering electives (Choose one of the following)* - ENGS 2, ENGS 21, ENGS 33, ENGS 44, ENGS 89. *Culture and Theory electives (Choose one of the following)* - ARTH 4, ARTH 38.01, ARTH 61.71, GEOG 06, SOCY 16, ANTH 18.

Honors Program

The Honors Program consists of a two-term course of study, completed during the class context of Senior Seminar I and II. To be eligible for the Honors Program, students must have achieved the following, by the end of junior year: a 3.4 average in all Studio Art Major courses; Drawing I and Drawing II; and three terms of study in a specific area of architecture, drawing, painting, photography, printmaking, sculpture (e.g., Sculpture I, Sculpture II, and Sculpture III). By the end of senior fall term, students must: have one professor (S. Park, D. Petros, E. Riley, A. Romero, C. Sollars, Z. Toloudi, or T. Treacy) who will advise them on their honors project throughout Senior Seminar; submit a typed proposal outlining their final project, along with 10 images of their

work. Studio Art majors will be notified in writing of procedures for Honors. An honors thesis is required by the end of spring term. *Honors, if granted, is bestowed at the end of spring term.*

Transfer Credit

Transfer credit is considered for Studio Art majors with junior standing. Application for prior approval must be made by the first day of the Dartmouth term immediately preceding the first day of the intended transfer term. Prior to enrolling, discussion of the nature, content, and reason for taking the course should occur with the major advisor or Chair of the Department. The Department requires a portfolio review upon completion of the course. No more than two courses can be substituted for those required for the major.

SART - Studio Art Courses

To view Studio Art requirements, [click here](#) (p. 771).

SART 15 - Drawing I

Instructor: Riley, Romero, Wilson, Lee, Kawiaka, & Associates

In this introductory course, major and non-major students will explore the issues of mark, line, scale, space, light and composition. Students will develop a critical facility to discuss the work presented in class. Although the majority of work will be from the observed form, such as still life and the human figure, non-observational drawing will also be emphasized. Various kinds of media, including charcoal, ink and pencil will be used. Supplemental course fee required. Enrollment limited.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 16 - Sculpture I

Instructor: Lee, Park, Sollars, & Associates

This course emphasizes the creation and critique of sculpture. Three-dimensional design concepts and various elements of sculpture such as form, space, surface, and time, will be discussed. Students will develop an understanding of different materials and techniques in conjunction with the aesthetics of each medium. This course focuses on an individual approach to creative problem solving, with students developing skills and vocabulary to critique their own sculpture and the sculpture of others. Supplemental course fee required. Enrollment limited. No prerequisites.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 17.01 - Collage: Bridging the Gap

An exploration of the design and construction of imagery through the medium of collage. Students will work in mixed media collage materials from a variety of subject matter with a focus on the development of critical abilities and an individual esthetic. Assignments will make use of collage as a connection between two-dimensional and three-dimensional artwork, addressing collage work in relationship to drawing, painting, relief sculpture, photography and architecture.

Degree Requirement Attributes: Dist:ART

SART 17.03 -

Cross-Listed as: FILM 48.01

Degree Requirement Attributes: Dist:ART

SART 17.07 - THE PASSIONATE PURSUIT OF COLOR

Students in this course will explore the use of color as a language to construct and find meaning in a fully realized work of art that captures both internal and external realities. A variety of traditional as well as digital drawing media and techniques will be encouraged. Emphasis will be on testing the boundaries between the flat picture plane and the mysterious illusion of pictorial space, between sensuous details and the overall unity of each work of art.

No prerequisites required. Counts towards the major and may be substituted for Drawing II

Degree Requirement Attributes: Dist:ART

SART 17.08 - Digital Drawing

Instructor: Kawiaka

This class will explore the connection of hand drawing and digital drawing to create original images. Students will explore the implications, opportunities and technical issues of using the computer as a drawing tool and combine computer-generated drawings with those done by hand. Drawings may combine layering, collaging and converting 3D form to 2D hand drawings using PhotoShop, Illustrator and Rhino software, among others. Supplemental course fee required. Enrollment limited.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

SART 17.09 - The Photographer as Activist: Making Art Inspired by the Hood Museum's Collection

This course examines photography's evolving role as protagonist for raising awareness of important social and political issues of our time, such as war and its aftermath, the politics of gender and family, and the sustainable landscape. Meetings in the Bernstein Study Center will focus on the study of specific photographs and the processes and techniques employed; these explorations

will form the basis for individual photographic projects, culminating in a creative portfolio or book. Students will develop a critical framework for the cultivation of visual literacy and the understanding of photography's importance as witness to human experience.

Degree Requirement Attributes: Dist:ART

SART 17.11 - Embodied Magic: Drawing into Life**Embodied Magic: Drawing into Life**

Starting from close observation, this class will explore possibilities for translating the wide and vibrant world into two-dimensional drawing and painting, and for translating two-dimensional works into sequential and moving images. We will investigate interrelationships between embodied magic, improvisation, disciplined daily practice, and finished work. Athletes, dancers, musicians, graphic designers, complete beginners, animators, fans of sequential art, and other assorted students from a variety of backgrounds and interests are welcome.

Degree Requirement Attributes: Dist:ART

SART 17.12 - Art Practices Across Media

This course examines strategies used by artists who work across a range of media. We will start with a critical inquiry into theoretical and practical methods: how do ideas determine the choice of material and the shape they take? Further explorations will address the socio-political dimension of art-making and how it enables interventions and interruptions of the historical, cultural, and individual sphere. In the spirit of its subject, this class will ask students to utilize multiple media with the goal of visualizing the relation between material and concept.

Degree Requirement Attributes: Dist:ART

SART 17.13 - Drawing with Van Gogh

Students learn to draw as Vincent Van Gogh did throughout various stages of his life, with similar instruction, purpose and drawing materials. The class will see and draw from the art that influenced him, work from subject matter similar to his, and experiment with his particular techniques. Students will copy a range of Van Gogh drawings, draw directly from life as he did, and read many of his extraordinary letters. At the end of the term, each student will develop a suite of drawings, embodying their own idea of how Van Gogh's work might have further evolved. Supplemental course fee required. All levels of drawing experience welcome.

Degree Requirement Attributes: Dist:ART

SART 17.14 - Reinventing Architecture: Design and Social Action

By thinking more broadly about the populations served and more expansively about collaborative initiatives, designers can take on an important role in addressing the significant

challenges we face in a rapidly changing and developing world. This course will include a series of drawing/media/design assignments that will serve as concentrated exercises in the investigation of architectural and spatial concepts and projects for challenged communities on the local, national and international levels. A wide array of design tools will be utilized and students will work both individually and collaboratively with classmates. Course requirements will consist of the completion of drawing, model making and analysis assignments associated with each of the phases of the course. A substantial part of many class sessions will be dedicated to working on these assignments in the studio, thus attendance will be critical to the successful completion of the course. There will be a time commitment required outside of class to complete most assignments and additional assignments will also be made explicitly for completion outside of class. Field trips, site visits and visiting experts will be an integral component of the course.

Degree Requirement Attributes: Dist:ART

SART 17.15 - 3D Design and Digital Fabrication

This course is an introduction to basic three dimensional design principles and the relationship between structure and space. Students will learn fundamentals of design ideologies to design and construct objects and structures that use cutting edge computer modeling and 3D fabrication processes to create forms ranging from everyday utilitarian objects to structures for specific sites on campus. Material investigations and problem solving skills to design innovative solutions to real world problems will be undertaken. Computer drawing and fabrication using the program Illustrator, and 3D modeling with Rhino, 3D Printers and CNC Routers will be taught and used. Students will develop skills needed to communicate design concepts and develop personal approaches to design as well as to construct them. The projects include forms based on aesthetic as utilitarian design.

Offered: Summer.

Degree Requirement Attributes: Dist:ART

SART 17.16 - Personal Iconography & the Public Debate: Text, Image and Form

This class will give students the chance to explore the relationship of what you want to say to how you say it in art, with a strong focus on combining image, text and material. How do text and image work together to create art that engages and demands its place in the public exchange of non-art related ideas? Making use of research students will work in the studio to realize their ideas. Students will make broadsides at the Book Arts Workshop in Baker-Berry, and create a public intervention

at a place of their choosing. Supplemental course fee required. Enrollment is limited.

Degree Requirement Attributes: Dist:ART

SART 17.17 - Handmade Cinema

“This course will explore non-conventional, artisanal modes of experimental and avant-garde cinema that focus on the materiality of moving image media formats. By utilizing a variety of techniques--direct image and sound manipulation on 16 mm film, hand-processing, ray-ograms, animation, special effects, and live-projector performance--students will gain total filmmaker toolsets through constructing a series of exercises that will screen publicly. In addition to producing personal projects, students will complete a series of short papers that build upon our screenings, readings, and discussions to locate handmade cinema within historical and cultural contexts.”

Cross-Listed as: FILM 44.01

Degree Requirement Attributes: Dist:ART

SART 17.18 - Art & Activism

This course will look at various international and domestic artists to examine how contemporary visual art can be a form of social activism.

Instead of working in one medium, students will have the opportunity to experiment with multiple media like drawing, painting, digital photography & collage, and video. The focus of the course will be on art practices in the context of social activism and its potential to interrupt conventions surrounding history, culture, identity and politics. In the spirit of its subject, students will utilize a range of media with the goal of visualizing the relation between medium and concept, art and thought, self and world.

Some of the questions we will be asking are: how do we identify issues and formulate questions in visual terms? What are the advantages and disadvantages, limitations and possibilities of each medium? How do we make aesthetic choices based on a particular subject? And to what extend do materials and artistic practices have an impact on our ideas? Supplemental course fee required

Degree Requirement Attributes: Dist:ART

SART 17.19 - Cut and Paste Cinema

Using principles of both animation and editing, this course will explore the results of combination in cut and paste cinema in conjunction with the history of collage--from

classic uses in painting, photomontage, architecture, and literature to contemporary functions via mash-ups, samples, and digital manipulation. Through producing projects, screening films, and discussing readings, we will explore the varying possibilities of forming new meanings via the pairing of found elements.

Cross-Listed as: FILM 44.02

Offered: Winter.

Degree Requirement Attributes: Dist:ART

SART 17.20 - Video Art

Instructor: Flanagan

This theory/practice studio course explores the medium of video as an art form. Through a survey of historical and contemporary works, students will examine how history, access, culture and technological shifts have influenced and changed how artists work with the moving image and time-based media. From early portable video rigs and live video to the use of animation, netart, streaming video, and memes, the course will unpack role that film, video, sound, writing, performance, abstraction, installation, structure, streaming and narrative forms have played in their work. Students create individual video projects to develop their artistic voice and point of view; they engage with properties that distinguish video art practices while completing a series of creative experiments in order to develop a personal media vocabulary. Students will use video art to expand our understanding of time, space, sound, representation, and narrative.

Cross-Listed as: FILM 48.02

Offered: Summer.

Degree Requirement Attributes: Dist:ART

SART 17.21 - Water In the Lake: Real Events for the Imagination

Instructor: Mack

This class, based on the book [Water in the lake: Real Events for the Imagination](#) (1979) by Kenneth Maue, fuses cinema, the studio arts, sound, and theatre with the natural landscape in an intense study of improvisation, collectivity, and collaboration in conjunction with the environment. Looking at religion, law, science, and politics as a way to consider cinema, sound, land art, site specificity, performance, and the unfolding of real time events within the artistic context, we will gain the critical capacity to understand intersections of cinema, performance art, video art, land art, and sonic practice. Through viewing films, listening to sounds, and studying works of art spanning painting, sculpture, installation, site-specific practice, and performance, we will inspire and provide critical/historical contexts for your personal work in the course.

Degree Requirement Attributes: Dist:ART

SART 17.22 - On Earth: Art The Anthropocene

Instructor: Foster

The Anthropocene is a new geologic era that has been defined as the present epoch in which the earth's systems and biodiversity are being slowly disrupted by the impact of humans on the earth. This theory/practice, studio course engages with contemporary art to explore creative practices related to the topic. Through the production of artworks students will investigate the profound role art and design can play to address and expand current related dialogues.

This course will explore what it mean to consider humans as a geological agent and how artists and designers can engage with the shifting perceptions of our surroundings. Creative projects that are open to the use of a range of media center on practical techniques that may include; mapping, the production of data visualization, journaling, and collaborative exercises. The course content builds through interrelating topics such as: new understandings of time, space, and scale; the concept of worlding; the use of scientific data to interpret planetary systems; the influence of the techno-sphere on human sensing and perceptions of "the natural", and a redefinition of kin in a posthumanist era.

The course serves neither as a comprehensive study of the Anthropocene nor as an art historical survey. It is instead an introductory exploration into ways to consider the Anthropocene in order to cultivate and reinforce new forms of flexible creative and critical thinking.

Offered: Summer.

Degree Requirement Attributes: Dist:ART

SART 17.23 - Book Publication Lab

This special topics studio course will provide students an opportunity to engage in research, conceptualization, design thinking, and execution of collaborative print projects. Strategies in design research, investigation, form-making will all be discussed along with techniques in page layout, typography for book and editorial layouts, risography, zines, self-publishing, and bookmaking. It will function as a creative laboratory, providing an opportunity to be immersed in and mindful of a range of collaborative creative processes. Through fast-paced exercises, readings, and studio projects, students will develop skills to create with others and test the boundaries of ways to give form to new ideas and strategies to generate content. Outcomes will include both digital and analog print methods. This course is designed as an interdisciplinary exploration for students in studio art and from other departments such as english and creative writing, music, languages, and the sciences. Supplemental course fee required. Enrollment limited.

Degree Requirement Attributes: Dist:ART

SART 17.24 - What is Architecture? 10/10

This course focuses on addressing the question “What is Architecture?” within the context of liberal arts education, through topics such as: light and the immaterial, details and processes of making (craftmanship), structure and engineering, materiality and resources (site-specificity), form, interdependence and symbiosis, composition and systems, representation, future practices, among others. It consists of 10 lectures and 10 relevant exercises/small projects. Students are expected to actively participate in the course through presentations, discussions, and the design exercises. Students will work individually and in teams. Supplemental course fee required.

Degree Requirement Attributes: Dist:ART

SART 20 - Drawing II

Instructor: Romero & Associates

This course will reinforce drawing techniques and strategies learned in Drawing I with an emphasis on discipline and increased mastery. Personal development, critical thinking and the student's relationship to materials, subjects and techniques will be emphasized. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 15.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 21 - Sculpture II

Instructor: Park & Associates

Sculpture II is an in-depth approach to the conceptual and physical aspects of making sculpture. Techniques such as woodworking and welding, along with the exploration of unconventional materials, will be used. Contemporary ideas involving installation, outdoor and site specific work will be explored in the cultural context of making sculpture today. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 16

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 22 - Figure Drawing

Instructor: Auten

A course based on drawing the human form. Most work will be done from direct observation. Attention will be paid to issues of mark, light, volume, space, and composition. Students will consider the complex relationship of perception, invention, and visual structure in the context of working from the figure. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 15

Offered: Spring.

Degree Requirement Attributes: Dist:ART

SART 23 - Figure Sculpture

Instructor: Park

Sculpture through direct observation, and learning to translate perceived form into sculptural form using the figure as subject is the emphasis of this class. Importance is placed on the fundamental sculptural principles of proportion, volume, and gesture, along with the relationship between the physical and psychological aspects of the human form and its contextual presentation. Modeling directly in clay, as well as plaster casts, and other additive processes and materials will be explored. Supplemental course fee required. Enrollment limited.

Degree Requirement Attributes: Dist:ART

SART 25 - Painting I

Instructor: Riley, Caine & Associates

Painting I is an introductory class in oil painting techniques, painting language, and critical thinking. Major topics that will be covered include: basic color theory, color mixing, paint application, and color composition. A variety of subjects such as still life, non-observational invention, and the human figure will be emphasized. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 15

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 26 - Printmaking I: Lithography

Lithography. An introduction to lithographic techniques, using stones and metal plates, b/w and color printing. Class sessions will consist of demonstrations, critiques, individual instruction, and work periods. Students will also see original prints by master artists (past and present) in the outstanding collection of Dartmouth's Hood Museum. This course may be repeated for credit by permission of the Chair. Supplemental course fee required. Enrollment limited.

Degree Requirement Attributes: Dist:ART

SART 27 - Printmaking I

Instructor: Treacy, Caine & Associates

The course offers an introduction to the technical fundamentals in print media focusing on some of the following: etching, stencil printing (screen printing and/or risography), relief, monoprinting, as well as zine and artist books. Processes vary based on subtitle and explore a range of materials which may include wood, linoleum, copper, pronto plates, photopolymer, and acrylic plates to

be printed in multiples and/or as unique variations. The course expands a student's capacity for developing images through two-dimensional design and conceptual processes. We will examine historical and contemporary printmaking results (using the Hood Museum and Rauner's outstanding collections), while exploring methods of making and experimenting with analog and digital print formats. This course asks students to consider printmaking in a contemporary context through technique and discussion. You will be encouraged to discover new methods of practice, including collaborative work, unfamiliar materials, and a hybridity of tools/processes. Printmaking is a unique intersection of Painting, Drawing, Sculpture, Photography, Architecture and Visual Communication. Supplemental course fee required. Enrollment limited.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 28 - Printmaking II

Instructor: Treacy

The intermediate course in print media offers an intensive exploration of printmaking methods. Print media provides a mode to visually communicate personal, political and conceptual themes. Students will concentrate on an advanced level on two or more printmaking processes, which may include etching, screen printing, relief, monoprinting, risography, and/or artist books. Students will be encouraged to discover new methods of practice, collaboration, and a hybridity of tools/processes. Students will hone technical skills and craft through experimentation, developing a body of both process and refined work. Discussions will address the expansive nature of contemporary fine art printmaking. Students develop individual portfolios. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 26 or SART 27. Supplemental course fee required. Enrollment limited.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

SART 29 - Photography I

Instructor: Petros & Associates

An introductory darkroom course concentrating on the fundamentals of operating and understanding a camera: black & white film processing and printmaking techniques, and the use of the camera as a tool of creative expression. Through lectures, readings, discussions, and critiques, students develop the ability to think and participate in critical contemporary art discourse regarding images and image making. The class culminates in a final project focused on conceptual content and fine printing skills. Supplemental course fee required. Enrollment limited.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 30 - Photography II - The Nature of Photography

Instructor: Petros & Associates

This intermediate studio course deconstructs the complexity of the contemporary photographic world. The course is an investigation into the aesthetic and theoretical implications of digital photography and the underlying principles, languages, and tools of photographic media. Assignments, visiting artists, lectures, reading discussions, and critiques will interrelate to inform the development of the individual voice of each student. We will investigate the memetic and fragmenting qualities of photography, the existential implications of what it means to use the medium to stop time, the power of imaging aesthetics to seduce and activate the viewer, the photograph as data and evidence, all with an emphasis on how perspective (cultural/societal background) and context (from a social media feed to a museum wall) inform the impact a photograph can have on a range of audience(s). Technical emphasis is centered on; digital workflow from camera input and digital darkroom editing, to final screen-based output (the projection, a digital monitor, the activated presentation, the moving still, etc...). We will also work collectively on a book project. Throughout the course, students will simultaneously hone their critical thinking and technical skills and examine the evolving nuances of broader image culture in line with contemporary art world trends, all in order to develop their photographic voice and the ability to think and participate in critical contemporary art discourse. Enrollment limited. Supplemental course fee required.

Prerequisite: SART 29.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 31 - Painting II

Instructor: Riley, Caine & Associates

This class is a continuation of Painting I. Students will be exposed to more complex ideas about color including color as emotion, impression, and construction. More distinction will be made between indirect and direct painting techniques. Students will also begin to form a personal relationship with the formal choices they wish to address. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 25

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 65 - Architecture I

Instructor: Toloudi, Wilson & Associates

A disciplined development of skills needed to communicate architectural ideas. Factors such as climate, site, orientation, program, materials, and structure are studied in the process of designing structures and buildings. The course will concentrate on developing student ability to translate architectural concepts into two-dimensional and three-dimensional representations. Free-hand drawing, the use of architectural drafting tools, and model making will be emphasized. Along with more traditional media, the computer will also be used as a design and communications tool. Supplemental course fee required. Enrollment limited.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 66 - Architecture II

Instructor: Toloudi

Students will continue the study of architectural design by exploring the organization of space, manipulation of light, and the experience of time in the creation of architecture. Experimentation in the language and vocabulary of architecture, as expressed through drawings, models, and the digital media will be emphasized. Contextual, cultural, economic, and technological conditions will be discussed in relationship to designs. Review of student work will take the form of presentations made to the class and guest critics. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 65. Supplemental course fee required.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART

SART 68 - Architecture III

Instructor: Toloudi

As an extension of Intermediate Architecture, this course will offer advanced students the opportunity to explore architectural design issues in more depth. Students will use analytical and expressive skills developed in previous coursework to undertake more complex and thorough investigations in architecture. Can be repeated for credit. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 66.

Offered: Fall, Spring.

Degree Requirement Attributes: Dist:ART

SART 71 - Drawing III

Instructor: Romero & Associates

In this course, students will develop a personal voice through the language of drawing. Commitment and discipline are mandatory and expected, commensurate with students' increased responsibility in shaping their trajectory

of learning. Contemporary issues and materials will take an increased role in informing the students' decisions. Critical thinking and decision-making will be emphasized. Observational drawing, abstraction, figuration and more unconventional techniques are all open to students. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 20.

Offered: Fall, Spring, Summer, Winter.

Degree Requirement Attributes: Dist:ART

SART 72 - Painting III

Instructor: Riley, Caine & Associates

In this course, students will develop a cohesive body of work that addresses their aesthetic and subjective concerns. More attention will be given to contemporary artists and contemporary painting strategies and techniques. Commitment and discipline are mandatory and expected, commensurate with students' increased role in shaping their course of study. Critical thinking and decision-making will be stressed, as well as awareness of the contemporary dialogue in painting. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 31

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 73 - Sculpture III

Instructor: Park

This course focuses on advanced problems in sculpture, with an emphasis on the development of a personal language. Individual growth through self-examination and self-discipline will be encouraged. Contemporary issues, as well as the history of sculpture will be discussed. Students are expected to develop a strong work ethic in the studio. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 21

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 74 - Printmaking III

Instructor: Treacy

The advanced course in print media will be self-directed based on the students interests and offers an intensive inquiry of printmaking methods and visual narratives. This is an opportunity for experimentation and risk-taking with materials and tools, a refinement of printmaking applications while adding further research and concept exploration to develop a personal voice. Work will be presented in both installation and portfolio platforms. Discussions will address the expansive nature of contemporary fine art printmaking. Students develop

individual portfolios. Supplemental course fee required. Enrollment limited.

Prerequisite: SART 28. Supplemental course fee required.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

SART 75 - Photography III - Contemporary Photography & Research

Instructor: Petros & Associates

While interwoven with Photography 2, the emphasis of this course is on building an increasingly independent artistic-research practice with focused critiques and individualized assignments. It will center around a single self-driven problem that will constitute the term's work. The student will have the opportunity to concentrate on one subject, to investigate new techniques of photographic craft, hone critique and critical thinking skills, and to employ the camera as a means toward the making of a personal, creative statement. Enrollment limited. Supplemental course fee required.

Prerequisite: SART 30.

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART

SART 76 - Senior Seminar I

Instructor: Treacy, Caine

The first half of the two-term culminating experience in Studio Art. The seminar is devoted to developing critical skills and a body of work predicated upon a student's ability to conceive, structure, sustain, and resolve an individual course of study in painting, drawing, printmaking, sculpture, photography, or architecture. Work will be reviewed by the faculty and an outside examiner. Supplemental course fee required.

Offered: Winter.

Degree Requirement Attributes: Dist:ART

SART 77 - Senior Seminar II

Instructor: Auten, Sollars

A continuation of SART 76, with the additional expectation that each student will present at the conclusion of the term the body of work that will be his/her thesis. The thesis must be judged by the Studio Art faculty to be technically and aesthetically sound. From this work a selection will be made for the senior exhibition. Continuous individual and group critiques will be given of student work by the principal instructor, department faculty, and visiting artists. Supplemental course fee required.

Prerequisite: SART 76.

Offered: Spring.

Degree Requirement Attributes: Dist:ART

SART 90 - Independent Study

Instructor: Park, Petros, Riley, Romero, Sollars, Toloudi, Treacy

Students who have completed all levels of instruction within a given area may propose and carry out an independent project in that area. This project must be supported and supervised by a faculty member. The project proposal must be submitted in writing and approved by the Chair. Supplemental course fee required.

Offered: Fall, Spring, Winter.

Degree Requirement Attributes: Dist:ART

Theater

Chair: Analola Santana

Professors: Timothy P. Hackett, Daniel Kotlowitz; Associate Professors: Laurie Churba, Monica White Ndounou, Mara Sabinson; Senior Lecturers: Keith Coughlin, Carol Dunne, Christian Kohn; Lecturers: Kathleen Cunneen, Robert David Grant, John Heginbotham, Rebecca Stenn.

To view Theater courses, click here (p. 786).

The Major

The Theater major at Dartmouth College seeks to facilitate and integrate the creative, critical, and historical study of theater as a performing art. To that end, the major includes a range of interdisciplinary courses in theater studies (the history, criticism, and theory of theater and performance) as well as theater practice (acting, directing, design, dance, stage management, technical production, and playwriting). Majors may concentrate their studies in one area, such as acting, or pursue a multifaceted course of study in consultation with their major advisor. In addition to coursework, majors are expected to be involved in department productions as described below, under "production requirements."

Requirements

Ten major courses, as enumerated within the following categories:

1. Five courses in Theater Studies:

a. The following three courses in the Theater History Sequence are required:

THEA 15: Theater and Society I: Classical and Medieval Performance
 THEA 16: Theater and Society II: Early Modern Performance
 THEA 17: Theater and Society III: 19th and 20th Century Performance

b. Any two of the following Theater Studies courses:

THEA 1: Introduction to Theater*
 THEA 10: Special Topics courses
 THEA 10.51: Black Theatre & Storytelling Workshop in XR
 THEA 10.55: Curating a National Black Theater Museum/Institution
 THEA 10.56: Black Theatre Workshop
 THEA 10.68: Staging Rebellion
 THEA 10.84: Performing Histories, Performing Us
 THEA 12/CLST 2: The Tragedy and Comedy of Greece and Rome
 THEA 19/COLT 34: Human Rights and Performance
 THEA 21/WGSS 59: Race, Gender, and Performance
 THEA 22/AAAS 31: Black Theater, U.S.A.
 THEA 23/AAAS 54: Postcolonial African Drama
 THEA 24/ASCL 70.07: Asian Performance Traditions
 THEA 62: Plays in Performance: Perception and Analysis (FSP)
 THEA 80: Independent Study, with approval of the Chair

*THEA 1 satisfies the Theater Studies course fulfillment only if it is completed before THEA 15, 16, and 17.

With prior approval of the Chair, up to one course in Theater Studies from another department may be used to fulfill this category, such as:

ENGL 15: Shakespeare I
 ENGL 34: American Drama
 ENGL 39: Modern British Drama

2. Four courses in Theater Practice:

a. The following course is required:

THEA 40: Technical Production

b. Any one of the following courses in Theater Performance:

THEA 10: Special Topics courses
 THEA 26: Movement Fundamentals I
 THEA 27: Movement Fundamentals II
 THEA 28: Dance Composition
 THEA 29: Dance Theater Performance
 THEA 30: Acting I
 THEA 31: Acting II
 THEA 35: Acting for Musical Theater
 THEA 36: The Speaking Voice for the Stage
 THEA 50: Playwriting I
 THEA 51: Playwriting II
 THEA 54: Directing
 THEA 60: Classical Performance I (FSP)

THEA 61: Classical Performance II (FSP)
 THEA 65: Summer Theater Lab
 THEA 80: Independent Study, with approval of the Chair

c. Any one of the following courses in Theater Design or Management:

THEA 41: Stage Management
 THEA 42: Scene Design
 THEA 44: Lighting Design
 THEA 48: Costume Design
 THEA 80: Independent Study, with approval of the Chair

d. One additional Theater Practice course, either in Performance, Design, or Management

3. The Culminating Experience:

In their final year, all majors must complete the following course to satisfy their Culminating Experience in Theater:
 THEA 90: Contemporary Theater Practice

4. Production Requirements:

Every Theater major is expected to complete **five** production credits to demonstrate an active and sustained participation in theater production. Production credits require faculty supervision and may be completed on either Department of Theater productions or productions sponsored by the Department. Production credits must reflect a variety of theater activity and each credit must represent a meaningful practical experience. No more than two production credits may be in a single area of production.

- One production credit must be fulfilled by THEA 40: Technical Production.
- One production credit must be fulfilled by serving as a stage manager or assistant stage manager for a MainStage production. Alternatively, the student may complete THEA 41: Stage Management to fulfill this requirement.
- One production credit must be fulfilled by serving on a production crew.
- Two production credits may be fulfilled with any category of theater production. This includes:
 - certain courses with a production component, such as THEA 65: Summer Theater Lab
 - acting in productions
 - participation on a production crew
 - stage management
 - directing
 - designing
 - playwriting, when the script is produced under the sponsorship of the Department

- dramaturgy

The Modified Major

A student who wishes to combine the study of theater with a related field may apply to the Department for a modified major. Such a program shall contain eight courses from the Theater major and four courses beyond prerequisites in a single field (only) outside of the Department of Theater. Theater modified majors must receive approval from the secondary department or program. Students are required to submit a detailed rationale that explains how the twelve (or more) courses across the two departments cohere into a unified plan of study. In rare instances, the department will consider a theater major that is modified with more than one field; proposals for such modified majors must be approved by the department faculty.

In addition to coursework, modified majors are expected to be involved in department productions as described below under "production requirements."

Requirements

Eight major courses, including those enumerated within the following categories:

1. Three courses in Theater Studies:

a. Two courses from the Theater History Sequence:

THEA 15: Theater and Society I: Classical and Medieval Performance
 THEA 16: Theater and Society II: Early Modern Performance
 THEA 17: Theater and Society III: 19th and 20th Century Performance

b. One course from the following:

THEA 1: Introduction to Theater*
 THEA 10: Special Topics courses
 THEA 10.51: Black Theatre & Storytelling Workshop in XR
 THEA 10.55: Curating a National Black Theater Museum/Institution
 THEA 10.56: Black Theatre Workshop
 THEA 10.68: Staging Rebellion
 THEA 10.84: Performing Histories, Performing Us
 THEA 12/CLST 2: The Tragedy and Comedy of Greece and Rome
 THEA 19/COLT 34: Human Rights and Performance
 THEA 21/WGSS 59: Race, Gender, and Performance
 THEA 22/AAAS 31: Black Theater, U.S.A.
 THEA 23/AAAS 54: Postcolonial African Drama
 THEA 24/ASCL 70.07: Asian Performance Traditions
 THEA 62: Plays in Performance: Perception, and Analysis (FSP)
 THEA 80: Independent Study, with approval of the Chair

*THEA 1 satisfies the Theater Studies course fulfillment only if it is completed before THEA 15, 16, and 17.

With prior approval of the Chair, up to one course in Theater Studies from another department may be used to fulfill this category, such as:

ENGL 15: Shakespeare I
 ENGL 34: American Drama
 ENGL 39: Modern British Drama

2. Three courses in Theater Practice:

a. The following course is required:

THEA 40: Technical Production

b. Any one of the following courses in Theater Performance:

THEA 10: Special Topics courses
 THEA 26: Movement Fundamentals I
 THEA 27: Movement Fundamentals II
 THEA 28: Dance Composition
 THEA 29: Dance Theater Performance
 THEA 30: Acting I
 THEA 31: Acting II
 THEA 35: Acting for Musical Theater
 THEA 36: The Speaking Voice for the Stage
 THEA 50: Playwriting I
 THEA 51: Playwriting II
 THEA 54: Directing
 THEA 60: Classical Performance I (FSP)
 THEA 61: Classical Performance II (FSP)
 THEA 65: Summer Theater Lab
 THEA 80: Independent Study, with approval of the Chair

c. Any one of the following courses in Theater Design or Management:

THEA 41: Stage Management
 THEA 42: Scene Design
 THEA 44: Lighting Design
 THEA 48: Costume Design
 THEA 80: Independent Study, with approval of the Chair

3. The Culminating Experience:

In their final year, all modified majors must complete the following course to satisfy their Culminating Experience in Theater:

THEA 90: Contemporary Theater Practice

4. One additional theater course, in any category.

5. Production Requirements:

Every modified Theater major is expected to complete **four** production credits to demonstrate an active and sustained participation in theater production. Production credits may be completed on either Department of Theater productions or productions sponsored by the Department, and require faculty supervision. Production credits must reflect a variety of theater activity and each credit must represent a meaningful practical experience.

- One production credit must be fulfilled by THEA 40: Technical Production.
- One production credit must be fulfilled by serving as a stage manager or assistant stage manager for a MainStage production. Alternatively, the student may complete THEA 41: Stage Management to fulfill this requirement.
- One production credit must be fulfilled by serving on a production crew.
- One production credit may be fulfilled with any category of theater production. This includes:
 - certain courses with a production component, such as THEA 65: Summer Theater Lab
 - acting in productions
 - participation on a production crew
 - stage management
 - directing
 - designing
 - playwriting, when the script is produced under the sponsorship of the Department
 - dramaturgy

Modifying another Major with Theater

A student who wishes to combine the another related field of study with theater may apply to the Department for a modified major. Such a program shall contain eight courses from a single field (only) outside of the Department of Theater and **four** courses from the Theater major. Modified majors with Theater must receive approval from the primary department or program. Students are required to submit a detailed rationale to that other department or program that explains how the twelve (or more) courses across the two departments cohere into a unified plan of study. Students intending to pursue a modified major with Theater must also meet with the Chair to discuss their planned course of study previous to

submitting a plan in DartWorks. In addition to coursework, modified majors are expected to be involved in at least one department production as described below under "production requirements."

Requirements

Four major courses, including those enumerated within the following categories:

1. One course in Theater Studies:

THEA 15: Theater and Society I: Classical and Medieval Performance

THEA 16: Theater and Society II: Early Modern Performance

THEA 17: Theater and Society III: 19th and 20th Century Performance

THEA 1: Introduction to Theater*

THEA 10: Special Topics courses

THEA 10.51: Black Theatre & Storytelling Workshop in XR

THEA 10.55: Curating a National Black Theater Museum/Institution

THEA 10.56: Black Theatre Workshop

THEA 10.68: Staging Rebellion

THEA 10.84: Performing Histories, Performing Us

THEA 12/CLST 2: The Tragedy and Comedy of Greece and Rome

THEA 19/COLT 34: Human Rights and Performance

THEA 21/WGSS 59: Race, Gender, and Performance

THEA 22/AAAS 31: Black Theater, U.S.A.

THEA 23/AAAS 54: Postcolonial African Drama

THEA 24/ASCL 70.07: Asian Performance Traditions

THEA 62: Plays in Performance: Perception, and Analysis (FSP)

THEA 80: Independent Study, with approval of the Chair

*THEA 1 satisfies the Theater Studies course fulfillment only if it is completed before THEA 15, 16, and 17.

With prior approval of the Chair, up to one course in Theater Studies from another department may be used to fulfill this category, such as:

ENGL 15: Shakespeare I

ENGL 34: American Drama

ENGL 39: Modern British Drama

2. One course in Theater Practice:

THEA 10: Special Topics courses

THEA 26: Movement Fundamentals I

THEA 27: Movement Fundamentals II

THEA 28: Dance Composition
 THEA 29: Dance Theater Performance
 THEA 30: Acting I
 THEA 31: Acting II
 THEA 35: Acting for Musical Theater
 THEA 36: The Speaking Voice for the Stage
 THEA 40: Technical Production
 THEA 50: Playwriting I
 THEA 51: Playwriting II
 THEA 54: Directing
 THEA 60: Classical Performance I (FSP)
 THEA 61: Classical Performance II (FSP)
 THEA 65: Summer Theater Lab
 THEA 80: Independent Study, with approval of the Chair

3. One course in Theater Design/Management:

THEA 41: Stage Management
 THEA 42: Scene Design
 THEA 44: Lighting Design
 THEA 48: Costume Design
 THEA 80: Independent Study, with approval of the Chair

4. The Culminating Experience:

In their final year, all modified majors must complete the following course to satisfy their Culminating Experience in Theater:

THEA 90: Contemporary Theater Practice

5. Production Requirement:

Every modified with Theater major is expected to complete **one** production credit to demonstrate an active and sustained participation in theater production. The production credit may be completed on either Department of Theater productions or productions sponsored by the Department, and require faculty supervision.

- certain courses with a production component, such as THEA 40: Technical Production, THEA 41: Stage Management, or THEA 65: Summer Theater Lab
- acting in productions
- participation on a production crew
- stage management
- directing
- designing
- playwriting, when the script is produced under the sponsorship of the Department
- dramaturgy

The Minor

The requirements for a Theater minor are **six** theater courses. Students intending to pursue a Theater minor must meet with the Chair to discuss their planned course of study and must submit the online minor declaration form on DegreeWorks. In addition to coursework, minors are expected to be involved in department productions as described below under "production requirements."

Requirements

Six minor courses, as enumerated within the following categories:

1. One course from the Theater History Sequence:

THEA 15: Theater and Society I: Classical and Medieval Performance
 THEA 16: Theater and Society II: Early Modern Performance
 THEA 17: Theater and Society III: 19th and 20th Century Performance

2. The following course in Theater Production:

THEA 40: Technical Production

3. Four additional Theater courses:

The other four courses of the minor shall include no more than one THEA 80: Independent Study and no more than one course outside of the Department that would normally be accepted for the major.

THEA 1: Introduction to Theater

THEA 10: Special Topics courses

THEA 10.51: Black Theatre & Storytelling Workshop in XR

THEA 10.55: Curating a National Black Theater Museum/Institution

THEA 10.56: Black Theatre Workshop

THEA 10.68: Staging Rebellion

THEA 10.84: Performing Histories, Performing Us

THEA 12/CLST 2: The Tragedy and Comedy of Greece and Rome

THEA 19/COLT 34: Human Rights and Performance

THEA 21/WGSS 59: Race, Gender, and Performance

THEA 22/AAAS 31: Black Theater, U.S.A.

THEA 23/AAAS 54: Postcolonial African Drama

THEA 24/ASCL 70.07: Asian Performance Traditions

THEA 26: Movement Fundamentals I
 THEA 27: Movement Fundamentals II
 THEA 28: Dance Composition
 THEA 29: Dance Theater Performance
 THEA 30: Acting I
 THEA 31: Acting II
 THEA 35: Acting for Musical Theater
 THEA 36: The Speaking Voice for the Stage
 THEA 41: Stage Management
 THEA 42: Scene Design I
 THEA 44: Lighting Design
 THEA 48: Costume Design
 THEA 50: Playwriting I
 THEA 51: Playwriting II
 THEA 54: Directing
 THEA 60: Classical Performance I (FSP)
 THEA 61: Classical Performance II (FSP)
 THEA 62: Plays in Performance: Perception and Analysis (FSP)
 THEA 65: Summer Theater Lab

4. Production Requirements:

Every Theater minor is expected to complete **three** production credits to demonstrate an active and sustained participation in theater production. Production credits may be completed on either Department of Theater productions or productions sponsored by the Department, and require faculty supervision. Production credits must reflect a variety of theater activity, and each credit must represent a meaningful practical experience.

- One production credit must be fulfilled by THEA 40: Technical Production.
- Two production credits may be fulfilled with any two categories of theater production. This includes:
 - certain courses with a production component, such as THEA 41: Stage Management or THEA 65: Summer Theater Lab
 - acting in productions
 - participation in a production crew
 - stage management*
 - directing
 - designing

- playwriting, when the script is produced under the sponsorship of the Department
- dramaturgy

The Culminating Experience

All Theater majors and modified Theater majors must complete the course THEA 90: Contemporary Theater Practice to satisfy their Culminating Experience in Theater during their final year of study. Theater minors and other majors modifying with Theater will complete their Culminating Experience in their primary departments. Double majors must complete Culminating Experiences in both majors.

Transfer Credit

Every course taken for transfer credit in Theater must be approved prior to enrollment by the Chair of the Department, upon review of a detailed course description and syllabus. Three courses taken at other institutions may be substituted in fulfillment of the major or minor requirements, provided that the courses are equivalent to Department courses and the program as a whole is consistent with the intent of the major or minor. Of the three transferred courses, no more than two may be in dramatic literature, history, and criticism; no more than two courses may be in theater practice (please see the list of courses above).

Honors Program

An honors thesis in the Department of Theater provides an opportunity to deepen skills and knowledge in an area in which the student has already demonstrated the ability to produce distinguished work. Students who have completed at least five major courses and who have an average in the major of 3.4 or higher (and a College average of 3.0 or higher) are eligible to apply for the Honors Program. Students with modified as well as standard majors may apply. An Honors project normally extends through two terms and receives two major credits. Possible honors projects include:

- A written academic thesis (at least 18-20 pages in length)
- An original full-length play with a supporting paper
- A realized production (fully produced) with a supporting paper
- A design project with a supporting paper

Honors theses that are primarily creative in scope will include an academic component, which will typically consist of a reflective and analytical essay, approximately 8-10 pages in length. All thesis students will also produce a bound document for the Rauner library that includes the

essay as well as additional documentation of the honors thesis project, as determined in consultation with the thesis advisor.

Students must submit a preliminary proposal to an advisor and the Chair of the Department by mid-May of their junior year; the due date for a final proposal will be determined at that time. Final proposals must be approved by the Department. Proposals will be evaluated based on originality and depth of the project, the quality of the proposal, and the student's prior record of accomplishment. The student's educational goals will also be balanced with available department resources. Students who prepare for an Honors project by pursuing approved courses of advanced independent study may, with approval of the Department, be allowed to complete the project (thesis) in one term. Students in the Honors Program must complete the full curriculum required of a major or modified major; the honors credits are in addition to the ten-course major. Students may complete the ten-course major simultaneously with the Honors thesis: the ten-course major does not necessarily have to be completed before the honors work has begun. For additional information, students should contact the Academic Coordinator of the Department of Theater.

Foreign Study Program

England: London. Summer term.

The Theater Foreign Study Program offers students the opportunity to combine Theater Studies and professional practice in theater at the London Academy of Music and Dramatic Art, one of the world's great conservatories. The program is a unique chance for students to develop their craft while taking advantage of London's incomparable theatrical tradition and vibrant cultural scene.

Prior to participating in the Theater Foreign Study Program, the following prerequisites must be completed:

1. One course from the Theater History Sequence:

THEA 15: Theater and Society I: Classical and Medieval Performance

THEA 16: Theater and Society II: Early Modern Performance

THEA 17: Theater and Society III: 19th and 20th Century Performance

2. One course in Theater Practice in either performance, design, or management from among the following courses:

Performance:

THEA 10: Special Topics courses

THEA 26: Movement Fundamentals I

THEA 27: Movement Fundamentals II

THEA 28: Dance Composition

THEA 29: Dance Theater Performance

THEA 30: Acting I

THEA 31: Acting II

THEA 35: Acting for Musical Theater

THEA 36: The Speaking Voice for the Stage

THEA 50: Playwriting I

THEA 51: Playwriting II

THEA 54: Directing

THEA 65: Summer Theater Lab

THEA 80: Independent Study, with approval of the Chair

Design or Management:

THEA 40: Technical Production

THEA 41: Stage Management

THEA 42: Scene Design

THEA 44: Lighting Design

THEA 48: Costume Design

THEA 80: Independent Study, with approval of the Chair

The typical British conservatory experience is designed for students interested in acting, directing, playwriting, design, stage management, dramaturgy, or criticism.

-

All FSP students will be enrolled in three courses:

THEA 60 : Classical Performance I

THEA 61 : Classical Performance II

THEA 62 : Plays in Performance: Perception and Analysis

THEA 60 and THEA 61 will be taught by instructors from the London Academy of Music and Dramatic Art. THEA 62: Plays in Performance: Perception and Analysis will be taught by the Dartmouth Theater faculty and involves attending an average of two to three productions per week and participating in a weekly seminar. In addition to the many London theaters, including the Royal Shakespeare Company and National Theatre, students will have full access to London's cultural resources in music, dance, film, and museums. When practical, field trips to historical sites of theatrical interest and backstage tours of theater facilities will be scheduled.

For additional information regarding enrollment and prerequisites, please contact the Academic Coordinator of the Department of Theater.

THEA - Theater Courses

To view Theater requirements, click here.

THEA 1 - Introduction to Theater

As a set of staged practices rich with social context, theater has sought to document, engage, and affect communities. This course introduces and explores theater from page to stage as a live performing art. Topics include the relationship between theater and society (historical and contemporary), dramatic structure, theatrical representation, and the crafts of theater artists such as directors, designers, playwrights, and actors. We will also engage with live performances and video archives of past performances.

Degree Requirement Attributes: ART

THEA 7 - First-Year Seminars in Theater

Consult special listings.

Offered: Spring.

THEA 10.08 - Creativity and Collaboration

Creativity and collaboration are concepts found in all disciplines and regularly requested, although rarely taught. In this course, students will have the opportunity to develop creative abilities through experiences in performance-based arts, and apply these in a collaborative project. Faculty artists active in movement and theater design will teach the course, which is open to students with no performance experience, as well as those looking for a new approach to existing skills.

Degree Requirement Attributes: Dist:ART

THEA 10.25 - Music, Design, and Creativity

This introductory class breaks new ground by making music, rather than text, the driving force behind design for the performing arts. After being introduced to the principles of design, students will create visual artworks inspired by personal responses to specific pieces of music. Students will then create designs specific to dance, concert design, musical theatre, and opera. Various forms of idea-sharing will be taught, including collage, sketching, rough modeling, and painting. No previous experience required.

Degree Requirement Attributes: Dist:ART

THEA 10.26 - Sound Design

The purpose of this course is to develop our listening skills. To broaden our understanding of music and noise and how to talk about them. To investigate how sound

works with both text and movement. To understand how sound can create context, tension, release, and surprise. To explore designing collaboratively. Projects include creating soundscapes and scoring short works.

Cross-Listed as: MUS 027

Degree Requirement Attributes: Dist:ART

THEA 10.27 - Latinx Stage and Screen

This course will examine the Latinx stage and screen, focusing specifically on musicals that portray Latinx lives. We will focus on canonical works—including *West Side Story*, *Zoot Suit*, and *Hamilton*—in order to deepen our knowledge of their form, production history, historical reception, and contemporary place in American culture. We will take an interdisciplinary approach, drawing our reading assignments from the fields of Ethnic Studies, American Studies, Performance Studies, and Film and Media Studies, in order to analyze these productions as they traveled from stage to screen (and sometimes, back to the stage) and the representational and cultural politics involved in that shift. Finally, we will explore not only the musicals themselves, but also the historiography that has informed our understanding of them. Writing assignments will ask the students to reflect on the evolution of scholarly arguments regarding these canonical works.

Cross-Listed as: FILM 47.29 LACS 20.07

Degree Requirement Attributes: Dist:SOC; WCult:NW

THEA 10.28 - Musical Theater Writing

A musical tells a story with words and music. Beyond those basic parameters, any limitations around what a musical can and cannot be are up for debate. This multi-disciplinary class is open to composers, lyricists, songwriters, playwrights, directors, actors, singers, poets and musicians of any background. The objective is to investigate music theater by making it ourselves. In addition to looking at the past present and future of American musical theater we will engage a broad exploration musical storytelling, across many aesthetic sensibilities and time periods. The class requires weekly creative output in addition to reading and listening outside of class. Students must be willing to work across the boundaries of their own disciplines to generate lyrics, songs and scenes. The class will establish a generous inter-disciplinary working environment which values creative risks, collaboration and inventiveness.

Cross-Listed as: MUS 27.01

Degree Requirement Attributes: Dist:ART

THEA 10.29 - Text Analysis: Tools for Interpretation

A dramatic text is like a musical score. In order to understand a play, a theater artist must first learn to “read music.” This course will focus on the tools that allow an artist to understand the dramatic “score” and ultimately to

translate the playwright's words into action on stage. The playwright's tools: Style, Setting, Mood, Theme, Environment, Character, Language, Action, Objective, Obstacles, will be defined and discussed. The reading list will include plays by Henrik Ibsen, August Strindberg, Katori Hall, William Shakespeare, Lynn Nottage, Caryl Churchill, and others. This course is relevant for all theater artists regardless of area of specialization.

Degree Requirement Attributes: Dist:ART

THEA 10.30 - Theater of Ideas: Britain and France

An exploration of the main intellectual movements, dramatic forms, and playwrights that shaped the evolution of British and French theatre in the post war period. Particular attention given to modern drama history, theory, and performance and how they relate to the wider social and political context. Writers drawn from some of the following: Osborne, Pinter, Stoppard, Churchill, Hare, Bennett, Ravenhill, Sartre, Beckett, Genet, Cixous and Mnouchkine, Koltes, Reza, and Ndiaye.

Cross-Listed as: COLT 34.01

Degree Requirement Attributes: Dist:LIT; WCult:W

THEA 10.34 - Disability Arts and Activism

"Disability Arts and Activism" examines radical disability resistance through the lens of culture and performance to ask the central question: how does disability art make cultural change? Students will learn a history of disability activism as well as the impacts of disability policy and politics across the stage and streets. Using the frame of Disability Justice, students will develop analytic skills to unpack normative conceptions around bodies, visibility, and representation across multiple forms of difference such as size, race, nation, class, gender, and sexuality. We will explore the performance involved in protest, alongside the protest present in disability cultural forms, such as dance, sports, theater, music, and visual art. The course culminates in a research project that crafts an intervention into a local art space to build radical accessibility.

Cross-Listed as: WGSS 66.25

Degree Requirement Attributes: Dist:ART

THEA 10.35 - Jazz Dance for Theatre

An exploration of movement for the theater. Ranging from realism to the ridiculous, from the pedestrian street scene to the full-blown dream ballet. With emphasis rooted in, but not limited to, Jazz Dance. This class will explore key, yet basic fundamentals of movement for living theater.

Degree Requirement Attributes: Dist:ART

THEA 10.45 - Arab Theatre

This class is a survey of the main trends and themes in Arab theatre from the mid-19th century to contemporary

times. Students will be introduced to some of the main playwrights, actors and directors who helped define the art in the Arab world over the last century and a half.

Cross-Listed as: COLT 35.07 MES 81.01

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 10.50 - American Musical Theatre History

This course provides insight into over a hundred and fifty years of American musical theatre style, practice, and tradition. Beginning with its roots in minstrelsy, European operetta, and vaudeville, we will examine the evolution of the American musical form from its origins to contemporary commercial Broadway and other professional productions. This course provides an additional layer of sociopolitical context to our understanding of shows ranging from *Show Boat* to *Hamilton* and beyond. Considering how intersecting aspects of identity shape the form and content of the work we study, this course requires close reading and listening as we explore the aesthetics, history, and impact of American musical theatre in theatre and performance studies as a field.

Degree Requirement Attributes: Dist:ART

THEA 10.51 - Black Theatre & Storytelling Workshop in XR: Reimagining The Purple Flower (1928)

Recognizing the intrinsic value of Black lives and Black storytelling across media platforms, this course will explore the staging of Black theatre texts in virtual reality (VR) and related XR technology. Participants will explore VR technology at the intersection of Black cultural storytelling through the performance of monologues and scenes as well as design/tech, music and movement culminating into a pilot production of Marita Bonner's *The Purple Flower* (1928), a non-realistic, one-act play that pushes the boundaries of theatrical staging. No prior experience or pre-requisites required.

Cross-Listed as: AAAS 31.90 FILM 49.02

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 10.55 - The Making of 21st Century Exhibits: Curating a National Black Theater Museum/Institution

This course is designed for those interested in theatre and performance, African American studies, history, and culture. Students will study influences on the development of black theater and performance in the USA as well as processes for preserving, curating, and exhibiting culture in institutions, examining how museum concepts intersect and/or collide with representations of black history and culture. In collaboration with the Hattiloo Theatre in Memphis and the DeVos Institute of Arts Management, who are drafting plans for an institution devoted to black theatre practitioners, students will determine and develop content for an interactive venue. They will consider

strategies for the use of technology and live exhibits, involving black communities in exhibits and curation, and providing access to diverse communities. Projects and findings will be shared with the institution's developers and will be considered in their ongoing plans. The course will include a visit to the National Museum of African American History and Culture in Washington.

Cross-Listed as: AAAS 32.15

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 10.56 - Black Theatre Workshop: The August Wilson Experience

Using legendary playwright, August Wilson's ten-play cycle of African Americans' experiences throughout American history as our inspiration, this course provides hands-on, experiential learning of acting, script analysis, and theatrical production. With no previous performance, design, or production experience required, students will read Wilson's plays and related commentary with opportunities to perform selected scenes from the Wilson cycle while exploring possibilities for design and technical elements. In this process-oriented course, students also learn basic acting techniques by strengthening observation and listening skills, risktaking, imagination, improvisation, concentration, exploration of self, voice, and body. Activities include textual analysis of Wilson's plays and related works as well as documenting and revising performance philosophy and process. While providing a safe space for exploring the roles we play in our daily lives and taking on the roles of others in given or imagined circumstances, students will learn widely accepted theories, practices, and terminology of the actor's craft in order to facilitate the practice, writing, and discussion of acting and producing Wilson's plays and others.

Cross-Listed as: AAAS 31.50

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 10.57 - Dance Theatre of Harlem Workshop: Collaborative Storytelling Through Movement

Synthesizing aspects of cultural storytelling, theater, movement, activism and biography, this course is focused on the creation of new performance work. Students will have a rare opportunity to engage with the singular Dance Theatre of Harlem (DTH) during their summer residency at Dartmouth College. This course explores the company's relationship and history with ballets that tell a story and the potential for collaborative storytelling across platforms. During THEA 10.57, students will also create, collaborate, and organize performances of their own movement-based works.

Cross-Listed as: AAAS 31.10

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 10.60 - Acting Styles

This course will cover the introductory principles of specific Acting Styles utilizing a part theory part practice format. Students will be encouraged to explore their creative abilities on a journey of self-discovery to add these styles to their performance toolkit. Through lecture and laboratory work, the participants will be introduced to the techniques behind stylized acting. The course will culminate in a final originally created scene evolved from the principles studied in class.

Degree Requirement Attributes: Dist:ART

THEA 10.64 - Feminist and Queer Africa on Stage & Screen

This course explores representations of feminist and queer Africa in theatre, dance, and film. How do female-identified, nonbinary, and/or queer African artists use creative expression to navigate and challenge neocolonial, heteropatriarchal regimes and advance ideas of LGBTQIA rights and gender equality? Although several countries will be considered during the term, Kenya and Uganda receive a particular emphasis. All students are welcome; no prior knowledge of Africa and/or theories of gender and sexuality are needed.

Cross-Listed as: AAAS 54.05

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 10.65 - Performeras on the Latin American Stage

This course provides an overview of women's dramatic writing and cultural expression from Latin America and considers how these texts intersect, reflect, disrupt or resist canonical literary movements in Latin America. Course content includes traditional dramatic forms as well as non-literary, visual and performative forms of expression. By examining works of very diverse ranges, we will also challenge society's and the authors' conceptualizations of Latin American women as a way to critique underlying issues of race, class, gender, and other power structures.

Cross-Listed as: LACS 049 SPAN 65.09

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 10.68 - Staging Rebellion. Dissidence in Latinx American Theatre

This course follows the history of theatre in the Latinx Americas (encompassing a hemispheric approach) for social change. Students will learn about Theatre of the Oppressed, guerilla theatre in all its forms used throughout Latin America and Latinx communities, playwrights writing about social justice issues, and activist

performance. We will focus on plays and performances that have as their central theme rebellion and the rebel as we question the nature of rebellion, its manifestations, and consequences.

Cross-Listed as: LACS 25.03

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 10.71 - Plays OnStage: Acting Comedy

An advanced acting class in the art of performing comedy. Building on the basics of Acting I, this course will examine how the fundamentals of acting are adapted to playing a heightened comedic text. Students will be introduced to a broad range of comedic performance, past and present, from sketch comedy to standup to films and television, developing a vocabulary of reference points, styles, and approaches to be applied in their rehearsals of the text. The course will culminate in a public presentation of the play. Roles may be shared.

Prerequisite: THEA 30: Acting I. Equivalent performance courses or experience will be considered on an individual basis.

Degree Requirement Attributes: Dist:ART

THEA 10.72 - Classical French Comedy Made Modern; Molière Past and Present

Molière is France's best known and most universally loved playwright. Over three hundred years after his death, his plays continue to dominate the French stage and stages across the world. In this course, we will explore Molière's creative genius to understand his profound and lasting influence. The last third of the course will be devoted to an in-depth study of "Molière in the Park," a theatre company in Brooklyn founded in 2019. Not open to students who have received credit for FREN 40.04. This course will be taught in English.

Cross-Listed as: FREN 40.09

Degree Requirement Attributes: Dist:INT or ART; WCult:W

THEA 10.84 - Performing Histories, Performing Us

Performing Histories, Performing Us is an interactive course, taught by scholar artist, Dr. Monica White Ndounou, with a residency component with actor/writer/director Roger Guenveur Smith. The course utilizes performance as a tool to interrogate, examine and explore the concept of history, particularly at the intersection of culture and performance. This course uses traditional and nontraditional archives and multiple platforms to illuminate the possibilities for performing histories; performing us.

Cross-Listed as: AAAS 31.80 FILM 47.33

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 12 - The Tragedy and Comedy of Greece and Rome

The course studies in translation selected works of Aeschylus, Sophocles, Euripides, Seneca (tragedy), Aristophanes and Plautus (comedy), and some of their central themes and questions: law, community, revenge, passion, and justice. We will approach them both as texts and as scripts/librettos, considering their relationship to other types of performance (ritual, rhetoric, music, dance) and genres (history, philosophy) as well as to theatrical space. There will be practical workshop opportunities for those interested. Open to all classes.

Cross-Listed as: CLST 2

Degree Requirement Attributes: Dist:ART; WCult:W

THEA 15 - Theatre and Society I: Classical and Medieval Performance

This course explores selected examples of world performance during the classical and medieval periods in Western Europe and eastern Asia. Plays to be discussed might include those by Aeschylus, Sophocles, Euripides, Aristophanes, Seneca, Plautus, Terence, and Zeami. Through the reading and discussion of primary and secondary texts, we seek to situate selected performance texts within their sociopolitical and artistic contexts. Open to all classes.

Offered: Fall.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

THEA 16 - Theatre and Society II: Early Modern Performance

This course explores selected examples of world performance during the early modern period (fourteenth through the eighteenth centuries). Plays to be discussed might include those by Shakespeare, Calderón, Sor Juana de la Cruz, Molière, Racine, Marivaux, and Carlo Gozzi. Through the reading and discussion of primary and secondary texts, we seek to situate selected performance texts within their sociopolitical and artistic contexts.

Offered: Winter.

Degree Requirement Attributes: Dist:INT or ART; WCult:W

THEA 17 - Theatre and Society III: 19th and 20th Century Performance

This course explores selected examples of world performance in the 19th and 20th century. Plays to be discussed might include those by Ibsen, Strindberg, Chekhov, Lorca, Ionesco, Beckett, Williams, Miller, and Brecht, as well as contemporary U.S. playwrights such as Suzan-Lori Parks and Charles Mee. Through the reading and discussion of primary and secondary texts, we seek to

situate selected performance texts within their sociopolitical and artistic contexts.

Offered: Spring.

Degree Requirement Attributes: Dist:INT or ART;
WCult:W

THEA 18 - Russian and East European Theater

This course is devoted to Russian drama and theater from the 19th through the 21st century. We will read eight plays that are central to the Russian literary and theatrical tradition and then discuss their most significant interpretations on both the Russian and the world stage. The meetings will be conducted in a non-traditional format. In our examination of the plays, we will attempt to model the process of stage production in accordance with the principles developed by Konstantin Stanislavsky—a celebrated Russian director whose approach to theater transformed acting in Russia and beyond. The course will culminate in the production of a play by a Russian playwright which students themselves will cast, direct, and design. All readings are in English.

Cross-Listed as: EEER 018

Degree Requirement Attributes: Dist:LIT; WCult:W

THEA 19 - Human Rights and Performance

What can theatre do for human rights, and human rights for theatre? How do playwrights translate violations of human rights to the stage? Through class discussion and creative exercises, we will explore selected plays from around the world that address human rights through various genres and dramatic forms, including theatre of testimony, documentary theatre, realism, allegory, and surrealism. Open to all classes.

Degree Requirement Attributes: Dist:INT or ART

THEA 21 - Race, Gender, and Performance

Students will explore the perspectives of contemporary Latina/o, Asian American, Black, and Native American theater artists/performers. Our examination will also consider the socio-historical and political contexts engaged through these artists' works. We will also consider the relationship between the construction of identity and strategies of performance used by playwrights/performers to describe race, gender, sexuality, class, subjectivity, and ideas of belonging. Texts examined will include works by Moraga, Highway, Wilson, Parks, Gotanda, and Cho.

Cross-Listed as: WGSS 59.04

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 22 - Black Theater, U.S.A.

This course will examine African American playwrights, drama, and theater from 1959 to the present. Further exploration will focus on the impact of civil rights, the

Black Arts movement, and cultural aesthetics on the form, style, and content of African American plays. Readings will include plays of Hansberry, Baldwin, Baraka, Kennedy, Childress, Shange, Wolfe, Wilson, Parks and others. Open to all classes.

Cross-Listed as: AAAS 31

Degree Requirement Attributes: Dist:ART; WCult:CI

THEA 23 - Postcolonial African Drama

This course explores selected theatre and performance traditions of sub-Saharan Africa. How do African playwrights negotiate and transform the colonial legacy of Western drama, and how do they use theater to challenge neocolonial regimes and to advance ideas of democracy, human rights, and gender equality? Plays from Nigeria, South Africa, Kenya, and Uganda receive special emphasis. No prior knowledge of African studies or theater is necessary, just a willingness to expand critical and creative horizons.

Cross-Listed as: AAAS 54

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 24 - Asian Performance Traditions

This course studies the performance traditions of Asia, focusing on China, Japan, Indonesia and India. Classical forms studied include Noh, Bunraku, Beijing opera, Sanskrit drama, Balinese dance and Javanese puppet theater. Attention is paid to social, religious and aesthetic influences on these traditions, theories on which they are based, the history behind the theatrical practices, and training and dramatic techniques. Students gain an appreciation of the rich variety and scope of theatrical conventions of Asia.

Cross-Listed as: ASCL 70.07

Degree Requirement Attributes: Dist:ART; WCult:NW

THEA 25 - Solo Performance

This course will introduce and engage the history, texts, topics, theoretical guideposts, and landmark figures/performances central to the genre of solo performance. Working between critical examination and practice, participants will analyze the form and content of leading solo performers while also composing a series of short exercises that activate solo performance strategies and methods. The course will culminate in the creation of a participant's self-authored, short solo performance piece.

Cross-Listed as: LACS 25.02

Degree Requirement Attributes: Dist:ART

THEA 26 - Movement Fundamentals I

An introduction to movement for the stage, this course will animate the interplay between anatomy, movement theories and performance. Through exploration of physical

techniques, improvisation and movement composition, students will experience a fundamental approach to using the body as a responsive and expressive instrument. Assignments will include readings, written work, class presentations, mid-term exam and final paper.

Degree Requirement Attributes: ART

THEA 27 - Movement Fundamentals II

A continuation of THEA 26, this class will explore further the relationship between efficient and expressive movement and body connectivity. Contact improvisation, conditioning, kinesiology and movement repertoire form the foundation from which the class will explore individual performance. Assignments include readings, written work, class presentations and a final paper.

Prerequisite: THEA 26; equivalent experience may be considered. Contact instructor for details.

Degree Requirement Attributes: ART

THEA 28 - Dance Composition

An in-depth study of the principles of dance composition leading to choreographic projects. Students will receive training in both dance composition and criticism, developing the requisite tools for choreography while acquiring the vocabulary for sophisticated choreographic analysis. Reading and writing assignments on contemporary issues in dance will be the departure for students' theoretical and creative exploration. To this end the class will concentrate on individual student choreography. Students' class work will be performed in an informal showing at the conclusion of the term. Open to all classes.

Degree Requirement Attributes: Dist:ART

THEA 29 - Dance Theater Performance

Students will examine movement theories and techniques, utilizing these elements to create physical language while developing enhanced ensemble skills. Emphasis will be placed on the creation of a dance theater ensemble piece, which culminates the term in a final performance. The creative process, collaboration, and individual performance are key components of the experience. Readings in Dance Studies and critical reviews of performances are included to contextualize the course's creative work. Open to all classes.

Degree Requirement Attributes: Dist:ART

THEA 30 - Acting I

This course is open to all students. No theater experience is necessary.

To achieve success as a performing artist, an actor must commit to building an ensemble based on respect and mutual understanding and to embracing the notion that empathy is at the heart of the actor's art. Students will be

encouraged to explore their creative abilities on a journey of self-discovery in order to build this sense of ensemble. Through individual and group exercises, students will be introduced to the techniques necessary to play a character believably and honestly. The class will culminate with scene presentations from realistic American plays by authors of diverse cultural backgrounds.

Degree Requirement Attributes: Dist:ART

THEA 31 - Acting II

Acting II is an advanced scene study class that focuses on developing a process for performing non-realistic, "heightened" acting texts. Students will encounter plays that present unique challenges for actors in terms of language, physicality, characterization, style, content and text analysis. The class will structurally fuse the traditionally separate disciplines of acting, voice, and movement into a comprehensive unit by approaching the text simultaneously from these three perspectives. The work will proceed from the assumption that the actor's performance must emerge from an expressively free and integrated instrument.

Prerequisite: THEA 30: Acting I

Degree Requirement Attributes: Dist:ART

THEA 35 - Acting for Musical Theater

This course will introduce students to the techniques used by actors/singers to play musical theater scenes believably, honestly and dynamically. Basic acting techniques will be taught as well as work in singing, text analysis, movement and speech. Students will begin with individual songs, then prepare, rehearse and present two-person musical scenes from *Company*, *The Color Purple*, *West Side Story*, *Side Show*, *Into the Woods*, *Hamilton*, *Passion*, *In the Heights*, *She Loves Me*, *Follies*, and others.

Prerequisite: THEA 30: Acting I

Degree Requirement Attributes: Dist:ART

THEA 36.01 - Acting for Musical Theater II

This course is a continuation of the study of Musical Theater, building on the curriculum of Acting for Musical Theater I. The class will further the student's technique in building character for this genre from various periods and styles. Acting techniques using American Musical Theater of the 1930s through the 1950s will be studied, as well as voice and speech techniques for Shakespearean texts. The course will culminate in a staged reading of scenes from a contemporary musical(s), performed before an invited audience.

Not open to students who have received credit for THEA 10.32.

Prerequisite: THEA 35: Acting for Musical Theater I

Degree Requirement Attributes: Dist:ART

THEA 37 - The Speaking Voice for the Stage

This course is an examination of the principles and practice of freeing the natural voice. It proceeds from the notion that "voice" and "acting" are inseparable. Although it is an introduction to the use of voice in the theater, it is in no way limited to the actor. A specific progression of exercises will be presented to facilitate freeing the body of tensions, discovering the natural breath, releasing vibrations of sound from the body, and opening the channel for sound (throat, jaw, tongue). Resonance, vocal freedom, and articulation will also be explored. Techniques for accessing emotional and psychological truth will be practiced as fundamental to the actor's creative process. A groundwork will be laid for physical and vocal presence. Each student will be responsible for the development and practice of a vocal warm-up. A variety of speaking assignments will be made to develop confidence, presence, and emotional expressivity. Text materials utilized will emerge from self-scripted autobiographical storytelling. A strong commitment to the work is necessary to explore what it means to find one's voice. Open to all classes.

Not open to students who have received credit for THEA 36.

Prerequisite: THEA 30: Acting I

Degree Requirement Attributes: Dist:ART

THEA 40 - Technical Production

An introduction to the technical aspects of live theater, exploring both traditional and modern approaches. Topics include the stage and its equipment, materials and construction of scenic and property items, lighting, sound, rigging, design, stage management, and more. This course includes both lectures and hands-on learning. Open to all students and classes.

Degree Requirement Attributes: Dist:ART

THEA 41 - Stage Management

An introductory course in the theories, techniques, and practices of stage managing a production from its initial stages to the conclusion of the run. Plays, musicals, opera, dance, and touring productions will be examined from the perspective of the stage manager. Working with directors, choreographers, and other members of the production team will be discussed as well as calling shows. Students will acquire practical experience through assignments on Department of Theater productions. Open to all classes.

Degree Requirement Attributes: Dist:ART

THEA 42 - Scene Design I

An introduction to the basics of scenic design through weekly projects in scale models, drawings, research, lighting and storyboards. Students will also study the

collaborative process among scene designers, directors, costume and lighting designers. Suitable for students interested in theater, visual and video art, installation, film, architecture, and sculpture. Students will have the opportunity to assist student and faculty scene designers on Department of Theater productions. Open to all classes.

Degree Requirement Attributes: ART

THEA 44 - Lighting Design

An introduction to the practical and artistic elements of theatrical lighting design. The course will include topics in color theory, form, movement, composition, and the creative process. Through analyzing the script and studying light in nature, film, and art, students will prepare projects that explore the possibilities of light in the theater. Students will have the opportunity to work on Department of Theater productions with faculty and student lighting designers. Lectures, discussions, design projects, and critiques. Open to all classes.

Degree Requirement Attributes: Dist:ART

THEA 48 - Costume Design

An introductory course in the appreciation of the costume design process as part of the dramatic production. Through weekly projects, students will study the principles of line, texture, and color as well as the history of costume from the Renaissance through the eighteenth century. Lectures, design projects, and critiques. Open to all classes.

Degree Requirement Attributes: Dist:ART; WCult:W

THEA 50 - Playwriting I

The aim of this course is for each student to write the best one-act play they are capable of writing. It is open to students both with a theater background and those without. This course will involve a number of creative exercises, the preparation of a scenario, the development of the material through individual conferences, and the reading and discussion of the student's work in seminar sessions. Open to all classes. Limited enrollment.

Degree Requirement Attributes: Dist:ART

THEA 51 - Playwriting II

A continuation of THEA 50: Playwriting I.

Prerequisite: THEA 50: Playwriting I

Degree Requirement Attributes: Dist:ART

THEA 53 - Writing for Musical Theatre

This course will cover the principles of musical theatre writing for book writers and lyricists from plot, storyline, character, character arcs, utilizing the anatomy of the American Musical structure. The course will be part lecture (Chalk Talk), part incubator (Lab) and will combine theory and practice and engage modern musical theatre writing collaborative methodologies towards the

creation of an adaptation for a musical theatre outline/treatment.

Cross-Listed as: MUS 30.03

Degree Requirement Attributes: Dist:ART

THEA 54 - Directing

An introductory course in directing for the stage. This class will focus primarily on text analysis and basic actor coaching techniques, culminating in staging scenes by authors from diverse cultural backgrounds. Particular attention will be paid to methods for building a creative ensemble based on respect and mutual understanding. Open to all classes.

Prerequisite: THEA 30: Acting I

Degree Requirement Attributes: Dist:ART

THEA 60 - Classical Performance I

Instructor: LAMDA faculty

This course is taught by the LAMDA faculty. THEA 60 is an intensive course in classical theater training focused on acting (including improvisation), movement (including movement theater, clown and historic dance), and voice (including singing). Texts include Shakespeare and either Jacobean or Restoration plays. This typical British conservatoire experience is designed for students interested in acting, directing, playwriting, design, stage management, dramaturgy or criticism. Offered only as a part of the Theater Foreign Study Program in London. This course is graded as credit/no credit.

Prerequisite: One theater history course and one theater practice course are required.

Offered: Summer.

Degree Requirement Attributes: ART

THEA 61 - Classical Performance II

Instructor: LAMDA faculty

A continuation of Classical Performance I. This course is graded credit/no credit.

Prerequisite: One theater history course and one theater practice course are required.

Offered: Summer.

Degree Requirement Attributes: ART

THEA 62 - Plays in Performance-Perception and Analysis

Instructor: Dartmouth Theater faculty

Offered only as a part of the Theater Foreign Study Program in London, this seminar integrates the study of theater with the experience of plays in performance. By providing intense, comparative experience of playgoing,

the course intends to broaden students' knowledge of the dramatic repertoire, to heighten their awareness of production approaches and values, and to encourage them to develop considered critical response to theater. Students attend a number of required performances and in addition attend performances of their own choosing - normally a total of three plays per week. Productions will represent a variety of periods and styles of playwriting, and a similarly diverse range of production companies and approaches to performance. Weekly seminar meetings will focus on critical responses to plays and productions, with background provided by guests from the professional theater (directors, writers, performers, designers, critics). Students will maintain journals and provide brief written critiques.

Prerequisite: One theater history course and one theater practice course are required.

Offered: Summer.

Degree Requirement Attributes: Dist:ART; WCult:W

THEA 65 - Summer Theater Lab

This experiential class is designed to explore the development of new work for the theater. Students will participate actively in three exciting aspects of our summer production season: 1) VoxLab, a one-week festival of new projects initiated by Dartmouth alumni, 2) the Frost and Dodd Student Play Festival, and 3) the New York Theatre Workshop's annual summer residency.

This course is designed for students with some level of familiarity and experience with theater; please contact instructor for details.

Offered: Summer.

Degree Requirement Attributes: Dist:ART

THEA 80 - Independent Study

Instructor: Chair

This course is designed to enable qualified students, who have completed the appropriate supporting coursework, to engage in independent study in theater under the direction of a member of the department. A student should consult with the faculty member with whom they wish to work as far in advance as possible, and not later than the term immediately preceding the term in which the independent study is to be pursued

Prerequisite: Course admission is determined by a proposal process; contact the Chair or visit the dept website for details.

THEA 90 - Contemporary Theater Practice

This course seeks to explore the contemporary world of theater. Through contemporary play readings and collaboration projects that revolve around scene work and devised theater, students develop an appreciation for the

breadth of new work being developed and produced in the field. In class, we also focus on the 'nuts and bolts' of the theater industry and share helpful information needed to enter the industry. Course materials include articles on experimental theater companies and their current practices; contemporary plays; and live performances. This course is mandatory for senior theater majors.

Prerequisite: Open to Senior Theater Majors and Modified Majors only.

Offered: Fall.

Degree Requirement Attributes: Dist:ART

THEA 91 - The Honors Thesis I

Instructor: Chair

An Honors project, which normally encompasses two terms, must include a thesis or thesis project. This course must be elected by all honors candidates. For acceptance into this course, please see the section in the ORC on the Theater Honors Program. Students are awarded one course credit for successful completion of this course, and receive a grade for the course at the end of the term. Students then subsequently register for THEA 92 in order to continue with their Honors Program study in a second term.

Prerequisite: For details on the Honors Thesis acceptance process, please see the section in the ORC on the Theater Honors Program and/or visit the Department of Theater website.

Offered: Fall, Winter.

THEA 92 - The Honors Thesis II

Instructor: Chair

An Honors project, which normally encompasses two terms, must include a thesis or thesis project. This course must be elected by all honors candidates. For acceptance into this course, please see the section in the ORC on the Theater Honors Program. Students are awarded one course credit for successful completion of this course. Students enrolling in this course have already completed one term of Honors Program study, and are registering for this course in order to continue their Honors Program work in a second term.

Prerequisite: THEA 91: The Honors Thesis I

Offered: Spring, Winter.

Degree Requirement Attributes: Dist:ART

Tuck - Undergraduate

These business courses, developed as a collaboration between the Arts and Sciences and the Tuck School of Business, are aimed at exposing undergraduates to core theories and principles of business behavior within the

national and international socioeconomic environment. The courses have no prerequisites, can be taken independently of each other in any order, and are open to all sophomores, juniors, and seniors regardless of major.

TUCK - Tuck Undergraduate Courses

TUCK 1 - Financial Accounting

Instructor: Thomas L. Porter

The purpose of this course is to introduce students to the principles of financial accounting and to teach students to be critical users of financial statements. The course is divided into two parts. The first part introduces students to the concepts and measurements underlying financial statements. The second part focuses on analyzing financial statements and understanding the choices firms make in reporting financial results. Students will be exposed to the decisions firms make relating to their operating, capital investment, and financing activities and how managers use discretion to affect reported financial results. Priority given to seniors, juniors, and then sophomores.

TUCK 2 - Principles of Marketing

Instructor: Lauren S. Grewal

Marketing deals with identifying and meeting human and social needs and is an organization function with a set of processes for creating, communicating, and delivering value to customers in ways that benefit the organization (for profit, not for profit, and public sector) and its stakeholders. The overall objective of this course is to introduce students to the substantive and procedural aspects of marketing strategy and implementation and to sharpen their skills for critical analytical thinking and effective communication. The course will involve case discussions and a group project. Priority given to seniors, juniors, and then sophomores; first-year students are not eligible.

TUCK 3 - Business Management and Strategy

Instructor: Christian Stadler

This course is intended to introduce students to the strategic management of business ventures. Topics will include theories governing the choice of business activities, market positions, technological responses, and social commitments. Throughout the course, we will attempt to differentiate between policy advice based on evidence from that based on speculation. Priority given to seniors then juniors. Sophomores and first-year students are not eligible.

Wellness Education

The Wellness Education program mirrors the liberal arts philosophy that encourages student exploration and self-discovery beyond the classroom to provide students

opportunities to enhance their own health and well-being based on self-knowledge, learning, and growth. Throughout this program, students will hone their self-awareness and gain the lifelong skills of utilizing internal and external resources while effectively implementing practices that tend to all parts of their well-being. This process provides students with a foundation for academic and personal success during and after their time at Dartmouth.

Beginning with those who matriculated with the class of 2026, students must complete three Wellness Education (WE) credits. Courses offered through the Physical Education (PE) department will count towards completion of the Wellness Education requirement as will new Wellness Education offerings as approved by the appropriate administrative body, which includes representatives from Athletics, Student Wellness Center, the Registrar's Office, and faculty committee representation.

The Wellness Education (WE) program requires completion of three Wellness Education (WE) credits. Credit in Wellness Education courses is awarded dependent on participation and skill development. All students are expected to fulfill their Wellness Education requirement before the end of their final term at Dartmouth.

Wellness Education (WE) credits may be earned by a combination of the following options:

- **Full-term courses:** Students may earn one WE credit by participating in a traditional 16-class, term-long, full-credit WE course.
- **Full-term participation in approved clubs and activities:** Students may earn one WE credit by participating in a full season of intercollegiate varsity or approved club sports.
- **Mini-courses and workshops:** This option consists of multiple sessions where skills and knowledge are obtained and built over several class periods. The time frame can be less than a term or extend beyond a single term. These experiences receive partial credit scaled to the amount of time participation requires. Mini-courses and workshops are assigned a number of sessions out of a total of twelve (12), where twelve (12) sessions equal one WE credit.
- **Single-Session classes:** Single-session classes/experiences that last 1-3 hours via a "Drop In" model. Students engage in 12 of any combination of single-session experiences, to accumulate one WE credit.

Women's, Gender, and Sexuality Studies Program

Chair: Eng-Beng Lim

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Studies), A. Tarnowski (Comparative Literature, French and Italian), E. Walton (Sociology), J. D. Wernimont (Film and Media Studies), M. J. Williams (Film and Media Studies), M. F. Zeiger (English and Creative Writing, Women's, Gender, and Sexuality Studies); Assistant Professors S. Allen (Sociology, African and African American Studies), M. Broner (Spanish and Portuguese), E. E. Collins (Geography, Women's, Gender, and Sexuality Studies), C. Crabtree (Government, Women's, Gender, and Sexuality Studies), J. E. Cuéllar (Latin American, Latino, and Caribbean Studies), A. Dev (The Dartmouth Institute), A. Garrison (English and Creative Writing), M. Huang (Women's, Gender, and Sexuality Studies), K. M. Middleton (African and African American Studies), E. S. Morsi (Comparative Literature, Middle Eastern Studies), M. Ritger (English and Creative Writing), A. Schultz (Classics); Senior Lecturers F. M. A'ness (Latin American, Latino, and Caribbean Studies, Women's, Gender, and Sexuality Studies), S. J. Billings (Anthropology), A. E. Bumpus (Philosophy), R.L. Greenblatt (Jewish Studies), K. J. Milich (MALS), D. J. Moody (Spanish and Portuguese, Latin American, Latino, and Caribbean Studies, Women's, Gender, and Sexuality Studies), A. Simon (Middle Eastern Studies); Lecturers B. Mendoza (Women's, Gender, and Sexuality Studies), J. Tran (Women's, Gender, and Sexuality Studies), M. Yang (Women's, Gender, and Sexuality Studies), Y. Zheng (Women's, Gender, and Sexuality Studies).

The Women's, Gender, and Sexuality Studies Program offers all students at Dartmouth a course of study that systematically examines the construction of gender and sexuality and the historical, economic, political, social, and cultural experience of women. As such, it is an interdisciplinary program drawing on resources in the Social Sciences, the Humanities, and the Sciences.

Women's, Gender, and Sexuality Studies may be undertaken as a program for a major, a minor, or a modified major.

To view *Women's, Gender, and Sexuality Studies* courses, [click here](#) (p. 800).

OPEN TO THE CLASS OF 2025 AND EARLIER

Women's, Gender, and Sexuality Studies Major for the class of 2025 and earlier

Women's, Gender, and Sexuality Studies offers a range of interdisciplinary courses offered by other departments and programs, that have a central focus on gender, women, or sexuality. The major is administered by the Women's, Gender, and Sexuality Studies Faculty Steering Committee. Students design their major plans in

consultation with the Chair. Only the Chair may approve majors and minors in DartWorks. Students interested in becoming majors should consult the Chair well in advance of their intended declaration of a major.

Prerequisite: WGSS 10: Sex, Gender, and Society.

Requirements: (9 additional courses)

1.

WGSS 15: Roots of Feminism

2.

WGSS 16: Contemporary Issues in Feminism

3.

WGSS 80: Seminar in Women's, Gender, and Sexuality Studies

4.

Three additional Women's, Gender, and Sexuality Studies Courses

5.

Three additional courses selected from Women's, Gender, and Sexuality Studies offerings

6.

Concentration. In consultation with the Chair, each student will include within the list of required courses an area of concentration consisting of at least three related courses. Some examples of possible areas of concentration are Gender in Literature; Women in the Global South; Lesbian, Gay, Bisexual, and Transgender Studies; Women's History; or Sex and Gender in Science.

7.

Diversity. Each student's major plan must include at least two courses that are clearly outside the area of concentration to provide diversity to the major.

Requirement 3 constitutes the culminating experience in the major and minor.

WGSS 7 (First-Year Seminar) may *not* count towards the major or minor.

Honors Program in Women's, Gender, and Sexuality Studies for the class of 2025 and earlier

Women's, Gender, and Sexuality Studies majors will be invited to participate in the Women's, Gender, and Sexuality Studies Honors Program if, after completing seven Dartmouth terms, WGSS 10, and four graded courses in the Women's, Gender, and Sexuality Studies major, they have achieved an overall College grade point average of 3.0 and a major average of 3.3.

The Honors Program consists of a two-term thesis project, WGSS 98 and WGSS 99. Students will design their projects in consultation with the adviser who has agreed to direct the thesis. A student must submit a preliminary proposal, with support from their advisor, to the Women's, Gender, and Sexuality Studies Faculty Steering Committee during spring term of the junior year. After doing reading and research over the summer term, a student must submit a final thesis proposal for the approval of the Women's, Gender, and Sexuality Studies Faculty Steering Committee by the second week of the fall term of the senior year. WGSS 98 and WGSS 99 carry two credits toward degree requirements but count as only one credit toward major requirements.

Women's, Gender, and Sexuality Studies Minor for the class of 2025 and earlier

The Women's, Gender, and Sexuality Studies minor consists of six courses: WGSS 10 (prerequisite); WGSS 15 or WGSS 16; WGSS 80; one other Women's, Gender, and Sexuality Studies course; and two additional courses selected from the Women's, Gender, and Sexuality Studies offerings.

Women's, Gender, and Sexuality Studies Modified Major for the class of 2025 and earlier

The modified major in Women's, Gender, and Sexuality Studies combines gender- or sexuality-related interdisciplinary coursework taken under the auspices of the Women's, Gender, and Sexuality Program with courses that are specific to a given discipline. Students will design a coherent program of study as they combine their interest in gender or sexuality studies with knowledge and skills provided by their secondary interest.

The courses in the secondary discipline should not be WGSS cross-listed; they should instead be courses necessary for students to gain proficiency in their chosen secondary discipline, i.e., courses that count for the major or minor in that discipline.

Students wishing to pursue a modified major in WGSS must submit a written proposal that will be reviewed by the WGSS Faculty Steering Committee; approval by the chair or other appropriate faculty member in the secondary discipline is also required.

Requirements for the Modified Major: (11 courses)

Women's, Gender, and Sexuality Studies (7 courses: 4 Core + 3 Electives)

1.

WGSS 10: Sex, Gender, and Society

2.

WGSS 15: Roots of Feminism

3.

WGSS 16: Contemporary Issues in Feminism

4.

WGSS 80: Seminar in Women's, Gender, and Sexuality Studies

5.

Three additional upper-level courses from the WGSS course offerings.

Secondary Discipline (4 courses from a single discipline)

•

Four upper-level courses that count towards the Major/Minor in that discipline.

Modifying Another Major with Women's, Gender, and Sexuality Studies

When Women's, Gender, and Sexuality Studies becomes the secondary part of a modified major, five courses are required: WGSS 10 (prerequisite) and four additional courses selected from the Women's, Gender, and Sexuality Studies offerings. A modified major should be planned to form a coherent program of study with the major. Students must file a written statement with each department and the Registrar explaining the rationale for the courses selected for the modified major.

OPEN TO THE CLASS OF 2026 AND AFTER

Women's, Gender, and Sexuality Studies Major for the class of 2026 and after

Women's, Gender, and Sexuality Studies offers a range of interdisciplinary courses offered by other departments and programs, that have a central focus on gender, women, or sexuality. The major is administered by the Women's, Gender, and Sexuality Studies Faculty Steering Committee. Students design their major plans in consultation with the Chair. Only the Chair may approve majors and minors in DartWorks. Students interested in becoming majors should consult the Chair well in advance of their intended declaration of a major.

Requirements: (10 courses)

1.

Two courses chosen from the following options:

•

WGSS 1 Intersections

•

WGSS 2 Introduction to Queer Studies

•

WGSS 3 Global Race x Global Migration

•

WGSS 4 Introduction to Disability Studies

2.

Two courses chosen from the following options:

•

WGSS 12 Feminist and Queer Theories and Methods

•

WGSS 13 Transnational Feminisms

•

WGSS 65.06 Radical Sexuality: Of Color, Wildness, and Fabulosity

•

WGSS 66.04 Introduction to Black Feminist Thought

3.

Three courses focused on a single area of concentration selected by students in consultation with faculty advisors. Possible areas of concentration include Race and Intersectionality; Queer and Trans Studies; Transnational and Decolonial Feminisms; Women's and Feminist Histories, Movements, and Practices; and Gender, Society, and Culture

4.

Two additional courses selected from Women's, Gender, and Sexuality Studies offerings

5.

WGSS 80 Seminar in Women's, Gender, and Sexuality Studies

Requirement 5 constitutes the culminating experience in the major and minor.

WGSS 7 (First-Year Seminar) may *not* count towards the major or minor.

Honors Program in Women's, Gender, and Sexuality Studies for the class of 2026 and after

Women's, Gender, and Sexuality Studies majors will be invited to participate in the Women's, Gender, and Sexuality Studies Honors Program if, after completing seven Dartmouth terms and five graded courses in the Women's, Gender, and Sexuality Studies major, they have

achieved an overall College grade point average of 3.0 and a major average of 3.3.

The Honors Program consists of a two-term thesis project, WGSS 98 and WGSS 99. Students will design their projects in consultation with the adviser who has agreed to direct the thesis. A student must submit a preliminary proposal, with support from their advisor, to the Women's, Gender, and Sexuality Studies Faculty Steering Committee during spring term of the junior year. After doing reading and research over the summer term, a student must submit a final thesis proposal for the approval of the Women's, Gender, and Sexuality Studies Faculty Steering Committee by the second week of the fall term of the senior year. WGSS 98 and WGSS 99 carry two credits toward degree requirements but count as only one credit toward major requirements.

Women's, Gender, and Sexuality Studies Minor for the class of 2026 and after

The Women's, Gender, and Sexuality Studies minor consists of six courses:

1.

One course chosen from the following options:

- WGSS 1 Intersections
- WGSS 2 Introduction to Queer Studies
- WGSS 3 Global Race x Global Migration
-

WGSS 4 Introduction to Disability Studies

2.

One course chosen from the following options:

- WGSS 12 Feminist and Queer Theories and Methods
- WGSS 13 Transnational Feminisms
- WGSS 65.06 Radical Sexuality: Of Color, Wildness, and Fabulosity
-

WGSS 66.04 Introduction to Black Feminist Thought

3. Three additional courses from the WGSS course offerings

4. WGSS 80 Seminar in Women's, Gender, and Sexuality Studies

Women's, Gender, and Sexuality Studies Modified Major for the class of 2026 and after

The modified major in Women's, Gender, and Sexuality Studies combines gender- or sexuality-related interdisciplinary coursework taken under the auspices of

the Women's, Gender, and Sexuality Program with courses that are specific to a given discipline. Students will design a coherent program of study as they combine their interest in gender or sexuality studies with knowledge and skills provided by their secondary interest.

The courses in the secondary discipline should not be WGSS cross-listed; they should instead be courses necessary for students to gain proficiency in their chosen secondary discipline, i.e., courses that count for the major or minor in that discipline.

Students wishing to pursue a modified major in WGSS must submit a written proposal that will be reviewed by the WGSS Faculty Steering Committee; approval by the chair or other appropriate faculty member in the secondary discipline is also required.

Requirements for the Modified Major: (11 courses)

Women's, Gender, and Sexuality Studies (7 courses)

1.

Two courses chosen from the following options:

-

WGSS 1 Intersections

-

WGSS 2 Introduction to Queer Studies

-

WGSS 3 Global Race x Global Migration

-

WGSS 4 Introduction to Disability Studies

2.

Two courses chosen from the following options:

-

WGSS 12 Feminist and Queer Theories and Methods

-

WGSS 13 Transnational Feminisms

-

WGSS 65.06 Radical Sexuality: Of Color, Wildness, and Fabulosity

-

WGSS 66.04 Introduction to Black Feminist Thought

3.

Two additional courses from the WGSS course offerings.

4.

WGSS 80 Seminar in Women's, Gender, and Sexuality Studies

Secondary Discipline (4 courses from a single discipline)

-

Four upper-level courses that count toward the Major/Minor in that discipline

Modifying another Major with Women's, Gender, and Sexuality Studies

When Women's, Gender, and Sexuality Studies becomes the secondary part of a modified major, five courses are required:

1.

One course chosen from the following options:

-

WGSS 1 Intersections

-

WGSS 2 Introduction to Queer Studies

-

WGSS 3 Global Race x Global Migration

-

WGSS 4 Introduction to Disability Studies

2. Four additional courses selected from the Women's, Gender, and Sexuality Studies offerings

A modified major should be planned to form a coherent program of study with the major. Students must file a written statement with each department and the Registrar explaining the rationale for the courses selected for the modified major.

WGSS - Women's, Gender, and Sexuality Studies Courses

To view Women's, Gender, and Sexuality Studies requirements, click here (p. 796).

WGSS 1 - Intersections

How have identity and difference formed our experiences and understandings of ourselves, the world we inhabit, and the world we envision? Students will investigate the categories sex, gender, sexuality, race, class, citizenship, and ability, how they are socially and historically constructed and in relation to one another. Students will be introduced to foundational concepts and theories to the study of women, gender, and sexuality, including canonical texts of Black and women of color feminisms, queer studies, transgender studies, disability studies, and transnational feminism. Students will explore

contemporary issues in feminism, including reproductive justice, disability justice, carceral feminism, sexual violence, and transformative justice in the context of neoliberalism and empire in U.S. and global contexts. This introductory course is designed for prospective WGSS majors/minors but open to all.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 2 - Introduction to Queer Studies

This course will examine the ways in which "deviant" sexual and gender behavior and identities, and the political movements that emerge from them, have been conceptualized in U.S. culture. We will cover basic lesbian/gay/bisexual/transgender cultural and political history and the interplay between sexuality, gender, race, class, ethnicity, and economics. Students will be expected to work with primary documents (including novels and film), recent work in queer theory, and historical analysis. Open to all students. Not open to students who have received credit for WGSS 018.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 3 - Global Race x Global Migration

The racialized migrant is the dominant figure in contemporary global capitalism. This figure represents the contradiction at the heart of planetary dynamics, and is increasingly the node on which politics, economy, and culture turns. What would it mean to read the history of the globe from the figure of the racialized migrant? This course breaks away from the disciplinary categories and cartographies of area studies while pushing beyond Western racial epistemologies that have bracketed the study of migration and race. Instead, we attend to migration's "corridors" "zones," "circuits" and "ecologies" to understand the ways that race and contemporary mobility are made—across various terrestrial, aqueous, and aerial spaces—always in relation to the layered histories of colonial, imperial, and global formations.

Cross-Listed as: LACS 40.04

Degree Requirement Attributes: Dist:INT or SOC; WCult:CI

WGSS 4 - Introduction to Disability Studies

This class will introduce students to key ideas in disability studies: the social model; newer ideas of disability justice; and histories of disability in relation to race and work; gender and sexuality, and empire, policing, and militarism. We will read key texts in disability studies, as well as scholarly work that apprehends disability through the lenses of Marxism, social history, trans studies, and biopolitics/empire studies. We will also closely consider representations of disability in three novels a documentary film, and contemporary detective television shows. By combining these various approaches, we will not only gain a sense of contemporary debates in disability studies, but

also begin to notice (if we did not know already) how central disability, and ideas of disability, is to contemporary global geopolitics and culture.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 7 - First-Year Seminar in Women's, Gender, and Sexuality Studies

Offered: Spring, Winter.

WGSS 10 - Sex, Gender, and Society

How has current thinking about sex, gender, and sexuality formed our experiences and understandings of ourselves, the world we inhabit, and the world we envision? This course investigates basic concepts about sex, gender, and sexuality and considers how these categories intersect with issues of race, class, ethnicity, family, religion, age, and/or national identity. The course also considers the effects of sex, gender, and sexuality on participation in the work force and politics, on language, and on artistic expression. In addition to reading a range of foundational feminist texts, materials for analysis may be drawn from novels, films, the news, popular culture, and archival resources. Open to all students.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 12 - Feminist and Queer Theories and Methods

How do feminist, queer, and racialized minoritarian subjects produce knowledge about inhospitable worlds, often against the limits of what is sayable, knowable, and thinkable? What makes a reading practice, text, or act feminist or queer? What makes critical knowledge critical? These are the questions that will guide our seminar on feminist ways of knowing. We work from two premises: knowledge is political, and theory helps us make sense of as well as transform the world. Each week is organized around a set of keywords and questions. The first half of the course builds a foundation in contemporary Western feminist and queer theory. We will explore gender, race, sexuality, difference, identity, subjectivity, bodies, temporality, and affect, among others. The second half of the course shifts to epistemology and methodology – what we know, how we know, and how we produce knowledge – as sites of contestation. Throughout the course, we will read texts engaging with ethnographic, visual, cultural, and historical analysis to become familiar with a variety of modes of knowledge production and interdisciplinary methods.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 13 - Transnational Feminisms

Transnational feminism, in its broadest vision, has been the project of "feminism without borders." Rooted in intersectionality, justice, praxis, and solidarity, the banner of transnational feminism has assembled scholars and activists from diverse social and geopolitical positions

through coalitions across global, regional, national, and local borders, both within and beyond the nation-state. This course begins with genealogies of global, women of color, and postcolonial or Third World feminisms and histories of movement-building from which transnational feminism emerged. Students will be introduced to themes of universalism, solidarity, positionality, and the problems with speaking for “others,” especially Northern feminists representing women in the Global South. In the second part of the course, we turn to contemporary topics in transnational feminism, including globalization, development, war, militarism, labor, migration, climate change, and humanitarianism, and feminist mobilizing against injustice within and across borders.

Not open to students who have received credit for WGSS 41.06.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

WGSS 15 - Roots of Feminisms: Texts and Contexts

This course will examine pre-twentieth century texts and historical events that set important precedents for the development of contemporary feminist theories and practices. We will survey some of the writings that consolidate legitimated patriarchal/misogynist ideologies in Western worlds (e.g. Plato, Aristotle, the fathers of the Church, the philosophers of the eighteenth-century Enlightenment, Rousseau). We will analyze different ways in which women historically have articulated strategies of contestation and/or resistance to systems of power based on gender differentiation. Readings may include works by French medieval thinker Christine de Pizan; sixteenth-century Spanish cross-dresser Catalina de Erauso; seventeenth-century Mexican intellectual and nun Sor Juana Ines de la Cruz; Mary Wollstonecraft; Maria Stewart, the first African-American political woman writer; the nineteenth-century American suffragists; and anarchist leader Emma Goldman. Open to all students.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 16 - Contemporary Issues in Feminism: Theory and Practice

How do feminist, queer, and racialized minoritarian subjects move through and produce knowledge about inhospitable worlds, often against the limits of what is sayable, knowable, and thinkable? What makes a reading practice, text, or act feminist or queer? What makes critical knowledge critical? These questions will guide this seminar on feminist ways of knowing. Together we will explore the politics of knowledge and roles of theory in knowing and transforming the world.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 20.03 - Introduction to the Study of Race, Migration, and Sexuality

This course aims to deepen our understanding and appreciation of the ways in which race, migration and sexuality have shaped U.S. culture, social and legal thought, cultural institutions and art practice from the colonial era to the present. Race, migration, and sexuality are experienced differentially across all groups and individuals. They also have distinctive transnational and diasporic histories and practices. This course will focus on the various groups that have comprised the United States in a comparative and decolonial study aligned with the intersectional approach advocated by black feminists. Students will learn about issues of race, migration, and sexuality across time and space, as critical dimensions of the nation’s political and economic structures, within different ethnocultural traditions, and in aesthetic, performance practices. The central object is to weave diverse historical and cultural traditions into a larger synthesis of the meaning of race, migration and sexuality in North American life that is deftly attuned to power in all of its guises and establishmentarian logics.

As a broad introduction to the multi- and inter-disciplinary studies in race, migration, and sexuality, the course will employ “a constellated approach” that will highlight the connections between our interdisciplinary programs with components of study in U.S. ethnicities, genders and indigenities. It will enable students to think across the fields of Latinx, African, Native and Asian American Studies while also encouraging thinking in global, hemispheric, transnational and decolonial terms. The course will promote interest in border thinking across geographies and practices that demand a fundamental rethinking of existing paradigms with new questions, objects and analytics

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

WGSS 21.01 - Slaves, Wives, & Concubines: Did Roman Women Have a History?

This course is about the heterogeneous lived experience of women (slaves, freed slaves, lawful wives, daughters, prostitutes) during the Roman Republic and Empire. Roman women built and immortalized themselves and their families in funerary and civic monuments, endowing institutions like schools, and sometimes had coins bearing their portraits. We explore the larger institutional frameworks that gave meaning to their lives, and within this framework we investigate their live choices over time.

Cross-Listed as: CLST 11.12, HIST 94.13

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 22.01 - Gender and European Society from Antiquity to the Reformation

This course examines the roles of women and men in Western Europe from late Antiquity to the Reformation period. Emphasis will be placed on the intellectual and social strictures that had a long-term effect on the concept and role of gender in European society. Topics included are biological and mythological foundations of gender concepts; attitudes toward the body and sex in pre-Christian and Christian culture; sin and ecclesiastical legislation on sex and marriage; family life and education; the individual and kinship; heresy and charismatic religious movements; and the impact of social-economic development on gender in professional life. We will discuss the textual and visual sources for our inquiry, as well as the changing contemporary views on gender roles in pre-industrial Europe.

Cross-Listed as: HIST 42.01

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 23.01 - Gender and Power in American History

This course examines the history of men and women from the period of colonial settlement to the achievement of woman's suffrage. We will explore the construction of gender particularly as it relates to social, political, economic, and cultural power. Topics will include: the role of gender in political thought and practice; the intersection of gender with categories of class and race; gender in the debate over slavery and the Civil War; and the rise and evolution of the woman's rights movement. Open to sophomores, juniors and seniors.

Cross-Listed as: HIST 27

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 23.02 - American Women in the Twentieth Century

This course is a multi-cultural multi-media history of American women from the Civil War to the present. We will discuss race and class tensions in the woman suffrage movement; women, labor and radicalism from the 1910s through the 1940s; civil rights, welfare rights, the rebirth of feminism in the 1960s and 1970s, and backlash politics from the 1950s to the 1980s. Open to all classes.

Cross-Listed as: HIST 028

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 24.01 - Arab Feminisms

This course is an introduction to the history of feminism in the Arab world from the 19th century to the present. It examines some of the most important socioeconomic and political issues as well as aesthetic trends that were or continue to be central to feminist activism and cultural production in the region. Throughout the term students will

engage with a wide range of primary sources (newspaper articles and op-eds, memoirs, novels, poems, photographs and films) that will help them develop a nuanced and critical understanding of the diverse and dynamic experiences of women in the Arab world.

Cross-Listed as: COLT 53.06 MES 19.03

Degree Requirement Attributes: Dist:INT or LIT; WCult:NW

WGSS 24.02 - Gender and The Modern Middle East and North Africa

In this course, we will study histories of the modern Middle East and North Africa and examine the ways that issues relating to gender and sexuality have affected the politics and social worlds of the region over the course of the past several centuries. This course begins with the medieval Islamicate Empires — Mughal, Safavid, and Ottoman — and then moves through the end of empire, the colonial era, the establishment of the nation state, and the emergence of modern cultural, political, and religious movements. In doing so, we will situate the histories and social worlds of the region in a global frame, asking how global political and economic transformations have affected the region. At the same time that we attend closely to these histories, we will also examine the ways in which the category of “woman” has been mobilized in popular and political discourses in the 18th-21st centuries, paying particular attention to how Muslim and Middle Eastern women have been represented in various political discourses, as well as how they have represented themselves. Through close readings of both primary sources (in translation) and secondary literature — including historiographical, theoretical, and literary texts as well as film and music— we will also tackle the questions, controversies, and stereotypes that have animated debates in both scholarly and popular literature on such topics as the veil, feminism, revolution, human rights, LGBT issues, masculinity, and war.

Cross-Listed as: HIST 70; MES 19.04

Degree Requirement Attributes: Dist:SOC; WCult:NW

WGSS 25 - Race, Gender, & Revolution in the Atlantic World

This course examines how the events and intellectual production of the Haitian Revolution and decolonization struggles in the Spanish Empire shook the Atlantic World and forced a reconsideration of political categories such as liberty, tyranny, citizenship, rights, and the relationship of race and gender to all of these concepts. The Enlightenment influenced Latin American and Caribbean revolutionaries, but these rebel intellectuals in turn challenged some of the Enlightenment's fundamental tenets, ushering in new polities with radical notions of citizenship and belonging. Not open to students who have received credit for HIST 41.02.

Cross-Listed as: AAAS 62.75 HIST 09.09 LACS 25.05

Degree Requirement Attributes: Dist:SOC; WCult:NW

WGSS 26.02 - Women and American Radicalism Left and Right

This course will trace the involvement of U.S. women in radical political movements from the mid-nineteenth century to the present including: Abolitionism; Anti-lynching; Socialist Trade Unionism; the Ku Klux Klan; the Communist Party; the National Welfare Rights Organization; the Civil Rights Movement; the New Left; the New Right; the direct-action wing of the anti-abortion movement; Earth First; and the neo-Nazi American Front. It will also examine the relationship between feminist ideologies and non-gender-specific radical political ideologies centered on race, class, and other social identifiers.

Cross-Listed as: HIST 29

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 26.03 - Queer History in America

How have historical processes produced distinct queer sexual practices and identities over time? This course engages 300 years of a history that often evaded the historical record or was deliberately purged from it and asks how more traditional topics of U.S. historical inquiry—immigration, citizenship, economic organization, intellectual and artistic production, racialization, formal politics, law, religious practice—can yield new insights when queer history is included as a legitimate dimension of analysis.

Cross-Listed as: HIST 08.04

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 30.01 - Women, Gender and Development

This course examines gender as it relates to both women and men and as constituted by multiple factors such as place, space, class, sexuality, age, race, ethnicity, nationality, and culture—what some call categories of "difference." We will explore how these categories of difference shape women's and men's daily lives, our institutions, the spaces and places we live in, and the relationships between social groups in different places and between different places in the world.

Cross-Listed as: GEOG 026

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 30.04 - Women, Work, and Wealth

It is one of the most famous sentences in the English-language canon, a short-hand for the entire foundation of modern economics: "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner," wrote Adam Smith in his 1776 *The Wealth of*

Nations, "but from their regard for their own interest." But of course none of those men actually served the lifelong bachelor his dinner: his mother did, and whether she did so from benevolence, self-interest, or some less easily classified motivation, the field of political economy was defined by her exclusion from its questions and answers. This course interrogates the sexual and racial contracts at the heart of modern economic relations, and asks how returning mothers, wives, daughters, and servants to the history of capitalism alters our assumptions about economic man.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 30.05 - Maid in America: The Politics of Domestic Labor

In *Maid in America* we study the representation, history, and rights of domestic workers in the Americas with a focus on the United States, Brazil, Mexico, Chile, and Argentina. Specifically, we look at representation and rights from artistic, legal, and sociological perspectives. Using the theoretical frames of intersectional and transnational feminism we will analyze primary texts that include essays, manifestos, theater, and documentary film. Topics we will explore will include media representation and controlling images, migrant imaginaries, invisible labors, modern-day slavery, the feminization of migrant work, and labor organization and rights. The class will include a theater workshop component that will culminate in the public presentation of an original group performance titled: *Making the Invisible Visible: The Politics of Domestic Labor*.

Cross-Listed as: LACS 25.15

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 31.01 - Sex and the State in Latin America

This course examines women's movements in Latin America. Women in Latin America are perhaps the most highly mobilized population in the world. Throughout the region women have organized around myriad issues, including the right to vote, human rights, poverty, legal rights, anticommunism, the workplace, race, ethnicity and war. Women's efforts to challenge fiercely repressive regimes, deeply entrenched norms of machismo and extreme poverty defy conventional stereotypes about women and provide us with inspiring examples of how to sustain hope during difficult times. The seminar will introduce students to recent scholarship on women's movements in Latin America in the 20th century and seek to understand the emergence, evolution and outcomes of women's movements in particular countries and cross-nationally.

Cross-Listed as: GOVT 49.04 LACS 52

Degree Requirement Attributes: Dist:SOC; WCult:NW

WGSS 31.04 - Women and Politics

This is a general course on women in politics. We will examine the role of women as politicians, activists, and voters. The course will examine a wide range of issue areas, including: female attitudes on war and conflict, the reactions of women to different kinds of campaign tactics and policy positions, the differing barriers women face to attaining elected office in different countries, and how the challenges thought to be faced by female political leaders compare with those faced by female business leaders. One key question we will explore concerns whether female politicians are treated differently than male politicians, and how that might affect their strategies for reelection and governance. Open to all students.

Cross-Listed as: GOVT 20.01

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 33.01 - Constructing Black Womanhood

This course is a critical examination of the historical and contemporary status of black women in the United States, as presented in fiction, primary accounts, and social science literature. We will explore the nature, extent, and consequences of the multiple discriminations of race, sex, and class, as the context in which these women shaped their social roles and identities within the black community and the larger society. We will consider the themes of family, motherhood, and sexuality; educational, economic and political participation; aesthetics and religious traditions; self and social images.

Cross-Listed as: AAAS 025 SOCY 046

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 33.03 - Gender and Judaism

Examining the intersections between gender, religious practice, cultural identity, and personal belief, this class will draw upon contemporary gender theory, religious texts and contemporary interpretations of Jewish thought and culture to examine the construction of Jewish identity through a feminist lens. Authors will include Alder, Boyarin, Heschel, Gilman, Peskowitz, Levitt and Biale. The class will also investigate questions of race, ethnicity, assimilation and Jewish gender issues in popular culture, including films and the work of performers Cantor, Benny, Berg, Midler, and Sandler.

Cross-Listed as: JWST 053 REL 19.22

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 33.05 - Unstalling the Stalled Revolution: Gender (In)equality at Work and at Home

The nature of work, family life, and gender relations has changed dramatically over the last half century. This course examines these trends, with a focus on implications for gender inequality in society. We will focus on patterns

in paid labor force participation and family life in the United States, and discuss the major debates surrounding the causes and consequences of such trends. We will also pay attention to how these patterns look across different races, ethnic groups, and socioeconomic status, as well as briefly examine how these trends compare to other countries. We will conclude by exploring the implication of gender inequality for families, as well as work-family policy debates.

Cross-Listed as: QSS 30.17 SOCY 061

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 33.07 - Love, Romance, Intimacy and Dating

Why do you connect with some people and not others? What exactly is love? And how do you make smart romantic choices for yourself? In this course we examine the social aspects of love, romance, intimacy, and dating. Using sociological theories and methods, we will investigate how cultural beliefs and structural arrangements affect our most intimate feelings and experiences. Specific topics include virginity loss, adolescent sexual behavior, hooking up, dating, intimacy and polyamory.

Cross-Listed as: SOCY 62

Degree Requirement Attributes: SOC

WGSS 34.02 - Gender Identities and Politics in Africa

This interdisciplinary course explores the constructions of gender identities in different African socio-cultural contexts. The emphasis is on contemporary Africa, although we will discuss some of the historical framework of these identities. We will read historical accounts of gender in some pre-colonial African societies, investigate the impact of colonialism, and examine gender in some anti-colonial movements. We will also analyze gender in urban and rural contexts, and address such questions as homosexuality and gay rights.

Cross-Listed as: AAAS 040

Degree Requirement Attributes: Dist:INT; WCult:CI

WGSS 34.04 - Sociology of Gender

What is gender? This seminar examines multiple sociological perspectives on what it means to be a woman, man, boy, or girl in everyday life - including gender as a social structure, an identity, an ideology, and something people "do." Readings and discussions reflect a belief that diversity (race/ethnicity, class, age, sexuality, etc.) is central to the study of gender. Possible topics include: language, the body, science, the wage gap, education, and masculinity during young adulthood.

Cross-Listed as: SOCY 56

Degree Requirement Attributes: SOC

WGSS 36.01 - Gender in Cross-Cultural Perspective

Sex (biological differences between men and women) and gender (social constructions of those differences) are not straightforward or natural, and it naturally follows that gender inequalities and gender oppression are also not straightforward and natural. Therefore, we will pay close attention to the issue of power - in terms of control and distribution of resources and the enforcement of gender roles and sexuality. We will also look at how Western gender ideals have been imposed on people in other parts of the world. We will talk about concepts, perceptions, images, stories, encounters, games, connections and disconnections. Finally, we will explore questions of practice and resistance.

Cross-Listed as: ANTH 31

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

WGSS 36.02 - Mapping the Queer and Trans South

Although by some accounts the American South is home to nearly 35% of the country's LGBTQ population, popular conception of the region is one of limited queer life. This course explores narratives and theories produced by queer and trans people in the South, alongside and within the broader colonial, carceral, and racial geographies of the region. We will look at how the American South is constructed as a meaningful entity, and how queer and trans people do or do not fit into that image. Readings and materials will include media representations of queer and trans people in the South, oral histories, memoirs, and poetry. How can an exploration of the queer and trans populations of the South destabilize normative regional conceptions? And what might a queer history/framing of the South—and a Southern framing of queerness/transness—offer to our understanding of the contemporary United States?

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 36.06 - Gender and Sexuality in Asian American Literature

Focusing on contemporary Asian American literature, film, and popular culture, this course emphasizes a diverse range of engagements with gender and sexuality that disrupts binary thinking on the topic. Through close analysis of cultural texts, students will examine the formation of Asian American genders and sexualities alongside histories of racialization, migration, and labor. Texts may include: Monique Truong's *The Book of Salt*, David Henry Hwang's *M. Butterfly*, R. Zamora Linmark's *Rolling the R's*, Justin Lin's *Better Luck Tomorrow*, as well as episodes of *Battlestar Galactica* and *24*. We will also read critical essays by Gayatri Gopinath, David Eng, Yen Le Espiritu, Karen Tongson, Lisa Nakamura, and Martin Manalansan.

Cross-Listed as: ENGL 53.33

Degree Requirement Attributes: Dist:LIT

WGSS 37.01 - Female Monstrosities

This course will explore how the concept of the female monster has been foundational to the construction of gender as well as of race, class, and sexuality. We will begin in Ancient Greece by analyzing female monstrosities like Medusa and Medea, as well as the Lilith figure from the Hebraic tradition, in order to then explore Black feminist reworkings of these figures. Particular attention will be paid to the figure of the witch and to the female vampire, as these figures travel from the heart of Europe to its peripheries in the modern world, to what Katherine McKittrick has termed the “demonic grounds.” The course will cover texts by authors that include Maryse Condé, Toni Morrison, Jewelle Gomez, and Octavia Butler. We will explore how these authors offer a feminist embrace of monsters as an imaginative way to combat heteropatriarchy as well as white supremacy.

Cross-Listed as: ENGL 53.56

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 37.03 - Social Justice and the City

This course explores issues of social justice and cities in terms of the spatial unevenness of money and power within and among cities, between cities and their hinterlands, and between cities of the world. We will examine how multiple dynamic geographic processes produce spatial and social inequalities that make cities the locus of numerous social justice issues. We will also look at how urban communities and social groups are engaged in working for social change.

Cross-Listed as: GEOG 25; SOCY 49.22

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 37.04 - Carceral Geographies: Explaining Mass Incarceration in the US

Why are there so many people incarcerated in the United States and why are so many people in the US and beyond calling for an end to police violence, some even for the abolition of policing? Is mass incarceration an inevitable product of slavery and Jim Crow? Why did prisons expand in the United States as crime rates were going down? Was it the War on Drugs, or the long term effects of housing discrimination?

Cross-Listed as: AAAS 90.09 GEOG 027

Degree Requirement Attributes: Dist:SOC

WGSS 40.01 - Gender Topics in Native American Life

This course will address a range of topics concerning gender that are of particular significance to indigenous communities. These topics will be considered from historical, political, cultural and social perspectives. In the context of this class, the term “indigenous” is a category

that includes tribal nations of the United States including Hawaii, the First Nations of Canada, and the indigenous people of Australia and New Zealand. The material is presented with particular concern for the diversity of indigenous groups and the variety of their own experiences and autochthony. We will explore their responses to misconceptions of tribal gender roles and identities projected upon Native people by the agents and institutions of settler colonialism. This approach opens a broader discussion about the many actions of indigenous communities to deconstruct and decolonize gender categories that are alien to the continuity, integrity, and vitality of their own traditions. The interdisciplinary approach of this course will engage texts from philosophy, literature, semiotics, history, and policy, as well as gender studies from various socio-cultural perspectives.

Cross-Listed as: NAIS 042

Degree Requirement Attributes: Dist:SOC; WCult:CI

**WGSS 40.02 - 10 Weeks, 10 Professors:
#BlackLivesMatter**

This collaboratively taught course seeks to answer the call of activists around the country to examine racialization, state violence, and inequality in the context of the #BlackLivesMatter movement. To begin, it offers a context for the events in Ferguson, Missouri in 2014. Then, it situates those events in a broader history of race and racism in the United States. Finally, the course highlights black feminist and queer approaches to questions of trauma, community, politics, and survival.

Cross-Listed as: AAAS 80.05 GEOG 80.05

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 40.03 - Racial Justice

This course introduces students to major contemporary racial justice debates. It also considers how theories of racial justice might better include the concerns of women of color as well as LGBT and trans persons of color. Throughout the course we will examine questions such as: What constitutes racial injustice? How is gender implicated in said injustice? What, if anything, do blacks and other people of color owe to one another? Should political possibility and pragmatism bound thinking regarding corrective racial justice?

Cross-Listed as: AAAS 21 GOVT 27

Degree Requirement Attributes: Dist:SOC

WGSS 40.04 - Black Women's Activism, 1970-present

In this course we will explore several genres of writing, grounded in an intellectual engagement with the creative, scholarly, and activist writing of Black women of all genders from 1970 to the present. How does Black women's activism constitute a political intellectual tradition that impacts how we do research and pose

questions? How does black women's activism refigure the categories and categorization of knowledge and knowledge production? What does it mean to write oneself into existence if and when knowledge is premised on their epistemic and actual disappearance? This course approaches Black women's intellectual and cultural production as one entry point into the project of creating from nothing, writing to become, writing as an act of survival, and writing to envision and practice new worlds. These are all vital skills in a rapidly transforming social, economic, political and climatic landscapes.

Cross-Listed as: AAAS 88.15 GEOG 062

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 40.05 - Feminist and Queer Performance at the Limit of Action

What counts as feminist and queer activism? This course challenges what we dominantly understand as activism—key to the emergence of feminist and queer theory and ethnic studies. Moving away from political actions centered in these disciplines, such as strikes, protests, and boycotts, this course will turn to visual and performance art works by artists of color, who consider other forms of action that are **not** overtly visible, resistant, oppositional, agentive, militant, loud, and documentable. Each week, students will examine a performance at the limit of action, including passivity, silence, and endurance, alongside issues related to gender, sexuality, labor, and immigration among others. How might we approach and reconcile with performances that once again reify notions of racialized and gendered bodies as apolitical, passive, submissive, and compliant? Drawing on scholarship within black and women of color feminist criticism, queer theory, critical ethnic studies, Asian American Studies, and performance studies, this course will attune students to the role of aesthetics to interrogate and expand what we typically conceive of as activism, resistance, and survival from racialized, feminized, and queer positions.

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 41.01 - Ocean Feminisms

This course introduces students to contemporary debates and conversations on Ocean feminisms in the Pacific. It weaves together literature, film, poetry and art from Oceanic feminist organizers and intellectuals in the Pacific to consider contemporary activism and movement building towards decolonization and Native Sovereignty across Oceania. In the class, we will examine the work and visions of Native feminists like Haunani Kay Trask, Teresia Teaiwa, Linda Tuhiwai Smith, and Kathy Jetnil Kijiner who highlight the anti and decolonial potential of Ocean feminisms in informing global movements for climate justice, demilitarization, body sovereignty, abolition, and land-based resurgence. We will also learn and engage with contemporary activists through a series of

guest lectures and workshops focusing on transdisciplinary and creative oceanic methodologies.

Degree Requirement Attributes: Dist:INT; WCult:CI

WGSS 41.04 - Muslim Feminism

This course introduces students to the diversity of feminist approaches on a transnational scale, by examining the movements, activism, media, literature, and Islamic debates produced in predominantly Muslim countries and beyond. We will interrogate concepts of transnationalism, feminism and modernity in terms of historical developments, theoretical usage, the context of colonialism, Islamic theologies, and the modern Muslim nation states. We will explore similarities and differences in women's experiences and feminist methodologies across global Muslim contexts. Course materials will be made up of several primary sources in translation that deal with intersectional issues such as religious and cultural practices, educational systems, politics, race and racism, socioeconomic class, legal rights for men and women, and marriage and the family.

Cross-Listed as: MES 19.02 REL 28.03

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

WGSS 41.06 - Transnational Feminisms

Transnational feminism, in its broadest vision, has been the project of "feminism without borders." Rooted in intersectionality, justice, praxis, and solidarity, the banner of transnational feminism has assembled scholars and activists from diverse social and geopolitical positions through coalitions across global, regional, national, and local borders, both within and beyond the nation-state. This course begins with genealogies of global, women of color, and postcolonial or Third World feminisms and histories of movement-building from which transnational feminism emerged. Students will be introduced to themes of universalism, solidarity, positionality, and the problems with speaking for "others," especially Northern feminists representing women in the Global South. In the second part of the course, we turn to contemporary topics in transnational feminism, including globalization, development, war, militarism, labor, migration, climate change, and humanitarianism, and feminist mobilizing against injustice within and across borders.

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

WGSS 42.05 - Ethnography of Violence

Violence is widely recognized as a problem in modern society, with policies and interventions to combat violence, or to employ it, dominating local and global politics. Yet the meaning of violence is seldom analyzed. Using an ethnographic lens, this course explores violence as both an embodied experience and a socially and culturally

mediated event. We examine spectacular and everyday forms of violence in terms of manifestations of power, structures of inequality, perceptions of difference, and politics of representation. Ethnographic studies are drawn from, among others, Mozambique, Haiti, and Harlem. An introduction to the cultural anthropology of violence, this course raises key questions about violence in a globalized world and explores how to study it anthropologically. This course is not open to students who have received credit for ANTH 12.03.

Cross-Listed as: ANTH 28; AAAS 88.08

Degree Requirement Attributes: Dist:INT or SOC; WCult:NW

WGSS 43.02 - Sex, Celibacy, and the Problem of Purity: Asceticism and the Human Body in Late Antiquity

Late Antiquity (c. 300-500 C.E.) was a time when Christians struggled to understand how gender, family life, and religion could intermesh. Did virgins get to heaven faster than those who marry? Can a chaste man and woman live together without succumbing to lust? Were men holier than women? What about women who behaved like men? This course examines the changing understanding of the body, marriage, sexuality, and gender within Christianity through reading saints' lives, letters, polemical essays, and legal texts. Open to all classes.

Cross-Listed as: CLST 11.06; REL 31

Degree Requirement Attributes: Dist:TMV; WCult:W

WGSS 43.03 - Women and the Bible

As contemporary Jewish and Christian communities of faith face the question of the role of women within their traditions, many turn to the Bible for answers. Yet the biblical materials are multivalent and their position on the role of women unclear. This course intends to take a close look at the biblical tradition, both the Hebrew Bible (Old Testament) and the New Testament, to ask what the Bible does—and does not say—about women. Yet the course is called "Women and the Bible," not "Women in the Bible," and implicit in this title is a second goal of the course: not only to look at the Bible to see what it actually says about women, but also to look at differing ways that modern feminist biblical scholars have engaged in the enterprise of interpreting the biblical text. Open to all classes.

Cross-Listed as: JWST 028 REL 056

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 43.04 - Goddesses of India

This course will use both elite and popular Hindu religious texts in conjunction with contemporary sociological and anthropological accounts, scholarly analyses, visual art, and film to explore the diverse identities and roles of India's many goddesses, both ancient and modern. Special

emphasis will also be given to the relationship between goddesses and women. Open to all classes.

Cross-Listed as: REL 042

Degree Requirement Attributes: Dist:TMV; WCult:NW

WGSS 43.06 - Gender in Islam

“Is Islam sexist?” “What does Islam really say about women?” This course seeks to dismantle the premises of these questions by asking who speaks for Islam, what makes something Islamic, and how are gender and gender roles constructed in Islamic texts and Muslim thought. We will make critical study of the constructions of gender, femininity, masculinity, sexuality, gender relations, marriage and divorce in classical and modern Islamic texts. In asking how Islamic notions of gender are constructed, we will examine both the roles religious texts have played in shaping Muslim life and how Muslim life in its cultural diversity affects readings of religious texts. We will read works of Muslim thought on gender relations in their historical contexts and in relation to one another. Through in-class discussions, critical reading exercises, and short essay assignments, students will strengthen their literacy on global gender issues, study religio-historical ideas on gender, analyze the role of texts in shaping gender in society, and vice versa.

Cross-Listed as: REL 28.04

Degree Requirement Attributes: Dist:TMV; WCult:NW

WGSS 43.07 - The Black Church and Black Bodies: Race, Sexuality and Class in Religious Culture

Black churches are challenged to better understand and respond to subjects that are often considered taboo. This course will focus on ideas and approaches that have informed the historic and current Black Church around race, sexuality, and class (and their nexus). Informed by Cultural Theory, it will consider how such churches have endeavored to understand, socialize, and in some instances, control Black bodies as well as some of the broader implications for critically assessing inequality, diversity, and social justice. Barnes.

Cross-Listed as: AAAS 81.04 REL 74.04 SOCY 49.21

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 44 - Imagining Reproductive Justice in the Americas

In this course we will study attempts to regulate and restrict population, abortion, surrogacy, adoption, and motherhood in the late 20th and early 21st centuries in the United States, Latin America, and Canada, and trace how these attempts connect to US empire, capitalism, patriarchy, and cultural nationalism. We will also consider anticolonial, feminist, Marxist, and queer visions of reproductive justice, primarily through readings of novels, films, and manifestos. We will use these historical and

cultural examples to think through difficult questions of individual freedom and community responsibility, desire and choice, and the redistribution or elimination of reproductive labor.

Cross-Listed as: REL 051

Degree Requirement Attributes: Dist:INT; WCult:W

WGSS 44.03 - Women, Religion and Social Change in Africa

This introductory, multidisciplinary course examines women's religions ideas, beliefs, concerns, actions, rituals and socio-cultural experiences in African societies and cultures from a comparative, historical and gender perspective. We will look at women's experiences of social change in African religions, the encounter with Islam, slavery, Christianity, and colonialism. We will analyze the articulations of economic and political power or lack of power in religious ideas as we ask questions such as: What are the different antecedents and circumstances in which women exercise or are denied agency, leadership, power and happiness in their communities? Texts will include nonfiction, fiction, and film narratives. Open to all students.

Cross-Listed as: AAAS 042 REL 066

Degree Requirement Attributes: Dist:SOC; WCult:NW

WGSS 44.07 - The Struggle for Liberation: Women, Monasticism, and Buddhism

This course will examine the relationship between women, monasticism, and Buddhism through an interdisciplinary and transnational perspective. We will begin in ancient India by examining the founding of the Order of Nuns; the monastic lives, spiritual poetry, and struggles of early Buddhist nuns; and the decline and death of the nuns' order in India. Then we'll move on to explore a wide range of topics from throughout the Buddhist world—such as the economic and political power of the nuns' order in parts of East Asia; the death of the nuns' order and the phenomenon of low-status “unofficial” nuns throughout much of Southeast Asia; the power of yoginis and other non-monastic spiritual roles for women in Tibet; the increasing phenomenon of Western nuns; and the feminist possibilities (or impossibilities) inherent in Buddhist doctrine. The term will conclude with a sustained look at the contemporary global movement to re-establish the valid ordination lineage for nuns throughout the world—a movement in which the voices arguing “for” and “against” are not always what one might presume them to be.

Cross-Listed as: REL 41.03

Degree Requirement Attributes: Dist:INT; WCult:NW

WGSS 45 - Global Girlhoods

From Greta Thunberg to girl dinner, from mean girls to Malala, girlhood and girls seem to be everywhere in global

and online popular culture. This course investigates the changing meanings of girls and girlhood, attempting to track the meanings and importance of the figure of the girl in the period from the global anticolonial movements of the 1960s to the present. Alongside this, we will use memoirs, social media and other sources to think about how larger-than-life 'girl' tropes, memes, and cultural texts shape our lives and desires.

This course will take an interdisciplinary cultural studies approach, which means we will try to understand girlhood as a cultural phenomenon through the study of cultural texts, in combination with social theory and in historical context. Rather than definitively answering the question "Who/what is a girl?," we will attempt to understand the disparate, historically contingent expectations and ideals of "girling" and girlhood, and study various historical actors who have attempted to exist within or against those norms and ideals.

Degree Requirement Attributes: Dist:INT; WCult:CI

WGSS 46.01 - Philosophy and Gender

This course will focus primarily on the following questions: What is feminism? What is sexism? What is oppression? What is gender? Is knowledge gendered? Is value gendered? What is a (gendered) self? What would liberation be? In exploring these issues, we will examine the ways feminist theorists have rethought basic concepts in core areas of philosophy such as ethics, social and political philosophy, metaphysics, epistemology, philosophy of law, and philosophy of mind. Open to all classes

Cross-Listed as: PHIL 4

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 47.03 - Modern American Women Poets

This course focuses on the emerging counter-tradition, within American modernism and within the larger tradition of poetry in English, of American women poets in the twentieth century. Taking our cue from Adrienne Rich, who ambiguously titles one book of essays *On Lies, Secrets and Silences* (is she for or against?), we will follow debates about what makes it possible to break previous silences--and to what degree and in what ways it is useful or satisfying to do so. Topics within this discussion will include sexuality, race, illness, literary modes, female literary succession, and relations with the literary tradition. We will read in the work of eight or nine poets and recent critical and theoretical writings, with some attention in the first weeks to important female and male precursors. The syllabus will include such writers as Edna St. Vincent Millay, HD, Gertrude Stein, Elizabeth Bishop, Gwendolyn Brooks, Sylvia Plath, Anne Sexton, Audre Lorde, Adrienne Rich, Marilyn Hacker, Louise Gluck, Rita Dove.

Not open to students who have received credit for ENGL 55.01.

Cross-Listed as: ENGL 53.53

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 48.08 - Desire and Difference in 19th Century British Fiction

This course will examine the phenomenon of moral panic in nineteenth-century British literature and culture through two linked but distinctive forms of sexual subjectivity: female heterosexuality and male homosexuality, connected forever in the 1885 Criminal Law Amendment Act that set the stage for the imprisonment of Oscar Wilde. We will consider the relationship between realist and sensationalist literary forms to trace the emergence and regulation of distinctly modern sexual subjectivities in mid- and late-nineteenth-century Britain.

Cross-Listed as: ENGL 52.05

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 48.09 - Nineteenth-Century British Women Writers

For the first time in literary history, women writers found commercial and critical success in England during the nineteenth century. Women writers of this time were keen observers of the social codes that formed—and constrained—their identities. Though women wrote in many genres in this period, this course will focus on major novels of the nineteenth century because of the particular strategies female novelists used to open up hard questions about social identity, and particularly social possibilities for women. Questions about gender clearly implicate sexuality, class, ethnicity, race, and power, as well, in complex, compelling, and unexpected ways. We will read works by Jane Austen, Mary Shelley, Emily Brontë, Charlotte Brontë, Elizabeth Gaskell, and George Eliot, and we will end the class by reading substantial excerpts from the private, unpublished diaries of the women writers who published as "Michael Field."

Cross-Listed as: ENGL 62.03

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 49.06 - Women and War in Modern Literature and Film

This course examines literary, artistic, and cinematic narratives about war created by women to reflect on the meaning of femininity and womanhood in times of armed conflict. Gender is a social construct and the gender binary seems to become profoundly entrenched during war. Some of the questions that will be explored are: how does violence perpetuated by instances of armed aggression overlap with the violence perpetuated by already existing power structures (such as patriarchy)? How does violence

redefine our understanding of gender difference in general and the category of “woman” in specific?

Cross-Listed as: ARAB 61.10 COLT 62.10 MES 16.08

Degree Requirement Attributes: Dist:INT or LIT;
WCult:NW

WGSS 50.01 - FQZ Feminist Queer Zones

FQZ Feminist Queer Zones provides in-depth study of the exceptional richness of feminist and queer traditions in global francophone cultures. From nineteenth-century revolutionaries to the mid-twentieth century’s first-wave feminists; from reproductive rights and women’s suffrage to the explosive intersectionality of race, capitalism, post/colonialism, and feminism; the books read in this class help us understand sexuality, gender, and identity as they evolve over time and across historical, political, and sociocultural formations. The texts open up *POROUS ZONES*—open fields and fluid sites of change, exchange, and interchange—that allow for various other forms of alternative thinking.

Along with full book-length texts by Louise Michel, Simone de Beauvoir, Monique Wittig, Anne Garréta, and Françoise Vergès, *FQZ* seeks to bridge the gap not only between theory and action, but also between reading and writing, and between art and life. We will participate in a unique pleasure-taking act—the opportunity to read single, long, complex texts over an extended period of time, sometimes spanning many weeks. By valuing slowness, leisure, and depth over speed, anxiety, and breadth, will have the opportunity to dwell with thinkers and writers long enough to do begin doing honor and justice to their life and work. A progression of alternating short creative and critical assignments will provide the framework for a hybrid final project that will represent a culminating multimedia work of personal-creative criticism.

All readings and discussions are conducted in English. No prior knowledge or pre-requisites necessary. Readings, written assignments, and x-hours are offered in French for students seeking credit for the major or minor in French.

Cross-Listed as: FREN 037 FRIT 37.30

Degree Requirement Attributes: Dist:INT or TMV;
WCult:CI

WGSS 51.09 - Young Adult Literature

This course explores the genre of young adult fiction in the 20th and 21st centuries. While the course will begin with a brief consideration of the conventions and early history of the genre, most of the course will examine post-1970s (most American) young adult novels. We’ll trace the evolution of the genre in relation to ideas of racial innocence, sentimentality, consent, queer childhood, and revolutionary girlhood, and position the novels within historical contexts such as the rise of mass incarceration, settler colonialism, fantasies of post-racial politics, and

environmental disaster. At the end of the course, we’ll consider how young adult novels have created not just reading but creative communities and explore the kinds of fan productions that have emerged in relation to young adult novels. The course will include critical and creative assignments. Texts may include *The Hunger Games*; the *Harry Potter* series; *Are You There God, It’s Me Margaret*; *The Outsiders*; *The Astonishing Life of Octavian Nothing*; *Vivian Apple at the End of the World*; *Fangirl*; *Artistotle and Dante Discover the Secrets of the Universe*; *Absolutely True Diary of a Part-Time Indian*; *The Fault in Our Stars*; *Ship Breaker*; *Long Division*; *Monster*; *Akata Witch*; *Make Your Home Among Strangers*.

Cross-Listed as: ENGL 54.03

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 52.04 - Arts Against Empire: Fictions of Revolution and Solidarity in the Americas

Anticolonial struggle and movements for social justice have always been accompanied by a range of cultural practices, including fiction, art, music, film, murals, theater, graffiti, and theory. This course explores that tradition of cultural activism, considering attempts to narrate revolutionary formation, imagine solidarity, and write decolonial theory. We will begin by examining revolutionary nationalist and anti-imperialist culture in the Americas—ranging from the memoirs of Che Guevara and Malcolm X to Nuyorican and Chicano Movement literature—in order to consider the formation of revolutionary subjects, and how 20th century ideas of revolution were raced and gendered. We will then consider how novelists, artists, photographers, filmmakers, and activists attempted to imagine solidarity with revolutionary movements and suffering others in the Americas, from Central America solidarity photography to performance art in solidarity with Guantanamo Bay prisoners. We will pay special attention to the work of feminist and queer solidarity artists, writers, and performers. Finally, we will examine contemporary activist cultural projects, such as PanAmerican public art road trips and hashtag-activism. Students will have the opportunity to produce a creative or multimedia final project.

Cross-Listed as: ENGL 63.04 LACS 35.07

Degree Requirement Attributes: Dist:INT or LIT;
WCult:W

WGSS 52.05 - Women, Representation, Power: Writing India, Then and Now

How are global relationships shaped by what and who we read? We come to these relationships with preconceptions, often created primarily from our encounters with others that are mediated through language. In this course, we will examine how knowledge is constructed through language using India as a case study. This course is directly related to Dartmouth’s program in Hyderabad, India. Our focus

will be on the representation of women and female agency in this case study of India as we explore how knowledge is created, by whom, and to what ends. Language is a powerful instrument. We will analyze how language has been and is currently used to portray India, as we will think critically about how our perceptions of India have been shaped by what we have read, heard, and seen. Some questions we will address are: How have images of India been constructed over time? To what ends? What impact has colonialism had on how India was portrayed to the west? How did/do Indian writers use language to reclaim their country? How is feminism defined in India? How can we understand female agency in the Indian context? What role have women in India played and how has this female agency been incorporated into or excluded from representations of India developed into the subcontinent as well as outside of it?

Degree Requirement Attributes: Dist:SOC; WCult:NW

WGSS 53.05 - The Poetry and Rhetoric of Love, from Petrarch to Social Media

What we call "love poetry" has generally been a way of expressing much more than the emotional and erotic fascination of one person with another. Often it seems to bypass the love-object altogether, and focuses instead on power relations or poetic achievement. Beginning with early examples, and moving on to contemporary and modern poems, our course will place love poems by men and women in the context of an ongoing poetic tradition, recent feminist criticism and theory, and talk about love and sex in recent popular culture. This last will include: excerpts from recent books about dating and seduction, film, contemporary song lyrics, dating websites, and campus culture.

Cross-Listed as: ENGL 65.06

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 53.07 - Language, Gender & Sexuality

This course will introduce students to foundational and current thinking about the connections among language, gender, and sexuality, from readings in linguistics, sociolinguistics, linguistic anthropology, and feminist theory. A cross-cultural approach will characterize the class, and units will link language, gender and sexuality to themes such as power, (in)equality, and identity. Students will also be encouraged to consider the significance of gender and sexuality in the context of quotidian language use.

Cross-Listed as: ANTH 044

Degree Requirement Attributes: Dist:SOC

WGSS 56.03 - Family Matters: Pedro Almodovar, Gender Reversals, and New Communities

Pedro Almodóvar Caballero, Spain's most internationally acclaimed filmmaker will be studied in this course as representative of what critics have termed the New Spanish Cinema Movement. Almodóvar's filmmaking, both in aesthetic and cultural terms, addresses issues which will appeal to students interested in understanding how culture, politics, and aesthetics get entangled in ways that "queer" gender identity, family structures, notions of community and the societal expectations and limitations surrounding them. The course will also compare his work with other contemporary filmmakers that have reconfigured in their films the boundaries of "family."

Cross-Listed as: FILM 43.02 SPAN 63.10

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 57.01 - Data and Bodies

In this course we will take a multi-modal approach to understanding relationships between "datafication" and human bodies. Today's "Datafication" is a process of transforming diverse processes, qualities, actions and phenomena into forms that are machine-readable by digital technologies, but the act of turning humans and human bodies into quanta of information has a long history. We will be using art, new media, history, information science, and more to think through the impact that datafication has on how we understand ourselves and others. Particular attention will be paid to the ways in which data has historically been used in racializing and gendering ways, and the role that quantification of people has been integral to the development of the Western nation-state.

Cross-Listed as: FILM 48.03

Degree Requirement Attributes: Dist:SOC

WGSS 59.04 - Race, Gender, and Performance

Students will explore the perspectives of contemporary Latina/o, Asian American, Black, and Native American theater artists/performers. Our examination will also consider the socio-historical and political contexts engaged through these artists' works. We will also consider the relationship between the construction of identity and strategies of performance used by playwrights/performers to describe race, gender, sexuality, class, subjectivity, and ideas of belonging. Texts examined will include works by Moraga, Highway, Wilson, Parks, Gotanda, and Cho.

Cross-Listed as: THEA 021

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 59.07 - Latinx Performance

This course offers a critical investigation of performance in the Americas through a queer and transgender/travesti lens. We explore specific social, political, and economic

contexts in which artists are performing and interweave written texts with audio, visual, and other modes of doing theory. Our texts are interdisciplinary: we listen to music, watch films, do written performance responses, and read memoir, history, ethnography, manifesto, and critical theory. The course will be organized around various themes that can be transposed to many other areas of study. Creative and critical written assignments provide opportunities to develop self-reflexivity, writing and thinking skills, and making connections between our everyday lives and larger workings of power. Ultimately, the course invites students to think about how queer and trans/trava performance is imbricated with social justice artistic formations in the contemporary world.

Cross-Listed as: LACS 25.16 LATS 30.01

Degree Requirement Attributes: Dist:INT or ART;
WCult:CI

WGSS 61.06 - Feminist Perspectives on Reproductive Ethics

This class focuses on ethical issues concerning human reproduction. Some of these issues are familiar: Is abortion moral? Is sex-selection ethical? Other issues may be less familiar: Does prenatal testing express a negative message about living with disability? Is there anything wrong with aiming to have a deaf child? Yet other issues have arisen with the commercialization and globalization of reproduction: Is there anything wrong with selling one's reproductive labor? Is it ethical to 'outsource' pregnancy to Indian surrogates? We will start by looking backward to ethical issues around the introduction of contraception; we will end by looking forward, to the promise of same-sex reproduction through in vitro-gametogenesis, and reproduction via artificial gestation. While we will consider numerous perspectives on each issue, special consideration will be given to feminist viewpoints.

Cross-Listed as: PHIL 04.01

Degree Requirement Attributes: Dist:TMV

WGSS 62.02 - A Global History of Sexual Science

This course provides an introduction to the global history of sexual science from the late 19th Century through the mid-20th Century. The beginnings of scientific approaches to sex, gender and sexuality were very diverse and thus we will read—among others—historical medical, psychiatric, anthropological, journalistic, philosophical and literary texts. Scientific notions of sexuality did not simply migrate from the “West” to the “rest,” but developed as a result of complex, mutually constitutive interactions and global networks. The field of sexual science emerged not just in Europe and North America but in a variety of places, such as India, Chile, or China. Its proponents in different parts of the world were intensely aware of each other and interacted through publications, conferences, or travel. Moreover, proponents of sexual science in Europe

and North America adopted notions forged in exchange with actors in Asia, Latin America and Africa, e.g., the US practice of gender reassignment surgery was heavily influenced by earlier Mexican cases or the German legal understanding of homosexuality was tested and contested in its colonial African courts. We will study many figures who have been forgotten in contemporary work on sexuality or sexual science. Some of these figures drew from the repressive legal, social and cultural discourses that limited sexual expression and gave the ideological grounds to discrimination and persecution. But others—and they were at times the very same figures—connected to the liberating discourses, the power of which we are experiencing today.

Degree Requirement Attributes: Dist:INT or SOC;
WCult:NW

WGSS 62.04 - Women and the Making of Science

This seminar course will consider the role of women in the history of science from two perspectives: first, women as the often eroticized objects of scientific inquiry and second, women as scientists or natural philosophers whose work was frequently derided or obscured behind the names of fathers, husbands, brothers, and/or coworkers. We will read primary texts in the anatomical, astronomical, mathematical, and physical sciences, along with contemporary theory on gender, science, and Anglo-American cultures. Please note that the construction of the gender binary and notions of biological race are very much at the fore of this course but are not taken as a 'natural,' given, or stable quality. The history of science is HUGE, so we'll take two areas as focal points for the course: bodies as sites of knowledge and mathematical sciences.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 65.04 - Queer Visual Culture

This seminar will look into the cultural history of queer aesthetics. The subjects are mostly moving images (cinema, TV and video), activist performances and some aspects of visual art. The starting-point is the simultaneous 'invention', disease mongering (pathologization) and 'emancipation' of homosexuality in the European fin de siècle and how it is negotiated in educational and feature films. The syllabus moves then to figurations of queerness in popular (and queer) imagination, for instance the 'Drag Queen' or the 'Vampire' with special attention on the AIDS crisis and will finally focus on gender-ambivalence, transgender, and gender-bending performances such as Butch-Femme aesthetic or Glam-Rock. A general tension will be observed between 'The Epistemology of the Closet' (Sedgwick), Mainstreaming Queerness and an effort on part of activists to use queer visual culture as a tool for political intervention.

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 65.06 - Radical Sexuality: Of Color, Wildness, and Fabulosity

This course examines how issues of race and sexuality are elemental to radical formulations of queer theory. We will begin with a deep study of U.S. feminist and queer of color critiques to understand how social formations are embroiled in nationalist, colonial as well as free market ideals and practices. Our focus on the quotidian and staged experiences of those who identify or are identified as an outsider, misfit, or the Other is an invitation to intensively analyze and perform what it means to be at once queer and gendered, queer of color, and queer and wild. From accents and affects to styling and production, we will read a range of manifestos, performances, literature, and art that conform to and yet also deviate from what is normal or acceptable in mainstream, U.S.-American society. The key words in the title, "Of Color, Wildness and Fabulosity," are suggestive of alternative queer practices in the U.S. and around the world that engage, exceed or even explode dominant categories of race, gender and sexuality. It explores, in other words, queer theory and praxis using diasporic perception or minority perspectives.

Degree Requirement Attributes: Dist:INT or ART;
WCult:NW

WGSS 65.07 - Queer Popular Culture

This course explores queer popular culture in the performing and media arts, from expressive visual and sonic cultures that include film, performance, music and television to museum and fashion shows, and street carnivals. We will look at conceptions of queerness that play with hyperbolic genders, sexualities and racializations, and interrogate their value, significance and meaning as cultural and/or political expressions. Is queer popular culture a way to sell LGBT life styles as metrosexual taste, or is it a way to challenge the heteronormative mandates set by the market, the state, and their regulatory institutions?

Degree Requirement Attributes: Dist:INT or SOC;
WCult:CI

WGSS 66 - Special Topics in Women's, Gender, and Sexuality Studies

This rubric catches courses that do not fit under other existing rubrics or have an experiential component. It should not appear in the ORC

WGSS 66.01 - Times of Crisis

In this course, we will engage in an interdisciplinary study of the topic of "crisis" in its many manifestations: from the erosion of justice, social inequities, and their effects on individuals, families, and communities to the exhilarating moment of transformation all moments of crisis offer. We will debate and ground systemic analysis and change in the

insights offered by critical social and gender-based theory, activism, and the arts.

Cross-Listed as: COLT 67.07

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 66.02 - Social Justice and Computing

This course draws on feminist and queer scholarship to examine the intricate relationship between datafication, ubiquitous computing, and social justice, highlighting the politics and impacts of data-driven processes and big data on human lives. One of the key highlights of WGSS engagements with computing history is the focus on the politics and impacts of data-driven processes and big data on human lives. The course will provide a brief introduction to histories of computing and data-driven practices within the Anglo-American tradition, including discussions of the roles that ethics and biopolitics play within these histories. We will explore ways that privacy/security, algorithmic processes, computational environmental impacts, and design have exploited the most vulnerable while increasing affordances for the most privileged. We will also spend significant time learning about new data/computational justice initiatives and develop a robust understanding of how social justice issues like prison abolition, climate change, and equitable health outcomes are at the core of understanding computational cultures. No Computer Science or Data Science background is required, but the course will entail learning about some of the technical history within both fields. Similarly, there are no WGSS prerequisites for the course but students will be responsible for learning about anti-racist feminist and queer methods and insights.

Cross-Listed as: FILM 48.04

Degree Requirement Attributes: Dist:SOC

WGSS 66.03 - Transnational Migration: Critical Ethnic, Indigenous and Queer Crossings

This course introduces undergraduate students in programs across the college to research practices, theories and methodologies commonly used in cultural analysis, with the intent of increasing their knowledge of the interdisciplinary fields of critical ethnic and gender studies around the theme of migration. Students will read a range of texts, performances, films and learn the different approaches that migration has come to shape transnational sensibility. The course is designed to individual research/analysis projects to emerge around various constellations of issues, such as where questions of 'queer' and 'migrations' intersect, or figures of diaspora, the undocumented and the transmigrant meet. This mode of investigation will enable students to develop research interests in cultural processes, discourses and forms across a range of historical periods, on diverse topics (neoliberalism, disability, humanitarian violence, security/securitization, war, terror, prison, border, law,

etc.), and in conversation with interdisciplinary themes that are organized by the week. Students will be introduced to the key debates in the field as they interrogate social and political apparatuses of power (sexism, racism, classism, xenophobia, homophobia/heterosexism, transphobia, ableism, and others), and how those apparatuses determine which migrant bodies are recognized and valued both in the United States and the rest of the world.

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

WGSS 66.04 - Introduction to Black Feminist Thought

What is Black Feminist Thought? Why Black Feminist Thought? And just whom is Black Feminist Thought for? This course considers the disciplinary formations and political happenings of Black Feminist Thought in the United States—from its role in the university department to its presence on the ground. Highlighting interlocking issues related to gender, sexuality, race, and economics, we will mine political speeches, visual art, live performance, literature, and theoretical discourse.

Cross-Listed as: AAAS 20.15

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 66.06 - Bodies and Technologies in Asian American Popular Cultures

From film, TV, and social media to the fringe punk scenes in between, this course explores the popular cultures of contemporary “Asian America.” By centering the bodies/emodied practices and technologies that produce Asian American popular cultures, we will ask historical questions about representation, power, and access, all with close attention to moving categories of race, gender, sexuality, class, and trans/nationalism. Ultimately, popular cultures—the critical, the joyful, and the terrible—will be our guide.

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 66.07 - African Diaspora Women Writers

This course will be organized around four themes prevalent in contemporary portrayals of Black women across the African diaspora. The themes, *Body*, *Voice*, *Memory*, and *Movement* provide a center from which discussions of agency, representation and counter-narrative can be situated within a larger discourse of canon formation. We will explore various parts of the United States and the Caribbean through analyses of literature and visual culture, paying particular attention to shifting dialogues of culture and identity. Among the central questions posed will be: What constitutes a feminist ideology in black women’s literature? How are images of subjection and victimization re-appropriated by Black women writers and image-makers and utilized for their own empowerment? What are the penalties inherent when

a Black woman “comes to voice” in the arena of self-representation?

Cross-Listed as: AAAS 67.06 ENGL 53.47

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.08 - Self, Subject, Photography

Before the oft-reproduced social-media mechanism of the selfie, there existed (and still does) the artistic self-portrait. Utilized in the creative realm to create a representation of the artist as both subject and object, self-portraits can be whimsical, grim, tantalizing, performative, or combative. In this course we will examine gendered constructions of self-portraiture as they exist in poetry, memoir, and photography. Specifically, our task will be to examine the registers of possibility present when women use their bodies and stories to claim authorial space. Our goal during the term will be to think through all of the mechanisms of the self that are deployed in the context of artistic practice. Students will produce their own photographic self-portraits and write an analytical paper on a contemporary writer or visual artist.

Cross-Listed as: AAAS 67.09 ENGL 63.29

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 66.09 - Black Consciousness and Black Feminisms

This seminar seeks to decenter mainstream (what bell hooks calls “imperialist, white supremacist, capitalist, [heteronormative], patriarchal”) thinking to understand the world differently. Reading primary and scholarly texts from the US, Caribbean, and Africa about the Black Consciousness Movement and black feminisms, we will trace the evolution of thinking about race, gender, sexuality and their interrelationships through time and across space. Assignments include weekly reading response papers and an independent research project.

Cross-Listed as: AAAS 67.50 ASCL 54.04 GEOG 072 HIST 92.04

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 66.11 - Black Elegies

This course is structured around iterations of black grief within, but mostly beyond the genre of poetry. What curator Okwui Enwezor calls the contemporary “emergency of black grief” is over four centuries old. We will explore modes of release from black cultural producers who attend to the multiple losses sustained by black subjects. The resulting productions span the range of representation from dance, painting, photography, music, film, and craftwork. The course will be organized around three parts, each focusing on the sensorial: *Sight*, *Sound*, and *Touch*. Together we will consider what it means to mourn in an antiblack world resistant to acknowledging the

violences endured by black subjects in the United States and beyond its borders.

Cross-Listed as: AAAS 35.01 ENGL 73.03

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.13 - Gender and Jewish-German Culture (in English)

In this class we will investigate different texts and representations of female experiences by Jewish authors from the Weimar Republic to the end of the 20th century. The intersection of gender with Jewish German culture became one of the most important topics in cultural and literary research during the last decades. We will read and discuss lyrical and political, essayistic and autobiographical texts written by authors under extremely different political and historical circumstances; and we also will discuss theoretical and methodological problems in the field of Jewish German history and culture. Taught in English translation. Students taking the class for major or minor credit in German Studies will have the option to enroll in an additional German-language discussion section.

Cross-Listed as: GERM 42.13 JWST 53.01

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.15 - Feminist and Queer Africa on Stage & Screen

This course explores representations of feminist and queer Africa in theatre, dance, and film. How do female-identified, nonbinary, and/or queer African artists use creative expression to navigate and challenge neocolonial, heteropatriarchal regimes and advance ideas of LGBTQIA rights and gender equality? Although several countries will be considered during the term, Kenya and Uganda receive a particular emphasis. All students are welcome; no prior knowledge of Africa and/or theories of gender and sexuality are needed.

Degree Requirement Attributes: Dist:ART; WCult:NW

WGSS 66.19 - Eroticism, Love and Sensuality in Hispanic Film

The contemporary topics to be studied in this course should be approached with an open mind and with the willingness to challenge our prior knowledge of the concepts. In order to do so, critical thinking is of the utmost importance. In this context, critical thinking implies the ability to question and destabilize most—if not all—of our preconceived ideas about eroticism, love, and sexuality that are no longer functional, i.e., that do not help us better understand society and our fellow citizens. As we explore a variety of subfields within contemporary Hispanic film, the course will offer you a set of conceptual tools that will help you deconstruct some of

the symbolic foundations of our existence. The course will address a series of topics ranging from: identifying ways that "personal choice" sometimes poses as a way of implementing one, single, heteronormative, monogamous, sex/gender morally safe model of behavior; thinking about the historicity of the normative, the deviant, or the perverse; discovering that the intersectional framing of gender creates an avenue for strong political and existential alliances; and making sure that the identities that fall under the umbrella of the Queer Nation (LGTBiQ peoples) do not become a label of marginality but instead get universalized as a mode of praxis that expands those borders, hence our study of love in relation to monstrosity, ageing, queer identities, prostitution, and pornography under this paradigm.

Cross-Listed as: SPAN 50.05

Degree Requirement Attributes: Dist:ART; WCult:W

WGSS 66.20 - Early Modern Literature and the History of Sexuality

Throughout the twentieth century and especially since the 1970s, the literature and drama of the English Renaissance has provided a crucial archive for scholars studying the historical formation of sexuality, sex practices, and gender in pre-modern society. Shakespeare's sonnets, for example, with their erotic address to both a "sweet boy" (or "master-mistress of my passion") and the so-called Dark Lady, remain a flashpoint. On the English stage, cross-gender identification and same-gender romance was a constant presence, while in the streets of London, "catamites," "tribades," or acts of "sodomy" were supposed to be completely absent—from the eyes of the law, at least. What can the poetry and plays of William Shakespeare, Amelia Lanyer, Christopher Marlowe, Margaret Cavendish, John Donne, or Katherine Phillips teach us, not only about the historically-distant practices of the past, but about our methods, theories, terms and changing paradigms for studying such topics today? What does it mean to read imaginative literature as an archive within an historically contingent body of knowledge? Students should prepare to engage with significant primary and secondary historical readings as well as the social theories of Michel Foucault, Eve Sedgwick, and others.

Cross-Listed as: ENGL 61.03

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 66.21 - Sex and Gender in Modern Europe

Sex and gender have been central to the making of modern Europe. Over the last 250 years, Europeans constantly debated fundamental questions such as the "appropriate" roles of men and women; the definition of "healthy" and "deviant" sexualities; and the relationship between biology and social norms. By exploring a wide variety of historical sources, including essays, etiquette books, speeches, and memoirs, we will examine how these discussions

profoundly shaped European thinking about politics, economics, imperialism, immigration, and everyday life. Open to all classes. Not open to students who have received credit for HIST 9.07.

Cross-Listed as: HIST 42.02

Degree Requirement Attributes: Dist:TMV; WCult:CI

WGSS 66.22 - Feminist and Queer Video Art: "I'm asking – does it exist? What is it? Whom is it for?"

John Perreault, the first openly gay art critic at the Village Voice, published the phrase "I'm asking – does it exist? What is it? Whom is it for?" as the subtitle of an article on "Gay Art" for Artforum in 1980. Expanding upon Perreault's nuanced consideration of how art works accumulate identities and address particular audiences, this undergraduate course will explore feminist and queer moving image-making practices in the United States between the 1950s-1990s. While eschewing a strictly chronological approach, we will consider art practices in relation to specific historical thresholds, from the intensification of nonviolent direct action in the 1950s and 1960s, to the Stonewall rebellions of 1969, to the emergence of AIDS activism in the late 1980s and 1990s. We will consider the term video expansively, inclusive of TV art, installation, and video's dialogue with film, holography, and print publications. This course leaves open what feminist and queer art practices look like and perform, and what methodologies might be most useful in writing about them. However, the course aims to challenge the ways in which art historical narratives, including alternative ones, have eclipsed the role of artists of color. Students will be required to reflect upon video footage and on readings in a series of short papers and assignments. Shorter videos will be screened in class, but some weeks require an extra screening during the X-hour session.

Cross-Listed as: ARTH 43.01 FILM 41.22

Degree Requirement Attributes: Dist: ART; WCult: CI

WGSS 66.23 - A Legacy of Tenderness:" Black Women's Creative Archive

This class studies the aesthetic/creative workings of 20th and 21st centuries Black women, who identify as/with feminism and womanism. We will prioritize the beauty of the often-understudied intersections of disability/crip, and trans and nonbinary, and intersex lived experiences and political praxis. Through visual art, poetry and prose, film, and music we will converse over Black ways of knowing and being beyond the normative. By the end of the quarter, we will be better able to articulate the general terrain of Black feminist and womanist creative works, with the hope of expanding (and deconstructing) the archive of Black Women's Studies.

Cross-Listed as: AAAS 81.08

Degree Requirement Attributes: Dist: ART; WCult: W

WGSS 66.24 - Modern Jewish American Women Writers

This course will explore the literature of Jewish American women from the late nineteenth century to the present; topics for discussion will include feminism, sexuality, identity politics, activism, and literary transmission. Among the readings will be poetry, fiction, memoir, and essays by such writers as Lazarus, Antin, Yeziarska, Stock, Stein, Olsen, Rukeyser, Paley, Ozick, Rich, Piercy, Levertov, Gluck, Goldstein, Wasserstein, Goodman, Klepfisz, Feinberg, Chernin. *Enrollment limited to 20.*

Cross-Listed as: ENGL 63.01

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.25 - Disability Arts and Activism

"Disability Arts and Activism" examines radical disability resistance through the lens of culture and performance to ask the central question: how does disability art make cultural change? Students will learn a history of disability activism as well as the impacts of disability policy and politics across the stage and streets. Using the frame of Disability Justice, students will develop analytic skills to unpack normative conceptions around bodies, visibility, and representation across multiple forms of difference such as size, race, nation, class, gender, and sexuality. We will explore the performance involved in protest, alongside the protest present in disability cultural forms, such as dance, sports, theater, music, and visual art. The course culminates in a research project that crafts an intervention into a local art space to build radical accessibility.

Cross-Listed as: THEA 10.34

Degree Requirement Attributes: Dist:ART

WGSS 66.26 - Migration, Gender and Health in Latinx Communities

This course uses an interdisciplinary approach to explore how Latinx people experience health inequities due to varying social inequalities across the life course. The course begins with a focus on the role Ethnic Studies and Latinx Studies can play towards improving the health conditions of Latinxs. Each subsequent section explores the social, economic, political and historical influences that place Latinx health in jeopardy. Sections of the course focus on Latinx migration and trauma, reproductive justice, workplace health hazards, nutrition and incarceration. The latter part of the course shifts to what can be done as a collective to improve the health and well-being of Latinx communities in the U.S.

Cross-Listed as: LACS 30.18

Degree Requirement Attributes: Dist:SOC

WGSS 66.27 - Disability and Madness in African American Literature and Film

Disability and madness are often overlooked analytic and lived experience in African American Studies and African American criticism, though recent work in Black disability studies is shifting this. The goal of this course is to pull disability and madness to the center of course readings to understand the complexities of Black life, such as: grief, sexuality and gender identity, geography, and the impact of incarceration and institutionalization. Students will be asked to approach canonical texts and less familiar texts for messier readings, unraveling(s) and ravings that complicate Black life. Likewise, we will watch film adaptations that also represent disability and madness on screen. Because disability and madness are recurrently represented visually, as is race, this course will trace representation from the page to the screen as part of a deeper understanding of how disability and race become co-constituted in American culture. Lastly, we will ask, again and again: what does disability and madness look like in literature? What images, language, etc., are used to represent disability and madness as it intersects with Blackness? And finally, what things are made possible through a disabled and mad lens? How are freedom, injury (and healing), and salvation better imagined through disability and madness?

Cross-Listed as: AAAS 35.02 ENGL 53.54

Degree Requirement Attributes: Dist:LIT; WCult:W

WGSS 66.28 - War, Nationalism, and Sexual Violence in Southeast Europe

This course is designed to develop students' critical thinking skills on the topics of war, nationalism, sexual violence, oppression, ethnicity, gender, class, and religion. Using intersectionality and interdisciplinarity as methodologies, the course aims to deconstruct ideological, cultural, and political entanglements in the context of Southeast Europe. The course intends to employ gender as a category of analysis to dismantle gender relations, positions of power, war tactics, national identity, socialism, politicization of identity, and social mobilization. The course is a discussion-based class, during which students will have the opportunity to trace concepts through close and in-depth readings of key academic, institutional, and organizational texts.

Degree Requirement Attributes: Dist:INT

WGSS 66.29 - Black Looks: A Survey of Race and Representation in Cinema and Visual Media

This course surveys the evolution of race and representation in visual media. Special attention will be given to black subjects and the socio-economic, historical and political factors that feed into depictions of black life, dominant tropes within these historic depictions, and the aesthetics of emergent voices that help to shape a new

black subjectivity on screen. Students are encouraged to draw connections between discourse about black subjectivity with that of identities through doing "close readings" of screen representations and images. In their final projects, students write about and create work relating to black subjects or the broader theme of race and representation in visual media.

Cross-Listed as: FILM 47.30

Degree Requirement Attributes: Dist:ART; WCult:CI

WGSS 66.30 - Trans Feelings, Feeling Trans

In her germinal essay in trans studies, Susan Stryker writes that "transgender rage is a queer fury, an emotional response to conditions in which it becomes imperative to take up, for the sake of one's own continued survival as a subject, a set of practices that precipitates one's exclusion from a naturalized order of existence that to maintain itself as the only possible basis for being a subject." In this class, we will explore the affective elements of trans experience and theory—including but not limited to rage, joy, loss, and love—through a survey of trans scholarship and trans stories from an intersectional, transnational, and multidisciplinary lens. Students will learn to apply this mode of critical affective analysis to media produced by trans people, and to anti-trans actors who use affective rhetoric to promote violence and oppression through appeals to emotions.

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 66.31 - Black Speculative Worlds

This course will explore futuristic speculative worlds as they are imagined by major Black women writers in the field of science fiction and fantasy, specifically focusing on works by Octavia Butler, Nalo Hopkinson, and N.K. Jemisin. We will explore utopias/dystopias and post-apocalyptic alien worlds in order to interrogate the ways in which they reflect and comment on our own human condition. Understanding each literary text as a thought experiment in its own right, we will unpack various themes associated with the reconfiguring of the constructs of race, class, gender and sexuality as well as Black women's reproductive rights and politics. We will closely analyze alien invasion contagion narratives that comment on the histories of slavery, settler colonialism, and imperialism, and that speak to the operations of white supremacy. Lastly, we will examine how a revisionist mode of writing functions as an essential part of Black feminist speculative thought.

Cross-Listed as: AAAS 35.05 ENGL 53.57

WGSS 66.32 - Framing Ecology and Gender

At a time when women from Argentina to Mexico are at the forefront of a transnational fight for environmental justice, this course focuses on Latin America to explore how images of these struggles and others circulate and

inform our perception of ecological crisis. As we study a range of media, we will attend to the ways in which visual objects illuminate the imbrications of gender and environment in order to investigate problems such as extractivism and neocolonialism. Concentrating on film, photography, television, visual art, and graphic novels, we will consider the potential of images to challenge, resist, or perpetuate environmental devastation and the concomitant marginalization of women and LGBTQIA persons. Whether by exposing the toxicity of agribusiness in the Amazon or foregrounding enduring connections between heteronormativity and colonialism, the media and critical texts we will examine ask us to notice the inseparability of social and environmental violence. As we pay special attention to ecofeminism and the activism of Indigenous women across Latin America, we will search for new perspectives that allow us to imagine alternatives to capitalist environmental exploitation. This course is taught in English.

Cross-Listed as: LACS 45.03 SPAN 50.06

Degree Requirement Attributes: Dist:ART; WCult:NW

WGSS 66.33 - Gender and Policy Leadership

This course uses case studies to provide a window into the decision-making processes leaders face when balancing their policy goals against the constraints imposed by the processes and institutions which frequently determine policy outcomes. Policy areas discussed include sexual harassment, healthcare access, and international sex work. By the end of the term, students will have drafted their own case study related to gender and policy leadership on a policy issue or policymaker of their choosing.

Cross-Listed as: PBPL 40.03

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 66.34 - Dangerous Intersections: Intersectionality Beyond Boundaries

Intersectionality has become a prominent framework for understanding how social categories shape lived experiences. As an interpretative tool utilized across the social sciences and humanities, intersectionality interrogates how power is distributed along and across axes of inequality and privilege. Course readings, discussions, assignments, and assessments will focus on a wide range of social locations connected to race, ethnicity, gender, class, sexuality, religion, language, and disability, while also accounting for the multiplicity, nuance, ambiguity, and contradictions in how these social identity markers intersect. Engaging both theoretical and empirical works, this course will examine how simultaneous and interdependent dynamics between axes of inequality impact identity formation and life chances, relationships of marginality and privilege, social continuity, social conflict, and social change. Additionally, this course will critically explore the challenges and advantages of

intersectional analysis and the future of intersectionality's theoretical, methodological, and epistemological capacities.

Cross-Listed as: SOCY 060

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 66.35 - Living a Feminist Life: Archive, Text, Action

This class will examine how “knowledge” about women’s, femmes’ and non-binary people’s lives have been constructed in text, and how this knowledge determines and impacts the choices we have and make about loving, working, thinking, and living. Over the first six weeks we’ll do a deep reading of Sara Ahmed’s book, *Living a Feminist Life*, putting her ideas in conversation with thinkers like Jamaica Kincaid, Audre Lorde, Gayatri Spivak, Valerie Solanas, Angela Davis, Jose Muñoz, and bell hooks. In the second half of the course, we’ll work together *through discussion and student suggestions to construct a corpus of women’s and femmes’ life “writing”*—TV, poetry, music, journalism, memes, theory, and memoir—to discover how image and the written word continue to shape feminist lives, and how femmes’ and non-binary people’s lived experience in turn shapes feminist, pro-femme, and queer discourse. Through weekly short writing exercises, students will consider how their own intimate relationships—with parents, partners, children, neighbors, or friends—can become sites of intersectional feminist activism, and sources of strength and knowledge to be carried into the broader world of public engagement and intervention. In the final weeks of the course, we will think seriously about the relationship between learning and living, and collectively interrogate the boundary between writing and living as modes of feminist praxis.

Cross-Listed as: ENGL 53.52

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.36 - Histories of the Carceral State

This course examines the construction of and resistance to the carceral state across United States history. How race and the law have shaped each other over time is the central question of the course, one we will parse alongside a focus on gender, sexuality, immigration, disability, and political economy. We will approach criminalization as a political, economic, and cultural process that reflects and reproduces dominant ideologies for those behind bars and those on the outside.

Cross-Listed as: GEOG 70.02 HIST 36.03

Degree Requirement Attributes: Dist:SOC; WCult:W

WGSS 66.37 - Gender and Sexuality in the Ancient Greek World

How did the ancient Greeks think about sex, gender, and sexuality? Which behaviors and relationships were considered socially acceptable, and why? And what does it mean to seek out ancient Greek models for contemporary (queer) identities? This course examines the construction of gender and sexuality in ancient Greece, as well as its modern reception, through the study of written texts, material culture, and feminist and queer theory.

Cross-Listed as: CLST 10.16

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 66.38 - Leadership, Sex, and Gender in Politics and Business

Why are there still so few women running companies, countries, and the governments? Nearly everywhere in the world, gender equity continues to be an aspiration, rather than a reality, with no end in sight as to when a reasonable degree of parity will ever actually be achieved. Despite widespread awareness of principles around the equality of women in the modern era, it continues to be the exception rather than the rule for women to become corporate board members, C-suite members, partners in law firms, college presidents, tenured professors, political leaders, or leaders in nearly any kind of organization where pay and/or power are considerable. Moreover, parity continues to be even more elusive for women of color and others who face “double difference” than for white women, and non-binary individuals face yet another set of hurdles with respect to equity. Why is this the case? How does it matter? What would need to be done to change it? And what are the roles of individuals versus institutions in instituting change? We will be examining the latest scholarly research and real-world examples to grapple with these important questions through active discussion and through writing assignments, with a podcast project focused on educating the class on student-selected topics as a highlight of the quarter.

Cross-Listed as: GOVT 029

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 67.01 - Freud: Psychoanalysis, Jews, and Gender (in English)

This course will examine how Freud’s own writings, his biography, and his biographers have shaped the perceptions of psychoanalysis as a specifically Jewish theory and practice. Through a reading of Freud’s texts on gender, sexuality, and religion, we will trace the connects between psychoanalysis, Jewishness, and gender that have impacted theoretical discussion. We will explore critique, including Horney, Reich, and Marcuse, and recent debate on the status of Freud in the U.S.

Cross-Listed as: COLT 66.03 GERM 42.06 JWST 051

Degree Requirement Attributes: Dist:SOC; WCult:CI

WGSS 67.02 - Modern Sex: Weimar Republic Germany 1918-1933 (in English)

This course explores conceptions of gender and sexuality in Weimar Republic Germany – up until today considered the “laboratory of modernity.” After a general introduction into Weimar Republic history and culture through the eyes of the American graphic novel *Berlin: City of Stones*, we will examine a variety of historical practices, theoretical reflections and artistic representations. We will read pioneering theoretical texts from the fields of psychoanalysis and sexology (e.g., by Magnus Hirschfeld and Wilhelm Reich) as well as literary texts (e.g., by the poet Else Lasker-Schuler). We will also analyze feature films (e.g., the silent film “Different from the Others”) and artwork (e.g., by George Grosz and Hannah Hoch) and discuss the status of the women’s and gay rights movements, and legislation concerning gender and sexuality. The class will focus on the close connections between political and cultural movements and also relate our readings to discussions of modernity and urbanity in general. Throughout this course we will investigate different perceptions and representations of sexuality, homosexuality, transvestitism, sexual reproduction, prostitution, marriage and love. These theoretical discussions and artistic representations still continue to impact our discussions today, e.g., in political controversies about abortion or gay marriage.

Cross-Listed as: GERM 42.15 JWST 60.02

Degree Requirement Attributes: Dist:LIT; WCult:CI

WGSS 67.04 - Humanities and Human Rights: Thoughts on Community

This course will focus on the deep connections between democracy and the role of the arts in the public sphere. We will focus on the work of artists who deem that the role of their creations is to generate dialogue around issues of social justice. We will study the work of writers, filmmakers, documentarians, photographers, and poets, individuals, who make “energy” (intellectual energy) usable in different places and contexts. This course will cross disciplinary boundaries and follow the “comparative method” scrupulously. We will be reading literature with care and learning how to read literarily—with intensive textual scrutiny, defiance, and metatheoretical awareness—a wide array of theoretical, visual and filmic texts.

Cross-Listed as: COLT 57.08; INTS 17.08

Degree Requirement Attributes: Dist:INT or ART; WCult:CI

WGSS 80 - Seminar in Women's, Gender, and Sexuality Studies

The seminar in Women's, Gender, and Sexuality Studies is designed as a culminating experience for Women's,

Gender, and Sexuality Studies students and preparation for future work such as independent research, honors thesis, graduate studies and advanced scholarship.

Degree Requirement Attributes: SOC

WGSS 85 - Independent Study

This will involve an independent project carried out under the direction of one or more of the Women's, Gender, and Sexuality Studies faculty. Permission of the instructor and the WGSS Chair and Steering Committee is required.

Prerequisite: Permission of the instructor and approval of the WGSS Chair and Steering Committee.

WGSS 98 - Honors Thesis I

This two-course sequence involves an extensive investigation of a topic in a student's area of concentration and submission of an undergraduate thesis. Only students accepted into the Honors Program may take this sequence. Permission of the instructor and the Steering Committee is required.

Students are awarded one course credit for successful completion of this course upon completion of WGSS-099. Students register for WGSS-098 in the first term of the project and receive a grade of "ON" (ongoing) at the end of the term. Students then register for WGSS-099 the subsequent term to complete the coursework. A final grade will replace the "ON" upon completion of WGSS-099.

Offered: Winter.

WGSS 99 - Honors Thesis II

This two-course sequence involves an extensive investigation of a topic in a student's area of concentration and submission of an undergraduate thesis. Only students accepted into the Honors Program may take this sequence. Permission of the instructor and the Steering Committee is required.

Students are awarded one course credit for successful completion of this course. Students who have registered for WGSS-098 register for WGSS-099 to complete the coursework. At the discretion of the instructor, a student may opt to do additional work over three terms. In this arrangement, students register for WGSS-099 and receive a grade of "ON" (ongoing) at the end of the second term. Students do not register for a third term. A final grade will replace the "ON" for WGSS-098 and WGSS-099 at the end of the subsequent term at which time the coursework must be completed.

Writing Program

Director: James E. Dobson

Professors: J. A. Compton; Associate Professors: D. K. Drummond; Senior Lecturers: J. P. Binkoski, S. B. Chaney, W. M. Craig, S. Grushina, C. S. Lewis, D. J.

Moody, B. O'Connor, R. W. Obbard, S. B. Smith, A. C. Taylor, A.C. Wetsel, R. Young; Lecturers: F. M. A'Ness, J. W. Barger, E. G. Carabatsos, R. B. Clark, P. D. Deutsch, C. Drain, M. Y. Godley, J. A. Godley, M. D. Koch, C. Lannon, E. B. Rockmore, K. F. Riley, E. C. Tremmel, L. York.

The Institute for Writing and Rhetoric is home to Dartmouth's Writing Program, which provides and oversees the first-year writing courses (WRIT 2 (p. 821) - WRIT 3 (p. 821), WRIT 5 (p. 822), and the First-Year Seminars). Speech at Dartmouth offers courses under the SPEE subject code. The Institute for Writing and Rhetoric also includes peer-tutorial programs that support students in their writing and research activities.

To view Speech courses, click here (p. 769).

To view Writing courses, click here (p. 821).

First-Year Writing and First-Year Seminar Requirements

All first-year students are required to fulfill Dartmouth's First-Year Writing and First-Year Seminar requirements. Through these writing courses, the College offers entering students a valuable opportunity to develop the thinking and writing abilities that characterize intellectual work in the academy and in educated public discourse.

First-Year Writing Requirement

The First-Year Writing requirement at Dartmouth is satisfied by taking WRIT 5, WRIT 2-3, or Humanities 1 (HUM 1 (p. 519)).

The WRIT 5, WRIT 2-3, and HUM 1 courses do not serve in partial satisfaction of the General Education Requirements (Distributive or World Culture Requirements). WRIT 2-3 is a two-term, two-credit course offered in fall and winter taken in place of WRIT 5. Students must successfully complete both terms of WRIT 2-3 to fulfill the First-Year Writing requirement.

First-Year Seminar Requirement

The First-Year Seminar requirement is satisfied by taking a First-Year Seminar or Humanities 2 (HUM 2 (p. 519)).

First-Year Seminars do not satisfy General Education requirements (Distributive or World Culture Requirements). First-Year Seminars are open only to first-year students. First-year students are permitted to enroll in a second seminar within the limit of sixteen students per course after all students who have not yet met the requirement have had a chance to elect a seminar.

Students should keep in mind three scheduling guidelines regarding First-Year Seminars:

- 1) Successful completion of WRIT 5 (or an equivalent) is a prerequisite for enrollment in a First-Year Seminar (or HUM 2).
- 2) The First-Year Seminar (or Humanities 2) must be taken during the first year, in the term immediately following completion of WRIT 5 (or its approved equivalents).
- 3) A student is not eligible to take part in an off-campus program until the First-Year Seminar (or HUM 2) is completed.

Individual section descriptions for WRIT 5 and course descriptions for First-Year Seminars are posted prior to registration for a given term. Links to these descriptions can be found on the Registrar's website at the bottom of this page: <http://www.dartmouth.edu/reg/registration/>

For more information about the First-Year Writing and First-Year Seminar requirements and placement and enrollment policies for WRIT 2-3, WRIT 5, and First-Year Seminar, visit:

<https://writing.dartmouth.edu/curriculum/first-year-writing-requirement-courses>

WRIT - Writing Courses

To view Writing requirements, *click here* (p. 820).

WRIT 2 - Composition and Research: I

Instructor: The staff.

The course description is given under WRIT 3. This course and WRIT 3 are open only to first-year students invited after an on-line placement process to participate in the Integrated Academic Support program. Normally, students enrolled in WRIT 2 will continue with WRIT 3, but in rare cases may instead take WRIT 5.

WRIT 3 - Composition and Research: II

Instructor: The staff.

This two-term course in first-year composition works on the assumption that excellence in writing arises from serious intellectual engagement. To achieve this excellence, WRIT 2 - WRIT 3 enrolls students into intensive, seminar-style classes in which literary and other works (including the students' own) are analyzed closely and interpreted thoughtfully. By submitting themselves to the rigorous process of writing, discussing, and rewriting their papers, students come to identify and then to master the essential properties of the analytic academic argument. In these ways, students will learn to write clearly and with authority. In WRIT 3, students engage in the more sustained discourse of the research paper. These papers might employ the research protocols of a variety of academic disciplines. Throughout the reading, writing, and research processes, students meet regularly with their

tutors and professors, who provide them with individualized assistance. Note: WRIT 2-3 is taken in place of WRIT 5. Students must complete both terms of WRIT 2-3.

WRIT 5 - Expository Writing

Instructor: The staff.

Founded upon the principle that thinking, reading, and writing are interdependent activities, WRIT 5 is a writing-intensive course that uses texts from various disciplines to afford students the opportunity to develop and hone their skills in expository argument. Instruction focuses on strategies for reading and analysis and on all stages of the writing process. Students actively participate in discussion of both the assigned readings and the writing produced in and by the class. Note: Enrollment limited to 16. WRIT 5 (or its two-term equivalent WRIT 2 - WRIT 3 or HUM 1) is required for all first-year students. It never serves in partial satisfaction of the Distributive Requirement. Individual section descriptions for WRIT 5 are posted prior to registration for a given term. Links to these descriptions can be found on the registrar's website at the bottom of this page: <http://www.dartmouth.edu/~reg/registration/>

WRIT 7 - First-Year Seminar in Writing

Instructor: The staff.

Consult special listings per term on the registrar's website.

Prerequisite: WRIT 5 or its approved equivalents (WRIT 2-WRIT 3 or HUM 1).

WRIT 80 - Independent Research

A tutorial course focused on an independent research project to be designed by the student with the assistance of a member of the Institute for Writing and Rhetoric faculty, who will serve as the project's supervisor. Appropriate foci include topics associated with rhetoric, writing studies, composition, speech, communication, digital or multi-media composition. A student wishing to enroll in Writing 80 must submit a proposal and plan of study, approved by the supervising faculty member, to the Director of the Institute for Writing and Rhetoric, during the term prior to taking the course.

DEPARTMENTS/PROGRAMS AND COURSES - GRADUATE

Biochemistry & Cell Biology - Graduate

Chair: James B. Moseley

Professors, C. K. Barlowe (Biochemistry & Cell Biology), T. Y. Chang (Biochemistry & Cell Biology), D. A. Compton (Biochemistry & Cell Biology), J. C. Dunlap (Molecular & Systems Biology and Biochemistry & Cell Biology), S. A. Gerber (Molecular & Systems Biology and Biochemistry & Cell Biology), H. N. Higgs (Biochemistry & Cell Biology), A. N. Kettenbach (Biochemistry & Cell Biology), F. J. Kull (Chemistry), S. M. Lacefield (Biochemistry & Cell Biology), G. E. Lienhard (Biochemistry & Cell Biology), D. R. Madden (Biochemistry & Cell Biology), D. F. Mierke (Chemistry), J. B. Moseley (Biochemistry & Cell Biology), L. C. Myers (Medical Education and Biochemistry & Cell Biology), E. V. Pletneva (Chemistry), S. Supattapone (Biochemistry & Cell Biology and Medicine), W. T. Wickner (Biochemistry & Cell Biology), L. A. Witters (Medicine and Biochemistry & Cell Biology); Research Professor, R. V. Stan (Biochemistry & Cell Biology and Pathology); Professors Emeriti, C. N. Cole (Biochemistry & Cell Biology and Molecular & Systems Biology), J. J. Loros (Biochemistry & Cell Biology and Molecular & Systems Biology), O. A. Scornik (Biochemistry & Cell Biology); Associate Professors, M. J. Ragusa (Chemistry), C. J. Shoemaker (Biochemistry & Cell Biology); Assistant Professors, E. Burgin (Engineering), J. E. Landino (Biochemistry & Cell Biology), J. Lee (Engineering), P. R. Malaney (Biochemistry & Cell Biology), P. J. Robustelli (Chemistry).

Undergraduate students interested in a major program involving biochemistry should refer to the major in Biology (Biochemistry area of concentration) offered by the Department of Biological Sciences and to the major in Biophysical Chemistry offered by the Department of Chemistry.

The Ph.D. in Biochemistry & Cell Biology is administered by the Biochemistry & Cell Biology Department of the Geisel School of Medicine at Dartmouth. The courses listed below are primarily designed for graduate students. The student should decide, in consultation with his/her committee and course instructors, whether his/her background is appropriate for the content of the course.

To view Biochemistry & Cell Biology courses, click here (p. 823).

Requirements for the Doctor's Degree (Ph.D.)

To qualify for award of the Ph.D. degree, a student must fulfill the following requirements:

1. Satisfactory completion of a year-long graduate-level sequence in biochemistry, cellular and molecular biology; a one-term teaching assignment; and a three-term course in laboratory biochemistry. The last will consist of three small research projects, conducted in rotation with different faculty members for periods of about three months each.
2. Satisfactory completion of three other graduate-level courses in biochemistry or related disciplines.
3. Satisfactory completion of two approved ethics courses.
4. Attendance at the weekly seminar series of the Program.
5. Participation in a journal club during fall, winter and spring terms every year and in the weekly Research in Progress series.
6. Satisfactory completion of a written and oral qualifying examination.
7. Satisfactory completion of a significant research project and preparation of a thesis acceptable to the thesis advisory committee.
8. Successful defense of the thesis in an oral examination and presentation of the work in a lecture.

Biochemistry and Cell Biology

BIOC 101 - Molecular Information in Biological Systems

Instructor: Shoemaker and associates

This course constitutes the first term of a year-long graduate-level sequence in biochemistry, cellular and molecular biology. The central theme of the course is the storage, retrieval, modification, and inheritance of biological information, as encoded in the molecular organization of proteins and nucleic acids. Topics include the principles of macromolecular interactions; the structure and function of proteins and nucleic acids; the machineries of transcription, translation, and replication; principles of genetics, genomics, and proteomics; and the control and evolution of biological systems. In discussing examples from the primary literature, the course also highlights the foundations of experimental rigor and reproducibility. Enrollment in Biochemistry 101 fulfills the Molecular and Cellular Biology Graduate Program requirement for fall term. Non-MCB graduate students require permission of the instructor. Not open to

undergraduate students. Please note that this course extends beyond the official last day of fall term classes.

Offered: Fall.

BIOC 102 - Spring MCB Course Module

Instructor: Kettenbach and Bobak

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

In this comprehensive workshop, PhD students specializing in molecular and cellular biology will be introduced to the intricate world of applied statistics using the R programming language. Spanning nine insightful sessions across three weeks, students will delve deep into topics ranging from hypothesis testing to regression, mastering the art of designing a statistical analysis pipeline, and exploring the vast universe of publicly available data resources. Tailored to the unique needs of biological research, this course ensures a seamless blend of theory and application, equipping students with the statistical tools essential for groundbreaking research.

Prerequisite: BIOC 101, BIOL 103

Offered: Spring.

BIOC 106 - Spring MCB Course Module

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

Prerequisite: BIOC 101, BIOL 103

BIOC 111 - Spring MCB Course Module

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of

BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for a current list of spring-term modules and descriptions.

Prerequisite: BIOC 101, BIOL 103

BIOC 124 - Critical Thinking and Scientific Writing

Instructor: Allan Bieber and Yina Huang

This course is designed to guide Molecular and Cellular Biology graduate students in their second year through writing a predoctoral fellowship application using a combination of lectures, writing assignments and proposal evaluations (self, peer and faculty). The course will introduce students to the foundations of scientific grant writing, to practical issues related to grant writing and to general instruction with regard to writing style. Concepts of scientific rigor and reproducibility in proposal writing will be incorporated. Students will receive stepwise guidance through drafting a proposal, review and revision processes and aspects of peer-review that culminates in a mock study-section experience.

This course requires permission by the instructor and is not open to undergraduate students.

Offered: Spring.

BIOC 132 - Inorganic Biochemistry

The role of metal ions in biological systems. Topics include metal ion transport, storage and interaction with proteins and nucleic acids, metalloproteins involved in oxygen transport and electron transfer, metalloenzymes involved in activation of oxygen and other substrates, and medicinal, toxicity and carcinogenicity aspects of metals, as well as inorganic model chemistry of bioinorganic systems. Several physical methods are introduced, and their application to current research on the above topics is considered.

Identical to CHEM 132. Enroll in CHEM 132.

Prerequisite: CHEM 41 or BIOL 40, and CHEM 64, or permission of the instructor

Offered: Spring.

BIOC 196 - MCB AC Mtg Rpt & Data Profile

Instructor: Kelly Salmon

This course was established to enable MCB to award credit to each student for the annual completion of their Advisory Committee (AC) meeting with the resulting meeting report submitted by the deadline of June 30 (5:00 PM). Advisory committee meetings are usually held after a student's

annual RIP. Students who give their RIPs in May / June may work with the MCB Office for an extended deadline. This course will be offered during the Summer term each year and every student, after passing their qualifying exam, will be required to enroll in and complete this course's requirements.

Complete annual Advisory Committee meeting and submit to the MCB Student Database the completed meeting report.

Maintain and update personal student account on the MCB Student Database each year.

Prerequisite: BIOC 101, BIOL 103, GENE 100

Offered: Summer.

BIOC 197 - Graduate Research in Biochemistry & Cell Biology, Pre-Qual I

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students prior to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing departmental colloquia and one or more other courses. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC 198 - Graduate Research in Biochemistry & Cell Biology, Pre-Qual II

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students prior to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC 199 - Graduate Research in Biochemistry & Cell Biology, Pre-Qual III

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students prior to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC 297 - Graduate Research in Biochemistry & Cell Biology, Post-Qual I

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing departmental colloquia and one or more other courses. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC 298 - Graduate Research in Biochemistry & Cell Biology, Post-Qual II

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC 299 - Graduate Research in Biochemistry & Cell Biology, Post-Qual III

An original individual experimental or theoretical investigation beyond the undergraduate level in biochemistry. This course is open only to graduate students subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term. Moseley and the staff of the Program.

Offered: Fall, Spring, Summer, Winter.

BIOC - Biochemistry and Cell Biology - Graduate Research Colloquium

This course is required of all students during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. Although minor variations in format exist among these series, normally these series meet weekly; and all students will be required to participate in at least one Journal Club presentation each term that describes work from the current literature and one Research in Progress presentation each academic year that describes their own research. This course is not open to undergraduates. Students may choose from the following topics, enrolling in the course named:

BIOC 259, Actin Cytoskeleton

BIOC 260, Structural Biology (*Identical to CHEM 264—Enroll in CHEM 264*)

BIOC 261, Phosphorylation Signaling JC

Offered: Fall, Spring, Winter.

Biological Sciences - Graduate

Chair: Magdalena Bezanilla

Professors M. P. Ayres, M. Bezanilla, R. G. Calsbeek, K. L. Cottingham, M. L. Guerinot, T. P. Jack, W-L. Lee, M. A. McPeck, K. J. Peterson, G. E. Schaller, E. F. Smith, L. A. Witters; Associate Professors P. J. Dolph, B. He, R.A. Hill, M. B. Hoppa, C. D. Nadell, C. E. Hicks Pries, O. Zhaxybayeva; Assistant Professors A. A. Amodeo, E.L. Behrman, D. D. Ghosh, J. Mutz; Senior Lecturer N. M. Grotz; Lecturer W. Ryan, J. D. Warren; Professor Emeritus E. M. Berger, C. L. Folt, J. J. Gilbert, C.R. McClung, D. R. Peart, R.D. Sloboda; Research Professor and Professor Emeritus S.E. Bickel, R. T. Holmes; Associate Professor Emeritus S. J. Velez; Adjunct Professors K. E. Griswold, D. A. Leib, L. R. Lynd, G. A. O'Toole, M. J. Turk, M. E. Zegans; Adjunct Professor D. Gilbert-Diamond, Adjunct Associate Professor M. E. Romano; Adjunct Assistant Professors C. G. Howe; Research Professor C. Y. Chen; Research Associate Professor T. Punshon; Research Assistant Professor J. V. Trout-Haney, Principal Instructor C. D. Layne; Senior Instructors A. L. Socha, N. R. Sylvain; Instructor T. L. Tornø

To view *Biological Sciences Graduate courses*, [click here](#). (p. 826)

To view *Biological Sciences Undergraduate requirements*, [click here](#). (p. 168)

To view *Biological Sciences Undergraduate courses*, [click here](#). (p. 170)

Requirements for Advanced Degrees

The general requirements for advanced degrees are given in the Regulations for Graduate Study section. Each graduate student must receive credit for a set of courses chosen in consultation with the advisory committee. All graduate students are expected to participate in departmental colloquia and weekly seminars.

To receive the Ph.D. degree in Biology a candidate must satisfactorily:

1. Complete the course requirement, as described above.
2. Complete the teaching requirement as specified by the advisory committee.

3. Demonstrate mastery of conceptual and factual material in the major area of specialization in an oral examination.
4. Present and satisfactorily defend a thesis proposal before the advisory committee.
5. Satisfy the two-year residence requirement of the College.
6. Complete a doctoral dissertation.
7. Defend the dissertation before a faculty committee appointed for this purpose.

Although the graduate program is designed for students pursuing the Ph.D. degree, a master's degree may be awarded under special circumstances. To receive an M.S. degree in Biology, a candidate 1) must satisfactorily complete course and teaching requirements, as specified by the advisory committee, 2) complete a thesis, 3) defend the thesis in an oral examination before a faculty committee, and 4) satisfy the one-year residence requirement of the College.

Biological Sciences

Biological Sciences

BIOL 103 - The Molecular Mechanisms of Cellular Responses

Instructor: Barlowe, Bliska, Higgs, Kettenbach, Moseley and Obar

Together with Microbiology 104, this course constitutes the second term of a year-long graduate-level sequence in biochemistry, cell and molecular biology. The central theme of the course is the molecular mechanisms by which cells respond to stimuli, to their environment and to other cells. Topics include membrane transport, protein targeting, energy conversion, signal transduction, cell motility and the cytoskeleton, and the cell cycle. Emphasis will be placed on the experimental basis for understanding cell function. This course culminates with discussion of the fidelity of cellular responses to both 'self' and pathogens. Note that this course must be taken concurrently with Microbiology 104 and that students will need to enroll in both courses to complete the Molecular and Cellular Biology Graduate Program requirements for winter term. Not open to undergraduate students.

Offered: Winter.

BIOL 119 - Design and Development of Scientific Proposals

Instructor: Cottingham

This graduate seminar and practicum focuses on design and development of research proposals in Ecology,

Evolution, Environment, and Society. Emphasis is placed on the formulation and design of testable scientific ideas and the development of these ideas into feasible projects. Each student is responsible for the development and execution of a realistic research proposal (typically following NSF proposal format). Students provide critical evaluation of each other's ideas and written work throughout the course.

Prerequisite: Permission of instructor

Cross-Listed as: EEES 119

Offered: Fall.

BIOL 120 - Advanced Population Ecology

Instructor: McPeck

Described under BIOL 51. Offered in alternate years.

Cross-Listed as: EEES-120

Offered: Spring.

BIOL 123 - Advanced Community Ecology

Instructor: McPeck

Described under BIOL 58. Offered in alternate years.

Prerequisite: Graduate standing

Cross-Listed as: EEES-123

BIOL 125 - The Nature and Practice of Science

Instructor: Ayres

This course compares and contrasts the nature and practice of science across the range of contemporary biological disciplines. Topics include: What is science? What is the structure of scientific knowledge? What are the philosophical, logical, and practical aspects of hypothesis testing? What are intellectual strategies for successful research in biology? What is the role of ethics in science? Format includes readings, exercises, and discussion.

Cross-Listed as: EEES-125

BIOL 127 - Biostatistics

Instructor: McPeck

Held concurrently with BIOL 29. The course will cover basic descriptive statistics, simple probability theory, the fundamentals of statistical inference, regression and correlation, t-tests, one-way analysis of variance, basic analyses of frequency data and non-parametric statistics, and the general philosophy of experimental design. We will explore these topics from the perspective of biological applications. Examples will be drawn from all subdisciplines of biology (e.g. biochemical kinetics, development, physiology, ecology, evolution).

Prerequisite: Graduate standing

Cross-Listed as: EEES 127

BIOL 128 - Biostatistics II

Instructor: McPeck

Held concurrently with BIOL 59.01. This is an advanced course in statistics and experimental design, as applied to biological systems. There will be lectures and computer laboratories, regular homework assignments, and a major term project of statistical analysis. Topics covered include analysis of variance, generalized linear models and logistic regression, multivariate analysis methods, experimental design, and an introduction to Bayesian methods. Emphasis will be placed on the use of statistical programming for performing analyses.

Prerequisite: Graduate standing and at least one elementary course in statistics

Cross-Listed as: EEES-128

Offered: Fall.

BIOL 129 - Biostatistics III: Generalized Linear Mixed Models

Instructor: Staff

This course covers the modern techniques of building linear statistical models to analyze observational and experimental data that follows many different probabilistic distributions (e.g., normal, binomial, Poisson, exponential, geometric).

Prerequisite: BIOL-128 or EEES-128

Cross-Listed as: EEES-129

BIOL 133 - Foundations in Ecology

Instructor: Ayres

In this graduate course, students will read and discuss a series of classic and contemporary papers taken from the primary literature on various topics in ecology and evolutionary biology. Each week a series of lectures will be given and a set of 2-4 papers will be discussed covering a different major topic. The papers will be chosen to expose students to the foundations of major ideas and theories in ecology and evolution and to contemporary tests of these major theories. Bio 133 covers topics in ecosystem and community ecology, natural selection and adaptation, and research approaches in ecology and evolution. Offered in alternate years.

Cross-Listed as: EEES-133

Offered: Fall.

BIOL 134 - Foundations in Evolutionary Biology

Instructor: Calsbeek

In this graduate course, students will read and discuss a series of classic and contemporary papers taken from the

primary literature on various topics in ecology and evolutionary biology. Each week a series of lectures will be given and a set of 2-4 papers will be discussed covering a different major topic. The papers will be chosen to expose students to the foundations of major ideas and theories in ecology and evolution and to contemporary tests of these major theories. This course covers topics in population biology, population genetics, speciation, and macroevolution. Held concurrently with BIOL 60.01 and BIOL 60.02.

Cross-Listed as: EEES-134

BIOL 145 - Practicum in combining theories, models, and data in research

Instructor: Ayres

In science, models are the link between theories and data. Models can be of infinitely variable form (verbal, graphical, or mathematical; process-based or empirical; deterministic or stochastic, etc.) and can function in myriad different ways (describing a theory, deriving predictions to test a theory, predicting the empirical outcomes of alternative management scenarios, etc.). Effective scientists are continually absorbing, conceiving, sorting, discarding, and refining models. All scientists are modelers, but many of us mainly do it unconsciously, and almost all of us would be better scientists if we were better modelers. This course will be a workshop in combining theories, models, and data in research. The course structure will include a mix of short lectures, analytical exercises, small work groups, structured discussions, and unstructured time for all of us to work on an interesting modeling problem from our own work. Offered in alternate years.

Cross-Listed as: EEES 145

BIOL 147 - Genomics: Data to Analysis

Instructor: Zhaxybayeva

Described under BIOL 47.

Cross-Listed as: EEES-147

BIOL 148 - Arctic Environmental Change

Instructor: Culler

Held concurrently with ENV5 23. This course examines the connections between science and the human dimensions of rapid environmental change. First, ecosystem responses to emerging environmental issues (climate change, resource development) will be introduced from a scientific perspective. In the second part, we will explore how this science is framed in policy documents such as reports from the Intergovernmental Panel on Climate Change. The course will emphasize the importance of science communication in the policy process and will culminate with a collaborative case study that

integrates climate change, resource development, and social issues.

Cross-Listed as: EEES-148

Offered: Winter.

BIOL 150 - Ecology of Infectious Disease

Instructor: Cottingham

The primary goal of this course is to apply the tools, concepts and approaches of ecological science to the vexing problem of infectious disease. We will begin with careful reading of published case studies to develop both content mastery and strategies for identifying important areas for further work. We will also meet with campus librarians and read materials about leading productive discussions, writing effective research proposals, and providing constructive peer reviews. Each student will then develop an NSF-style research proposal to better understand the ecological aspect of a particular disease or type of disease, practice the art of constructive peer review with others' proposals, and iteratively improve their own proposals. Throughout, we will work together to build communication skills as well as cultivate key academic virtues. Held concurrently with BIOL 50.02.

Offered: Spring.

BIOL 152 - Student-Organized Seminar in Ecology and Evolution

Instructor: Staff

Graduate students who have advanced to candidacy may organize a seminar course on topics of their choosing. The course will be conceived, organized, and led by students with faculty involvement. Course proposals should contain: (1) title; (2) one-page exposition on the intellectual motivation for the course; (3) syllabus, including reading list and example problem sets, if appropriate; (4) name(s) of faculty advisor(s); (5) names of students and postdoctoral researchers that will participate in the seminar; and if appropriate, (6) a listing of potential products of the seminar, such as joint papers or proposals. Proposals will be evaluated by a faculty committee. Students are encouraged to collaborate with faculty advisors during proposal development.

Cross-Listed as: EEES-152

BIOL 153 - Aquatic Ecology

Instructor: W. Ryan

Described under BIOL 53.

Offered: Spring.

BIOL 166 - Molecular Basis of Cancer

Instructor: Grotz

Described under BIOL 66.

Offered: Winter.

BIOL 168 - SENIOR SUPERVISED TEACHING IN BIOLOGY

Instructor: Staff

This course is required for any senior graduate student in MCB Program completing a second Teaching Assignment. This teaching experience is of particular relevance to students interested in academic careers. Students will conduct laboratory or discussion sessions in graduate or undergraduate courses under the supervision of the course faculty. The faculty and student teaching assistant work very closely to develop lab and discussion assignments. In some cases, the student is encouraged to present lectures for which they receive detailed feedback on their teaching style. In all cases, students will receive instruction on effective teaching techniques through weekly preparation sessions. Topics for discussion include how to teach the material, how to run discussions, how to evaluate student responses, and grading. Performance will be monitored throughout the term and appropriate evaluation will be provided. This course is not open to undergraduates.

Prerequisite: BIOL 169

Offered: Fall, Spring, Summer, Winter.

BIOL 169 - Supervised Teaching in Biology

Instructor: Staff

This course is required for all graduate students, based on the assertion that an essential element of graduate education is the experience gained in teaching other students. Such teaching experience is of particular relevance to students interested in academic careers. Students will conduct laboratory or discussion sessions in undergraduate courses under the supervision of the course faculty. The faculty and student teaching assistant work very closely to develop lab and discussion assignments. In some cases, the students are encouraged to present lectures for which they receive detailed feedback on their teaching style. In all cases students will receive instruction on effective teaching techniques through weekly preparation sessions. Topics for discussion include how to teach the material, how to run a discussion, how to evaluate student responses, and grading. Performance will be monitored throughout the term and appropriate evaluation, coupled with detailed suggestions for improvement, will be provided. This course is not open to undergraduates.

Cross-Listed as: EEES-169

Offered: Fall, Spring, Summer, Winter.

BIOL 171 - Microtubule Dyn. & Motor Funct.

Instructor: Lee

Described under BIOL 71.01.

Offered: Spring.

BIOL 172 - Cell Bio Across Scales

Instructor: Amodeo

Described under BIOL 71.02.

Offered: Spring.

BIOL 173 - Cell Signaling

Instructor: Dolph

Described under BIOL 69.

Offered: Spring.

BIOL 174 - Development, Plasticity and Dysfunction of the Synapse

Instructor: Hoppa

Described under BIOL 74.01.

Offered: Winter.

BIOL 175 - Diseases of the Nervous System

Instructor: Hill

Described under BIOL 74.02.

Offered: Fall.

BIOL 176 - Advanced Genetics

Instructor: Behrman

Described under BIOL 76.

Offered: Fall.

BIOL 180 - Microscopy Principles and Application

Instructor: Warren

Research in the life sciences is increasingly driven by the need to use microscopy to examine cellular components and processes. The goal of this course is to provide graduate students with a solid foundation in both the theory and practice of light microscopy, with emphasis on fluorescence and confocal techniques and approaches. We will focus on practical aspects of microscope use including experimental design, data collection and analysis. In addition, newly emerging imaging techniques relevant to the life sciences will be discussed. There will be considerable "hands on" training on different microscopes within the Biological Sciences Light Microscopy Facility.

Prerequisite: Graduate standing

Offered: Winter.

BIOL 196 - MCB AC Mtg Rpt & Data Profile

Instructor: K. Salmon

This course enables MCB to award credit to each student for the annual completion of their Advisory Committee (AC) meeting with the resulting meeting report submitted by the deadline of June 30. This course will be offered during the Summer term each year and every student after passing their Qualifying exam will be required to enroll in and complete this course's requirements.

MCB has a template for the meeting report which includes accomplishments during the past year to be discussed at the meeting. Each student will be required to upload their completed AC report form to the MCB Student Database.

Students who have passed their Qualifying Exams will now be required to set up and maintain their student account on the database with the upload of their first AC meeting report. Additional information may be entered into the database at any time each year by the student.

REQUIREMENTS: Complete annual Advisory Committee meeting and submit to the MCB Student Database the completed meeting report. Maintain and update personal student account on the MCB Student Database each year.

Offered: Summer.

BIOL 197 - Graduate Research I: Level I

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

Cross-Listed as: EEES-197

Offered: Fall, Spring, Summer, Winter.

BIOL 198 - Graduate Research I: Level II

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

Cross-Listed as: EEES-198

Offered: Fall, Spring, Summer, Winter.

BIOL 199 - Graduate Research I: Level III

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Cross-Listed as: EEES-199

Offered: Fall, Spring, Summer, Winter.

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BIOL 200 - Foundational Papers in Ecology Research Colloquium

Instructor: Ridgeway

The goal of this discussion-based journal club is to bring together students, postdocs, and faculty from the EEES and allied graduate programs to discuss foundational papers in ecology and ecosystem science, and to make connections between this classic work and the current frontiers in these fields. Each enrolled graduate student participant will be required to lead a weekly discussion of 1-2 papers once during the term. Normally meets weekly. This course is not open to undergraduates.

Offered: Fall.

BIOL 262 - Mechanisms of Evolution and Development

Instructor: The staff

BIOL 263 - Cell Biology

Instructor: He

Offered: Fall, Spring, Winter.

BIOL 265 - Microbial Ecology and Environmental Biology

Instructor: Nadell

The goal of this discussion-based journal club is to bring together students, postdocs, and faculty from the EEES, MCB, and EARS graduate programs to discuss recent papers on the ecology and environmental biology of microbes. Each enrolled graduate student participant will be required to lead a weekly discussion of 1-2 papers once during the term. Normally meets weekly. This course is not open to undergraduates.

Cross-Listed as: EEES-265

Offered: Spring.

BIOL 266 - Ecology and Evolution

Instructor: Hicks Pries, Cottingham, Mutz

This course is required of all students during each term of residence, except summer. An essential element of

scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All students will make oral presentations that describe work from their own research. Normally meets weekly. This course is not open to undergraduates.

Cross-Listed as: EEES-266

Offered: Fall, Spring, Winter.

BIOL 268 - Genes and Gene Products

Instructor: Dolph, Lee

Offered: Fall, Spring, Winter.

BIOL 269 - Plant Molecular Biology

Instructor: Schaller

Offered: Fall, Winter.

BIOL 271 - Research in Progress Colloquium

This course is designed to monitor participation of first year MCB graduate students in the Research in Progress Seminars. The Research in Progress Seminars are presentations by MCB students, second year and older. These Research in Progress Seminars meet five times per month for 1-1.5 hours from September through May. The course will be taken by all first year MCB students in the Spring term, and the course will monitor Research in Progress Seminar participation throughout the first year.

Offered: Spring.

BIOL 272 - Advanced Readings In Evolution

Instructor: Calsbeek

Asexual reproduction dominates the Earth's biology. Curiously, the vast majority of eukaryotes reproduce sexually even though the evolution of meiosis involves substantial costs. How meiosis evolved, and why it persists in sexual reproduction despite its many associated costs, are major unanswered questions in evolutionary biology. This course will survey the literature on the evolutionary origins of meiosis and the maintenance of sexual reproduction. We will explore the diversity of sexual and asexual modes of reproduction and related evolutionary phenomena with a focus on critically evaluating current research and theory in this area.

Cross-Listed as: EEES 272

Offered: Winter.

BIOL 274 - Neurobiology Journal Club

Instructor: Hoppa, Ghosh Hill

The goal of this discussion-based journal club is to bring together students, postdocs, and faculty from the IND, MCB and PBS graduate programs to discuss recent high-impact papers on cellular and molecular neurobiology. Each term's papers will have selected themes of high interest based on the topics of leading conferences in the field of neurobiology (Gordon, Keystone and FASEB). This will help all enrolled students gain a foundation of knowledge within these topics to explore future research paths as well as prepare them to attend and present at these conferences. Each enrolled graduate student participant will be required to lead a weekly discussion of 1-3 papers depending on length once during the term. BIOL 274 will plan to meet bi-weekly for 2 hours. This course is not open to undergraduates.

Offered: Fall, Spring.

BIOL 275 - Cell Signaling in Development

Instructor: Amodeo, Kasper

To go from a fertilized egg to a functional organism, cells must undergo a series of developmental decisions including decisions about proliferation and differentiation. At the heart of these decisions is cell signaling. Cellular communication including cell-cell signaling, morphogens, and cell autonomous cues are essential for organismal development and are often mis-regulated in human disease. In this journal club, we will discuss recent and preprinted research articles which focus on novel findings in cell and developmental signaling including new methodologies, quantitative analysis, and conceptual advances. Each week, students will take turns presenting an article and will lead an in-class discussion for the selected paper.

Offered: Fall, Spring, Winter.

BIOL 297 - Graduate Research II: Level I

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, subsequent to passing their qualifying examination; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

Cross-Listed as: EEES-297

Offered: Fall, Spring, Summer, Winter.

BIOL 298 - Graduate Research II: Level II

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, subsequent to passing their qualifying

examination; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

Cross-Listed as: EEES-298

Offered: Fall, Spring, Summer, Winter.

BIOL 299 - Graduate Research II: Level III

Instructor: Staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of biology. This course is open only to graduate students, subsequent to passing their qualifying examination; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Cross-Listed as: EEES-299

Offered: Fall, Spring, Summer, Winter.

Biological Sciences

BIOL 300 - Communicating Science

Instructor: Kohn, McPeek

Sure, you know how to present your research to the experts, but can you talk about it with other audiences — without your slides? Do you really connect with an audience — any audience? The goal of this 10-week, interdisciplinary graduate course is to develop the skills in current and future scientists to present their work more spontaneously, and to connect more directly and responsively with their audiences and with each other. The course, which is eligible for credit through the Graduate Office, is based on a model developed by Alan Alda at Stony Brook University. In the first half of the course, we will use improvisation exercises to enhance presence, charisma and confidence, students will develop their observational and active listening skills. In the second half of the course, we will turn these exercises to writing. Special focus will be placed on enhancing clarity and vividness, avoiding jargon and using emotion, and developing story-telling and two-way communication. Peer feedback is an essential component of this course. The class will meet one day per week in the late afternoon/early evening in the fall term (exact time and place to be determined). Enrollment in this course represents the diversity of Dartmouth's graduate programs. When you register for the course, please send your name, your graduate program, year in program, and the reason you want to take this course to Mark McPeek (mark.mcpeek@dartmouth.edu).

Offered: Fall.

Chemistry - Graduate

Chair: Ekaterina V. Pletneva

Professors: I. Aprahamian, D. S. Glueck, F. J. Kull, J. E. G. Lipson, D. F. Mierke, D. E. Wilcox, J. Wu; Associate Professor: K. A. Mirica; M. J. Ragusa; Assistant Professors: M. I. Gonzalez, X. Qi, P. J. Robustelli, M. Sneha, W. Zhang; Senior Lecturer: W. S. Epps, C. O. Welder; Research Professors: R. Ditchfield, G. W. Gribble, R. P. Hughes, M. Pellegrini; Research Associate Professors: C. R. Midgett

To view Chemistry Graduate courses, click here. (p. 834)

To view Chemistry Undergraduate requirements, click here. (p. 181)

To view Chemistry Undergraduate courses, click here. (p. 184)

Integrated 4+1 AB/MS Program in Biophysical Chemistry

Objective and Overview: A 4+1 program to provide Dartmouth undergraduate students an opportunity to acquire a broader and deeper education in modern techniques of biophysical chemistry through a combination of coursework and independent research under the direction of one of the program faculty. With integration of the courses and a substantial effort in the independent research carried out during the senior year, the MS can be obtained in one year directly after completing the AB at Dartmouth.

Prerequisite Courses: Students wishing to enter the program must demonstrate proficiency in each of the following areas: biochemistry, chemistry, calculus and physics. Such proficiency will normally be demonstrated by completing the following Dartmouth College courses with at least a B grade prior to entering the Master's Program: MATH 8 (or equivalent), PHYS 13-14 (or PHYS 15-16 or, by permission, PHYS 3-4), CHEM 51-52 (or equivalent), CHEM 41 (or, by permission, BIOL 40), CHEM 40 or CHEM 75 and CHEM 76.

It is anticipated that the student will begin an independent research project with one of the participating faculty no later than the summer before senior year. An interim evaluation will be made after each term and continuation within the Master's Program will be recommended for those students whose work demonstrates the capacity for satisfactory independent research.

Admission: Students must apply for admission to the program no later than May 1 of their junior year, although interested students are strongly encouraged to contact the Department Chair earlier for advice on prerequisites, and on the scheduling of required courses for the degree. Having explored research opportunities with members of the faculty listed above, the applicant is expected to reach an agreement on a specific project with one of the faculty.

The program Admissions Committee will be responsible for reviewing applications and making offers of admission, to be completed by June 30.

A complete application includes: i. A current transcript. ii. Anticipated schedule of courses for senior and fifth year. iii. The name of the research advisor and a brief description of the research project, including a timeline of research effort.

Specific Requirements for the Master's in Biophysical Chemistry are as follows:

1. Course Distribution Requirements: In addition to the prerequisite courses described above, each student must pass the following courses, either prior to beginning the Master's Program or as part of the coursework required for the program: CHEM 42, and two offerings of CHEM 161: (CHEM 161.1, CHEM 161.2, CHEM 161.3, CHEM 161.4, CHEM 161.5, CHEM 161.6).

2. Required Course Credits: During the Master's Program, each student must pass with a grade of P or better at least eight courses from the offerings in biophysical chemistry. Two terms of Graduate Research Colloquium and up to four courses in graduate-level research may count in the eight-course total. Note: Courses taken as an undergraduate can fulfill the "Course Distribution Requirements" described above, but do not count toward the eight courses required for the Master's degree.

3. Competency Requirement: The student must demonstrate competency in the fundamentals of biophysical chemistry methodology, including X-ray crystallography, NMR spectroscopy, fluorescence spectroscopy/FRET, experimental characterization of binding processes, or biomolecular computer simulations. This requirement will be satisfied by successful defense of the topic in an oral examination that must be completed before the end of winter term.

Thesis Requirement: The student must complete a satisfactory thesis based on independent-original research. The thesis must be approved by three program members and successfully defended in an oral examination.

Integrated 4+1 AB/MS Program in Chemistry

Prerequisite Courses: Students wishing to enter the program must demonstrate proficiency in chemistry or materials science. Such proficiency will normally be demonstrated by completing the Dartmouth College chemistry major with at least a B average prior to entering the Master's Program. Students with appropriate experience in chemistry from other majors, such as engineering, biology or physics, may also request consideration.

It is anticipated that the student will begin an independent research project with one of the participating faculty no later than the summer before senior year. An interim evaluation will be made after each term and continuation

within the Master's Program will be recommended for those students whose work demonstrates the capacity for satisfactory independent research.

Admission: Students must apply for admission to the program no later than May 1 of their junior year, although interested students are strongly encouraged to contact the Department Chair earlier for advice on prerequisites, and on the scheduling of required courses for the degree. Having explored research opportunities with members of the faculty listed above, the applicant is expected to reach an agreement on a specific project with one of the faculty. The program Admissions Committee will be responsible for reviewing applications and making offers of admission, to be completed by June 30.

A complete application includes:

1. A current transcript.
2. Anticipated schedule of courses for senior and fifth year.
3. The name of the research advisor and a brief description of the research project, including a timeline of research effort.

Requirements for the Master's Degree (M.S.) in Chemistry

The general requirements for the Master's degree, together with the specific requirements of the Department of Chemistry normally allow completion of the degree in two years.

The specific requirements are as follows:

1. Each student must pass with a grade of P or better eight courses from the graduate offerings in Chemistry and allied areas that have been chosen in consultation with the adviser and approved by the Graduate Student Advisory Committee (GSAC). CHEM 256 and one term of CHEM 257 may count. Up to four courses may be in graduate-level research, but they may not include the Colloquium course CHEM 140 or any course in the CHEM 260 series, nor may courses numbered below 100 count in the eight-course total.
2. The student must complete a satisfactory thesis based on independent, original research and pass creditably an oral examination upon this thesis.
3. In the course of this training, the student must gain experience in teaching, including completion of CHEM 256.

Requirements for the Doctor's Degree (Ph.D.) in Chemistry

A student will be admitted to candidacy for the doctorate after satisfying the following requirements:

1. Completion, by the start of the Fall term of the student's second year in the program, through an appropriate combination of Dartmouth courses or performance on diagnostic entrance examinations, of a breadth requirement in three of the four topical areas of biological, inorganic, organic, and physical chemistry.
2. Passing a Ph.D. qualifying examination consisting of a written proposal on the student's Ph.D. research and an oral defense of that proposal by the end of the spring term of the second year.
3. Submission and oral defense of an original research proposal in an area removed from the student's own thesis research by the end of the student's third year.
4. Presentation before the Department of a lecture on the thesis topic during the student's fourth year.

The candidate will receive the doctorate upon:

1. Satisfactory completion of an original thesis project of high quality and substantial significance, and approval of the thesis embodying the results of this research.
2. Successful defense of this thesis in an oral examination.

A candidate for the doctorate will take various courses in chemistry and allied fields that are pertinent to their area of study. He or she will also participate actively in undergraduate teaching, including completion of [CHEM 256](#). It is anticipated that a graduate student will normally complete all of the requirements for the doctorate in approximately five years. It is not necessary to earn a master's degree as a prerequisite to the doctorate.

More complete information can be obtained from the brochure, *Graduate Study in Chemistry at Dartmouth*, that can be obtained from the Department of Chemistry.

CHEM 101 - Special Topics in Physical Chemistry

An in-depth exploration of a specific topic in physical chemistry. This course provides an introduction into the areas of current research in the field. The course is offered in most fall and winter terms, but the content changes according to the chosen topic.

CHEM 101.1 (p. 834) Quantum Chemistry

CHEM 101.2 (p. 834) Statistical Thermodynamics

CHEM 101.3 (p. 834) Molecular Spectroscopy

CHEM 101.4 (p. 834) Chemistry of Macromolecules

CHEM 101.5 Introduction to Statistical Thermodynamics and Molecular Simulations

CHEM 101.6 Computational Methods in Chemistry and Biophysics

CHEM 101.7 (p. 835) Introduction to Materials Chemistry

CHEM 101.8 (p. 835) Chemical Kinetics

CHEM 101.1 - Quantum Chemistry

Instructor: Ditchfield

An introduction to the quantum mechanics of molecular systems. Approximate methods for calculating the electronic structure of molecules are discussed. Particular emphasis is placed on molecular orbital methods at various ab-initio levels. Methods which include the effects of electron correlation will also be presented. Evaluation of such methods for studies of molecular geometry, conformational problems, thermochemical data, and spectroscopic parameters is presented. Other topics considered may include the electronic structure of hydrogen bonded systems and of excited states.

Prerequisite: MATH 13 and CHEM 76 or equivalent, or permission of the instructor.

Cross-Listed as: CHEM 96.01

CHEM 101.2 - Statistical Thermodynamics

Instructor: Cantor

Elements of equilibrium statistical thermodynamics for classical and quantum mechanical systems, with applications to ideal gases, crystalline solids, imperfect gases and liquids.

Prerequisite: MATH 13 and CHEM 76 or equivalent, or permission of the instructor.

Cross-Listed as: CHEM 96.02

CHEM 101.3 - Molecular Spectroscopy

Instructor: Winn

A study of optical spectroscopy including selected topics from amongst point group theory, vibrational spectra of polyatomic molecules, electronic and vibronic spectra of molecules and rotational spectra. May be offered on tutorial basis.

Prerequisite: CHEM 76 or equivalent, or permission of the instructor.

Cross-Listed as: CHEM 96.03

CHEM 101.4 - Chemistry of Macromolecules

Instructor: Lipson

Light scattering and other characterization techniques; thermodynamic and transport properties of

macromolecular solutions. Structure-property correlations in amorphous and crystalline polymers.

Prerequisite: CHEM 75 or permission of the instructor

Cross-Listed as: CHEM 96.04

CHEM 101.5 - Introduction to Statistical Thermodynamics and Molecular Simulations

Instructor: Zhang

An introduction to statistical mechanics and computer simulations of molecular liquids and solids. Discussions of fundamental concepts are complemented with demonstrations of computational and analytical methods for solving statistical mechanics problems.

CHEM 101.6 - Computational Methods in Chemistry and Biophysics

Instructor: Robustelli

A project-based introduction to computational methods in chemistry, molecular biophysics and structural biology. Projects will provide a practical introduction to data analysis and data visualization with python. Molecular dynamics simulations, Monte Carlo simulations and quantum calculations will be used to explore topics in protein dynamics, polymer dynamics, and the conformational analysis of small molecules. No prior coding experience is required.

CHEM 101.7 - Introduction to Materials Chemistry

Instructor: BelBruno

This course begins with a review of fundamental concepts in material science, provides an introduction to some of the more advanced concepts, especially in regard to nanomaterials and, finally, focuses on the chemistry involved both in production of modern materials and their uses. The latter topics include the chemistry of thin films, self-assembled chemical systems, surface chemistry and cluster chemistry.

Prerequisite: Background in Chemistry equivalent to CHEM 76 or Physics equivalent to PHYS 24 or Engineering equivalent to ENGS 24 or permission of instructor.

Cross-Listed as: CHEM 96.07

CHEM 101.8 - Chemical Kinetics

Instructor: BelBruno

Kinetics of chemical reactions in various media: reaction rate expressions, mechanisms, elementary processes. Elementary theories of rate processes: activated complex theory, elementary collision theory, unimolecular decomposition. Such topics as diffusion control of reactions, catalysis and photochemistry will be treated as time allows.

Prerequisite: MATH 13 and CHEM 76 or equivalent or permission of the instructor.

Cross-Listed as: CHEM 96.08

CHEM 103 - Special Topics in Biophysical Chemistry

Instructor: Staff

A course designed to address topical interests and knowledge areas required of students in the Integrated 4+1 AB/MS Program in Biophysical Chemistry.

CHEM 123 - Graduate Toxicology

This course is open to graduate, medical and advanced undergraduate students. It provides an introduction to toxicology as a discipline, with a focus on the molecular basis for toxicity of chemicals in biological systems. Major topics include: principles of cell and molecular toxicology, xenobiotic metabolism, molecular targets of cellular toxicity, genetic toxicology, chemical carcinogenesis, immunotoxicology, neurotoxicology, clinical toxicology, and quantitative risk assessment. Faculty lectures and discussion.

Prerequisite: Undergraduate or graduate biochemistry, or permission of instructor.

CHEM 124 - Analytical Chemistry and Inorganic Instrumental Analysis

Instructor: Jackson

This course is directed towards graduate students planning to use inorganic chemical analysis in their thesis work. The lectures and seminars focus on the theory and application of modern instrumental analysis and analytical chemistry. The theoretical background for a number of inorganic instrumental analytical methods is given and examples of their application to problems of interest to analytical chemists working in the fields of earth science, chemistry, biology and environmental science are presented. The lectures cover ion chromatography, electrochemistry, atomic absorption, inductively coupled plasma optical emission and inductively coupled plasma mass spectrometry. The theory and concepts of analytical chemistry are provided along with statistical tools, uncertainty calculations and data treatment methods useful in analytical chemistry.

Prerequisite: CHEM 5 and CHEM 6 or equivalents or permission of the instructor.

Cross-Listed as: EARS 124

CHEM 131 - Advanced Inorganic Chemistry: Catalysis

Instructor: Glueck

The role of metals in homogeneous and heterogeneous catalysis, with an emphasis on mechanisms of catalytic reactions. Applications to industrial processes, organic synthesis, and asymmetric synthesis will be discussed.

Prerequisite: CHEM 64, and either CHEM 52 or CHEM 58, or permission of the instructor

Cross-Listed as: CHEM 91

CHEM 132 - Inorganic Biochemistry

Instructor: Pletneva

The role of metal ions in biological systems. Topics include metal ion transport, storage, and interaction with proteins and nucleic acids; metalloproteins involved in oxygen transport and electron transfer; metalloenzymes involved in activation of oxygen and other substrates; and medicinal, toxicity, and carcinogenicity aspects of metals; as well as inorganic model chemistry of bioinorganic systems. Several physical methods are introduced, and their application to current research on the above topics is considered.

Prerequisite: CHEM 64, and CHEM 41 or BIOL 40, or permission of the instructor

Cross-Listed as: CHEM 92 and BIOC 132

CHEM 135 - Functional Nanomaterials: Synthesis and Applications

Instructor: Mirica

This course focuses on synthesis, structure, and properties of nanomaterials. It begins with the introduction to the fundamental principles for understanding the size-dependent properties of materials that emerge at the nanoscale. It surveys a number of experimental techniques that can be utilized for observing and analyzing nanostructures, including X-ray techniques, scanning probe microscopy, and electron microscopy. It further details how strategies for synthesis, surface chemistry, and self-assembly can be utilized to control and tailor structure and properties of nanomaterials. Finally, the course highlights the applications of nanomaterials in chemical sensing, disease diagnosis and treatment, energy conversion and storage, and information storage. The class will feature a Wikipedia editing project, and visiting lectures highlighting modern technological applications of nanomaterials from PhD-level guest speakers.

CHEM 136 - Polymer Synthesis

Instructor: Ke

This course covers a broad spectrum of polymer synthesis methods, reaction mechanisms and characterization methods. Students will actively participate in the learning process, which involves oral presentations, practice in retrosynthesis and the development of a research proposal.

CHEM 137 - Methods of Materials Characterization

Instructor: I. Baker

This survey course discusses both the physical principles and practical applications of the more common modern methods of materials characterization. It covers techniques of both microstructural analysis (OM, SEM, TEM, electron diffraction, XRD), and microchemical characterization (EDS, XPS, AES, SIMS, NMR, RBS and Raman spectroscopy), together with various scanning probe microscopy techniques (AFM, STM, EFM and MFM). Emphasis is placed on both the information that can be obtained together with the limitations of each technique. The course has a substantial laboratory component, including a project involving written and oral reports, and requires a term paper.

Prerequisite: ENGS 24, or permission of the instructor

Cross-Listed as: PHYS 128 and ENGS 133

CHEM 140 - Chemistry Research Colloquia

Instructor: The Staff

Colloquia presented to the Department of Chemistry by scientists and educators in the chemistry profession on Thursdays, and by graduate students and others conducting research in chemistry and allied fields on Wednesdays as needed. The course is required of all graduate students in chemistry in each term except summer. The course is not open for credit to undergraduates.

CHEM 151 - Physical Organic Chemistry

Instructor: Aprahamian

Modern theories of organic reaction mechanisms, particularly the use of physical-chemical principles to predict the effect of changing reaction variables, especially reactant structures, on reactivity. The structure, stability, and reactivity of carbanions and carbocations, as well as SN1 and SN2 reactions, are discussed.

Prerequisite: CHEM 52 or CHEM 58, or permission of the instructor

Cross-Listed as: CHEM 93

CHEM 152 - Advanced Organic Synthesis and Mechanisms

Instructor: Wu

Consideration of organic chemical reactions at an advanced level. Current knowledge concerning synthetic methods, reaction mechanisms, reactive intermediates, conformational analysis, and biosynthesis is discussed in the context of modern organic chemistry.

Prerequisite: CHEM 52 or CHEM 58 or permission of the instructor.

CHEM 153 - Chemistry of Natural Products

Instructor: Micalizio

A survey of the application of modern synthetic methods to the total synthesis of natural products. Coverage will include retrosynthetic analysis and synthetic planning and an overview of the preparation of a wide variety of important natural products. Emphasis will be placed on student problem-solving in the context of the synthesis of complex molecules.

Prerequisite: CHEM 152, or permission of the instructor

CHEM 157 - Topics in Advanced Organic Chemistry

Treatment at an advanced level of one or more areas of organic chemistry. The subject matter may vary from offering to offering; accordingly, the course may be taken for credit more than once. Offered on a tutorial basis to qualified students.

CHEM 158 - Supramolecular Chemistry

An introduction to molecular recognition and self-assembly processes that are the cornerstones of natural and synthetic supramolecular systems. The course will focus on the design of functional supramolecular materials, and their application in nanotechnology.

CHEM 159 - Chemistry of Heterocyclic Compounds

An introduction to the chemical, physical, and spectroscopic properties of heterocyclic compounds. Coverage will include reactions, synthesis, stereochemistry, and unusual rearrangements. Attention will also be given to natural product synthesis and to heterocycles of biological interest.

Prerequisite: Permission of the instructor

CHEM 161 - Topics in Advanced Biophysical Chemistry

Instructor: Staff

Treatment at an advanced level of one or more areas of biophysical chemistry. The subject matter varies from offering to offering; accordingly the course may be taken for credit more than once.

Prerequisite: CHEM 41, and CHEM 42 or CHEM 76, or permission of the instructor.

CHEM 161.1 - Membrane Biophysics

Instructor: Cantor

The structure and function of cell membranes, with emphasis on the complex behavior of intrinsic membrane proteins and its relation to physical properties of the lipid bilayer.

Prerequisite: CHEM 41 and CHEM 42 or CHEM 76, or permission of the instructor

CHEM 161.2 - Biomolecular Simulations

Instructor: Mierke

An advanced treatment of modern computational approaches to the folding, structure, and dynamics of proteins and nucleic acids and their complexes. Topics include folding, searching algorithms, homology modeling, energy landscape deformation, and multi-dimensional searching.

Prerequisite: CHEM 41 and CHEM 42 or CHEM 76, or permission of the instructor

CHEM 161.3 - Biomolecular NMR

Instructor: Mierke

The theoretical and practical aspects of the modern use of nuclear magnetic resonance in the study of biomolecules including peptides/proteins, synthetic and natural products, and nucleic acids will be developed.

Prerequisite: CHEM 41 and CHEM 42 or CHEM 76, or permission of the instructor

CHEM 161.4 - Structure and Dynamics of Biomolecules

The principles that define structure and dynamics of biological molecules are discussed. Dynamics are examined in mechanisms of protein folding, signal transduction, and catalysis. Theoretical and experimental methods that probe structural fluctuations are introduced and explored in detail in examples from modern research.

Prerequisite: CHEM 41 and CHEM 42 or CHEM 76, or permission of the instructor

CHEM 161.5 - Protein Crystallography

Instructor: Ragusa

Theoretical aspects for the determination of protein structures using X-ray crystallography. Topics will include a detailed description of crystal symmetry, diffraction theory, data collection and processing, and methods for solving the crystallographic phase problem.

Prerequisite: CHEM 41 and CHEM 42 or CHEM 76, or permission of the instructor

CHEM 161.6 - Enzymes

Instructor: Wilcox

Properties of enzymes that accelerate biochemical reactions, kinetic measurements to quantify enzymatic catalysis, methods to determine the mechanism of an enzymatic reaction, control and regulation of enzymatic activity, overview of the classes of enzymes and the reactions they catalyze.

CHEM 256 - Graduate Instruction in Teaching

Instructor: Staff

A course in the methodology and practice of chemistry teaching at the undergraduate college level. Topics such as laboratory supervision and safety, grading issues, special needs students, lecturing and tutoring techniques, exam preparation, and the teacher/student relationship will be discussed through readings, class discussions, and student presentations. Topics in professional ethics and career development will be considered and discussed. This course is a prerequisite to the supervised undergraduate teaching requirement for the Ph.D. degree in chemistry. Required of entering graduate students. This course is not open for credit to undergraduates.

CHEM 257 - Supervised Undergraduate Teaching in Chemistry

Instructor: Chair and staff of the Department

Teaching in chemistry undergraduate courses under the supervision of a faculty member. Normally students enrolled in this course teach alongside faculty in undergraduate instructional laboratories. This course is open only to graduate students; it may be elected for credit more than once.

Prerequisite: CHEM 256 or previous teaching experience in undergraduate chemistry courses

CHEM 260 - Graduate Research Colloquium in Organometallic Chemistry

Instructor: Glueck

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 261 - Graduate Research Colloquium in Materials Chemistry

Instructor: Staff

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 262 - Graduate Research Colloquium in Synthetic Organic Chemistry

Instructor: Staff

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 263 - Graduate Research Colloquium in Bioinorganic Chemistry

Instructor: Staff

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 264 - Graduate Research Colloquium in Biophysical Chemistry

Instructor: Staff

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 265 - Graduate Research Colloquium in Computational, Modeling and Theoretical Chemistry

Instructor: Staff

This course is available to graduate students during each term of residence, except for the summer term. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work, quality of critical analysis, and on presentation style,

including effective use of audiovisual materials. All enrolled students will make oral presentations that describe work from the current literature or their own research. Normally these series meet weekly. This course is not open to registration by undergraduates.

CHEM 297 - Graduate Investigation in Chemistry A

Instructor: Chair and staff of the Department

An original and individual experimental or theoretical investigation beyond the under-graduate level in one of the fields of chemistry. This course is open only to graduate students; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

CHEM 298 - Graduate Investigation in Chemistry B

Instructor: Chair and staff of the Department

An original and individual experimental or theoretical investigation beyond the under-graduate level in one of the fields of chemistry. This course is open only to graduate students; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

CHEM 299 - Graduate Investigation in Chemistry C

Instructor: Chair and staff of the Department

An original and individual experimental or theoretical investigation beyond the under-graduate level in one of the fields of chemistry. This course is open only to graduate students; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Master of Energy Transition - MET

The Master of Energy Transition (MET) is a professional degree program that combines coursework in the technology, business, policy, and science of energy transitions. It is taught by faculty from the Thayer School of Engineering, the Tuck School of Business, the Dartmouth School of Arts & Sciences, and select practitioner-scholars. The program prepares leaders and problem-solvers to accelerate an affordable, reliable, and equitable clean energy transition for the benefit of society.

Requirements: Graduate students enrolled in the MET are required to take a prescribed sequence of nine courses as a cohort; there are no electives. The degree is completed over the course of three terms.

ENTR - Energy Transition

ENTR 110 - Technology of Current and Future Energy Systems

Instructor: Junbo Zhao

This course provides an overview of current and emerging technologies spanning the entire energy value chain—from generation to the grid edge. Students will explore a broad range of energy facilities and infrastructure, including traditional systems such as fossil fuels, nuclear power, and large-scale grids, while critically examining the ongoing transition to low-carbon and decentralized energy solutions. Topics include renewable energy integration (solar, wind, hydro, geothermal), smart grids, energy storage, electric vehicles, grid resilience, and next-generation clean energy technologies. Through real-world case studies, simulation exercises, and project-based learning, students will evaluate the trade-offs and system-level implications of various energy pathways. The course prepares students to make meaningful contributions to the development and deployment of resilient, efficient, and sustainable energy systems.

Offered: Fall.

ENTR 120 - Team Dynamics and Professional Communications

Instructor: Amanda Graham and Megan Litwhiler

The evolving energy and climate workplace requires sophisticated professional skills. This course will serve as a laboratory for honing those skills in order to successfully pursue and perform in a meaningful career in the energy transition. Students will identify and apply core principles of teamwork, leadership, and communication, and will expand their ability to leverage skills in these areas to facilitate professional success. The course will include workshops and mentorship in career self-assessment, ethics, and interpersonal and organizational communication.

Offered: Fall.

ENTR 130 - Climate Science and the Energy Transition

Instructor: Christopher Guiterman

This course will build on the basic principles of climate science to explore drivers of present-day climate change, including greenhouse gasses, and their impacts on society and ecosystems. With an emphasis on project-based learning, students will examine the interactions of climate

change and economic growth, and how these affect a society's ability to navigate the energy transition. Critical to evaluate will be the socioecological costs and benefits of climate mitigation measures over short (years to decades) to long (decades to a century) time horizons, and at local to regional to global scales.

Offered: Fall.

ENTR 140 - Data Analytics for Energy and Climate

Instructor: Cong Chen

This course provides an introduction to the concepts and applications of data analytics for energy and climate. Topics include data collection and preparation, descriptive statistics, machine learning, optimization, and visualization. The course will introduce the overall process of using data analytics to solve problems, leveraging real-world data related to energy and climate. Students acquire a working knowledge of coding and analytics (Python or similar) with practical datasets related to electricity markets, power system operations, and climate.

Offered: Winter.

ENTR 150 - Energy Markets and Economics

Instructor: TBD

This course provides the conceptual and applied foundation in energy economics necessary to engage with the market frameworks at work in multiple sectors of the energy economy. Students will explore key aspects of energy supply and demand and assess the role of markets, regulation and deregulation in energy systems. The course addresses market design questions related to energy generation, transmission and distribution. It also provides an overview of economic institutions designed to control the impacts of energy infrastructure and examines market innovations that can advance energy policy goals and accelerate decarbonization.

Offered: Winter.

ENTR 160 - Energy Law and Policy

Instructor: Elizabeth Wilson

This course will address the evolving U.S. policy context for energy system management and transition. We will

briefly review historical approaches to managing energy resources before focusing on recent and emerging governance models as well as regulatory challenges and incentives for the deployment of emerging energy technologies. Throughout the course, we will examine the interplay between technological and social systems, including the key role of technology in both creating and mediating environmental impacts and the roles of policy and politics in shaping technology choices. We will use a diverse set of tools and methodologies to investigate the social and environmental implications of energy technology and policy choice. We will assess how these issues interact at multiple scales, particularly local, state, regional, and national, and review major global trends and their potential impact on U.S. energy law and policy.

Offered: Winter.

ENTR 170 - Energy Systems Modeling

Instructor: TBD

This course introduces how to use and evaluate computational energy systems models to solve integrated technological, environmental, economic, cultural, and social problems.

Foundational models of energy system operations, planning, investment, markets, technology adoption, and trade are introduced. Fundamental systems modeling topics are covered, including the treatment of uncertainty, spatial and temporal scaling, multi-sector dynamics, multi-stakeholder preferences, multiple objectives, and environmental and socioeconomic impacts (e.g., air quality, labor, land use, social equity). Existing, transforming, and emerging systems are explored, such as power, renewable, fossil fuel, hydrogen, carbon capture, transmission, industrial, residential, and transportation systems.

Offered: Spring.

ENTR 180 - Finance and Accounting for the Energy Transition

Instructor: Charles Donovan

The energy transition is a massive undertaking requiring trillions of dollars of investment. This course will explore concepts from finance and accounting that are crucial to understanding the rationale for investment decision-making. We will work with various methods for assessing the financial viability of energy and decarbonization projects and managing financial risks. Critical topics that

will be addressed include discounted cashflow modelling, financial & carbon accounting, investment risk analysis, & project financing. We will also explore ongoing innovations that seek to establish the next generation of financial products, services, and institutions that can effectively serve the goals of the energy transition. Students will develop both tactical and strategic skills to help them manage the financial aspects of energy projects, with the goal of becoming confident and conversant about the avenues available for securing commercial & concessional sources of funding.

Offered: Spring.

ENTR 190 - Community and Global Resilience in Energy Transitions

Instructor: Christa Daniels

This course examines how energy systems and climate impacts reinforce longstanding social and economic inequities. Students will investigate who benefits and who is burdened, historically and today, across local and global contexts. Through a systems thinking lens, students will explore how natural and social systems are interconnected, interdependent, and shaped by dynamic feedback loops. Using this holistic approach, students will assess real-world case studies, identify leverage points for change, and analyze community-level climate and energy strategies from within and beyond the U.S.

Emphasizing applied learning, students will engage in collaborative projects and comparative case analysis to develop actionable insights and equity-centered solutions. The course equips students with the systems literacy, effective engagement tools and techniques, and strategic frameworks needed for leadership in the energy transition and climate resilience field.

Offered: Spring.

Health Policy and Clinical Practice

The Dartmouth Institute for Health Policy and Clinical Practice (TDI)

Requirements for the Doctoral (PhD) degree in Health Policy and Clinical Practice include:

The Dartmouth Doctor of Philosophy (PhD) program offers in-depth and a multi-disciplinary approach that integrates relevant theories, methodological strategies, and evidence from a variety of fields. Disciplines represented by the faculty include clinical medicine, decision science,

economics, epidemiology, health services research, geography, political science, psychology, public health, and sociology.

The doctoral program is designed so that each student-researcher works closely with a faculty advisor and his or her research group to design a course of study and participate in ongoing research. PhD students are encouraged to investigate a specialized area in-depth while also gaining an informed appreciation of other core areas. They are trained in independent and team-based strategies to integrate these perspectives into research.

Our PhD graduates are expected to further the development of these core areas, to lead in the design, initiation and management of effective change in health care, and to contribute to the education of future scholars in health policy and clinical practice. Graduates of the doctoral program go into academic, government, and corporate positions involving health services research and health policy.

The requirements for the PhD include:

- Satisfactory completion of the following courses (listed below)
- A minimum of two (three are allowable research rotations (PH 181-183) during the Fall and Winter terms of the first year).
- One ethics course PH 700 (offered second half of Fall term of the first year)
- All PhD students must engage in research (PH 197-199) efforts each academic term related to their dissertation research topic. These efforts will form the basis of the Qualifying Examination Defense proposal.
- An on-topic (thesis-related) qualifying examination consisting of a written proposal and an oral defense.
- PhD students must serve as a Teaching Assistant (TA) (PH 272-276) in at least two units of courses, and across at least two terms. Beginning in the student's second year of study, they will be eligible to TA one of The Dartmouth Institute courses or electives unless another course has been approved by The Dartmouth Institute.
- After successfully passing the Qualifying Examination Defense. Students will continue their research (PH 297-299) efforts as a doctoral candidate each academic term until they are ready to present their doctoral research at their thesis defense.
- Annual formal presentation of a research in progress (RIP) seminar to TDI faculty and students.
- Attendance at TDI program functions.

- Preparation, presentation (seminar and defense with an internal examination committee and one external faculty member), and submission of a thesis upon successful defense of thesis.

Satisfactory completion of the following courses:

Core Course Requirement: Year 1

While all courses below are required, we strongly recommended for your training, students are required to complete PH140 **OR** successfully petition for course equivalency credit with supporting evidence of their mastery of that material. There are also a number of elective courses offered in the first year that provide valuable background content related to the Dartmouth Institute's research areas.

The following 3 courses must be completed during Year 1:

- PH 141: Regression and Other Approaches
- QBS 139/PH 147: Advanced Methods in Health Services Research
- QBS 140/PH 121: Decision and Cost Effectiveness Analysis

Core Course Requirement: Year 1, Year 2, and Year 3

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PH 700: Responsible and Ethical Conduct of Research

- (required for all graduate students in first term/first year)

At least 3 courses from the following list must be completed by the end of Year 2:

Biostatistics courses (a minimum of 1 of the following is required):

- QBS 119: Biostatistics I: Applied Biostatistics
- QBS 120: Statistical Theory
- QBS 121: Statistical Modeling
- QBS 122: Statistical Analysis of Complex Data

Epidemiology courses (a minimum of 1 of the following is required):

- QBS 131: Epidemiology II
- QBS 136 or 137: Applied Epidemiology Methods
- QBS 133: Clinical Epidemiology

Year 2 and Year 3:

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PH 290 Doctoral Seminar (Professional Development Seminar – register each term – F, W, Sp)

- Year 2 Fall: Grant Writing Seminar
- Year 2 Winter: Writing Seminar
- Year 2 Spring: Writing seminar

PH 270: Advanced Research Methods (register each term – F, W, Sp)

- Year 3 Fall
- Year 3 Winter
- Year 3 Spring

Health Policy Clinical Practice Graduate Courses

PH 181,182,183 - Research Rotation

An original individual, experimental, or theoretical investigation beyond the undergraduate level in quantitative biomedical sciences. This course is open only to TDI PhD graduate students prior to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register every quarter, including summer. Advanced research is to be registered for post-qualifier examination.

All terms: By arrangement. (CT, NC)

PH 181 is 1.0 Dartmouth units; PH 182 is 2.0 Dartmouth units; PH 183 is 3.0 Dartmouth units

**Core Requirement for PhD*

PH 186,187,188,189 - Directed Readings

Students may participate in a Directed Readings course through arrangements with a faculty member. "Directed" coursework involves readings and special projects, and is subject to approval by an approved Geisel faculty supervisor and either the Executive Director of Education (for masters degree students) or the Chair of their program (for PhD students). Directed Readings are typically literature reviews on a topic with a paper due at the end of the term that provides an overview of the topic(s) reviewed, the references read, the process used to identify readings, and a summary of the theory and evidence found in the literature review. For PhD students, Directed Readings (PH 186-189) are for 'deep background' reading for the student's general training or exploring a topic area, while Directed and Doctoral Research (PH 196-199 & PH296-299) grants credit for carrying out research activity, including a specific literature review for a research proposal or dissertation, design, analysis, writing, and preparing a PhD proposal.

All terms: By arrangement. (HP/P/LP/NC)

PH 186 is 0.50 units; PH 187 is 1.0 units; PH 188 is 2.0 units; PH189 is 3.0 units.

Prerequisites: Proposal form available from the PhD Program Associate Director must be approved on or before the first day of the term, including specified readings, products to be delivered, and timeline all signed by the supervising faculty member and the Executive Director of Education.

PH 196,197,198,199 - Directed Research (pre-qual)

Students may participate in Directed Research through arrangements with a faculty member. Directed research is subject to approval by an approved the Chair of the program. Directed Research (PH 196-199) grants credit to PhD students prior to their qualifying exam for carrying out research activity on the student's own project, including a specific literature review for a research proposal or dissertation, design, analysis, writing, and preparing a PhD proposal. Doctoral Research (PH 297-299) grants credit exclusively to PhD candidates and post-docs for carrying out research activity.

PH 196 is 0.50 units; PH 197 is 1.0 units; PH 198 is 2.0 units; PH 199 is 3.0 units.

Prerequisites: Proposal form available from the PhD Program Associate Director must be approved on or before the first day of the term, including aims, specified products, and timeline all signed by the supervising faculty member and the Executive Director of Education.

PH 270 - Advanced Research Methods Seminar Series

This year-long seminar explores a new area of research methodology each semester, with an emphasis on both conceptual understanding and practical application.

- **Term 1: Research Design & Validity**
The focus is on foundational principles of research design, including strategies to strengthen internal and external validity, and how to recognize common threats.
- **Term 2: Measurement Methods**
We delve into advanced techniques for measurement and assessment, covering reliability, validity testing, and the construction and evaluation of measurement scales.
- **Term 3: Implementation & Dissemination (D&I)**
The final term is structured as a discussion-based seminar emphasizing implementation science and dissemination strategies. Sessions include guest presentations by leading D&I experts followed by in-depth discussions.

The first two terms include more structured, didactic instruction from the course leader. Assignments focus on reflective writing and student-led presentations to encourage synthesis and critique of methods. The final term shifts to a collaborative format, engaging participants in critical discussions around contemporary D&I issues.

The seminar meets for three terms (10 sessions per term) and is designed for PhD students, post-doctoral scholars, and early-career faculty. Enrollment is limited to 10 participants to ensure a rich and interactive learning environment.

PH 272,273,274,275,276 - Supervised Teaching

This experience for the student teacher assumes that the course has been developed and taught in prior terms. Course faculty and the student teaching assistant (TA) work closely to develop and evaluate discussion assignments and associated homework. TAs conduct discussion sessions in courses under the supervision of the course faculty. TAs may be encouraged to present lectures for which they receive detailed feedback on their teaching style. TAs receive instruction on effective teaching techniques, such as how to teach the material, how to run a discussion, how to evaluate student responses, and grading. TA performance will be monitored throughout the term and the supervising faculty will provide appropriate evaluation, coupled with detailed suggestions for improvement.

For a 10-week course, Teaching Assistants should plan on being available for 13 weeks, which includes final course planning prior to the start of the term and student evaluation after the end of the term.

All terms: By arrangement. 0.25 - 2.00 Dartmouth units:(Credit/No Credit grade).

Prerequisites: PhD students must have familiarity with the subject matter, and prior approval from the PhD Program Associate Director and the supervising faculty member.

PH 290 - Doctoral Seminar - Communicating your research for professional and lay audiences – Grants, Papers and Presentations.

This three-term seminar aims to enhance skills in research communication. Term One will focus on developing a full NIH grant application and understanding all steps on the grant journey. Terms Two and Three will focus on how to communicate science to different audiences using different mediums. Participants must be actively writing papers and grants.

Based on participants' background and interest, the seminar will cover a range of topics including PowerPoint presentations, talks to professional and lay audiences, posters, abstracts, articles for professional journals, and research grants. The course leaders will present brief didactic material and invite expert speakers (journal editors, master grant writers), but the primary method is peer presentations and review.

The seminar meets for three terms (10 sessions each term) for PhD students, post-docs, and junior faculty (maximum 10 participants).

Because we expect considerable interest in this seminar series, seminar faculty will be interviewing potential participants to ensure that the seminar meets their needs and interests.

0.50 Dartmouth units; (Credit/No Credit)

PH 297,298,299 - Doctoral Research

Thesis research under the guidance of a faculty member who is the student's designated Dissertation Research Advisor. See the PhD Student Handbook for more details and examples of acceptable proposals.

Contrast these with Directed Research (PH 196-199),

All terms: By arrangement. PH 297 is 1.0 units; PH 298 is 2.0 units; PH 299 is 3.0 units.

Prerequisites: PhD candidacy status, including successfully defending the thesis proposal

PH 700 - Responsible and Ethical Conduct of Research

This course is part of a campus-wide series that provides training in professional research conduct and is required of all Dartmouth MS & PhD students. PH 700 covers issues regarding the responsible and ethical conduct of biomedical research, including topics in professionalism, authorship, mentoring, data collection, and rigor and reproducibility in the practice of science. The current curriculum was developed by the Graduate Studies Office in collaboration with the Ethics Institute at Dartmouth. In five live sessions in the fall term, graduate training faculty meet with small groups of first-year graduate students and postdoctoral fellows to facilitate discussions on ethical dilemmas that biomedical scientists may encounter in their careers. Case studies will be used to provide a framework for discussions on ethical issues occurring in scientific research.

0.10 Dartmouth units: (CT, NC)

Health Sciences Education - Graduate (MS/MPH)

Master of Science in Epidemiology

The interdisciplinary program in epidemiology focuses on the rapidly advancing area of molecular epidemiology which overcomes impediments to traditional epidemiologic approaches by discovering and incorporating molecular measures of susceptibility, exposures, biologic response, preclinical changes, and prognostic phenotypes over the life course. Students obtain rigorous training in formulating and testing hypotheses by planning and executing well-designed human epidemiologic studies combined with applying innovative molecular markers and complex statistical modeling of high-dimensional data. Topics span global, infectious, nutritional,

environmental, cancer, and clinical epidemiology and the goals of precision medicine and prevention.

The Master of Science in Epidemiology degree provides a unique interdisciplinary education in the areas of epidemiology, statistical analysis, and bioinformatics for careers in biomedicine in academia and the emerging private sector, healthcare, government, and other non-profit agencies.

Master of Science in Epidemiology Requirements

Dartmouth's Epidemiology degree challenges students to think critically across a wide range of courses that build an unparalleled knowledge base in Epidemiology.

Students take a combination of core and elective courses, with an optional capstone completing their Master of Science degree in 12-15 months.

Master of Science in Epidemiology Courses

Visit the Master of Science in Epidemiology Curriculum website to see which courses are core and elective options.

HSE 101 - Foundations of Programming for Data Scientists

Instructor: Dr. Christian Darabos

This course is designed for graduate students with little to no prior programming experience who are eager to understand computational approaches to solving problems. This course will equip you with the foundational skills needed to excel in computational data science.

Course Highlights:

- **Foundations of Programming** Learn the essential concepts of programming, including variables, expressions, flow control, basic algorithms, and data frames.:
- **Computational Data Science:** Get comfortable with Python, Bash scripting, and High-Performance Computing (HPC) environments.
- **Hands-On Learning** Engage in live code examples and in-class exercises that bring ideas to life without getting bogged down by computer idiosyncrasies.:

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll gain practical experience with:

- **Python** Basics of programming, using notebook environments (Jupyter Notebooks).:
-

Bash Scripting: Command line input, file input/output, and mixing languages with Python.

-

High-Performance Computing (HPC) Introduction to Dartmouth's HPC environments like Andes, Polaris, and Discovery.:

Course Experience:

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week includes:

-

Live coding sessions.

-

In-class exercises that reinforce your learning.

-

Mock Tech Interviews (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(1 unit)

Cross-Listed as: QBS 101

Offered: Fall, Summer.

HSE 101.1 - Intermediate Programming for Data Scientists

Instructor: Dr. Christian Darabos

Elevate your programming skills and make your research more reproducible, reusable, and maintainable. This course designed for graduate students who already have foundational programming knowledge and are eager to advance their expertise.

Course Highlights:

-

Object-Oriented Programming (OOP): Dive deeper into OOP concepts, enhancing your ability to design robust, scalable software.

-

Reproducible Research: Apply OOP and other best practices for ensuring your research can be easily replicated and built upon by others.

-

Code Reusability and Maintainability: Master techniques that will make your code cleaner, more efficient, and sustainable, particularly in cloud environments

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll get practical experience with:

-

Python: Advanced programming techniques and libraries.

-

Containerization (Docker): Streamline your development process and ensure consistency across different computing environments.

-

Bash Scripting: Automate tasks and enhance your productivity.

-

High-Performance Computing (HPC): Leverage powerful computing resources to handle complex data science tasks.

-

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

Course

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

-

Participate in live coding sessions.

-

Complete in-class exercises that reinforce your learning.

-

Take part in a Mock Tech Interview (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(0.5 unit)

Prerequisite: HSE-101

Cross-Listed as: QBS 101.1

Experience:

Offered: Winter.

HSE 103 - Foundations of Data Science

Instructor: Dr. Meghan Muse and Dr. Noelle Kosarek

Strong programming and mathematics skills are the crucial foundation for any data scientist. In this course, students will have an introduction to programming in R and review of critical linear algebra and calculus that will serve as the foundation of many of their courses in this program. Students will be exposed to introductory programming practices, data visualization, data wrangling, introductory data analysis, type setting in LaTeX, using GitHub repositories, and High Performance Computing (HPC). During the calculus review, exercises in topics such as linear algebra, sequences and series, and derivatives and integration will be provided.

Mandatory for MS of Epidemiology, Health Data Science, and Medical Informatics students upon matriculation

Students in other programs need instructor approval to enroll.

(1 unit)

Prerequisite: Calculus, Multivariate Calculus, Linear Algebra. Previous coding experience highly recommended. Instructor or administration permission for non-MS of Epidemiology, Health Data Science, and Medical Informatics students.

Offered: Fall, Summer.

HSE 108 - Machine Learning

Instructor: Dr. Saeed Hassanpour & Dr. Indrani Bhattacharya

This course provides a comprehensive introduction to machine learning methods and techniques. Various machine learning concepts and methods, such as computer vision, natural language processing, and deep learning, will be described and discussed. The emphasis of this course will be providing the required background and working knowledge of the machine learning methodology to apply these techniques on new or existing research or data science problems. Through multiple project assignments, this course will provide students with the experience on the application of machine learning techniques to solve real-world complex problems, such as those in the biomedical domain.

(1 unit)

Prerequisite: Coursework: Calculus, Linear Algebra, Basic knowledge of Probability and Statistics. Programming: Intermediate proficiency in Python.

Cross-Listed as: QBS 108

Offered: Spring.

HSE 119 - Foundations of Biostatistics I: Applied Biostatistics

Instructor: Dr. Jennifer Emond

In this course, students will learn foundational topics of biostatistics including random variables and probability distributions, sampling distributions, the central limit theorem, statistical estimation and hypothesis testing, and power and sample size calculations. The course will include bivariate parametric and non-parametric statistical testing procedures including simple linear regression. Content also includes two-way ANOVA and foundational topics in classification performance metrics (e.g., sensitivity, specificity, AUC). Classwork will prominently feature active learning activities. Course material will use the R Language for Statistical Computing.

The course is intended for students who need a strong foundation in statistical thinking to pursue more advanced applied biostatistical coursework in multivariable statistical modeling. Students seeking to understand the mathematical foundations of statistical theory should enroll in HSE 120.

(1 unit)

Prerequisite: N/A

Cross-Listed as: QBS 119

Offered: Fall.

HSE 120 - Foundations of Biostatistics I: Statistical Theory for the Quantitative Biomedical Sciences

Instructor: Dr. Robert Frost

This is a time-intensive graduate-level course in mathematical statistics designed to teach the fundamental knowledge of statistical theory required to read and, with further study, contribute to the statistical methodology literature. An in depth overview of statistical estimation and hypothesis testing will be provided, including the method of least squares, maximum likelihood methods, asymptotic methods, and correction for multiple comparisons. The basic elements of statistical design and sample size calculations will be introduced. Resampling strategies will be discussed in the context of the bootstrap, as well as simulation as a tool for statistical research. The emphasis will be on theory used in modern applications in biomedical sciences, including genomics, epidemiology, and clinical and health services research. The statistical program language R will be leveraged for computational examples, problem sets and exams.

(1 unit)

Prerequisite: Dartmouth Coursework: No specific Dartmouth courses are required. See syllabus for specific prerequisites. HSE 120 is a fast-paced, calculus-based graduate mathematical statistics course with a strong

theoretical component. It is assumed that students are comfortable with multivariate calculus, mathematical proofs, linear algebra and R programming. A strong internal motivation to learn the material and complete challenging assignments is essential to success in this class. Students should expect to spend 10-15+ hours per week outside of class. Students are strongly encouraged to review the content and level of theory in the class textbook (Rice, see below) prior to registering for the class. Versions of prior problem sets (and solutions) are also available on request to help students assess the class workload, theoretical component and assumed mathematical and computational background.

Cross-Listed as: QBS 120

Offered: Fall.

HSE 121 - Foundations of Biostatistics II: Statistical Regression

Instructor: Dr. Todd MacKenzie and Dr. Tor Tosteson

We cover the theory and applications of statistical regression, as practiced in biomedical research. We present statistical inference (estimation and hypothesis testing) for linear models, generalized linear models (e.g. logistic and Poisson regression), longitudinal models for repeated measurements, and models for times-to-event (survival analysis). The course emphasizes the primary goals of regression, which are (i) prediction and (ii) causal inference. It also introduces penalized regression for large numbers of predictors and methods for missing data in regression. The statistical software R is used for applications.

(1 unit)

Prerequisite: HSE 120 or HSE 119. Calculus, linear algebra. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 121

Offered: Winter.

HSE 122 - Foundations of Biostatistics III: Modeling Complex Data

Instructor: Dr. James O'Malley

This course follows HSE 120 (Biostatistics I: Theoretical Foundations) and HSE 121 (Biostatistics II: Modeling). The first module of the course extends standard regression models to analyze data when the data are statistically dependent. This component encompasses clustered, multi-level, longitudinal and other forms of structured data and will focus on hierarchical (mixed-effect) modeling approaches. The consideration of random effects and their conditional distribution given that data links to the final two modules. Bayesian methodology is carefully developed and compared to the classical (frequentist)

approach. Bayesian statistical methods are a feature of this course due to their affinity for solving challenging problems and their ubiquity across modern statistical applications. A variety of applications in which Bayesian methods are naturally suited are considered. Bayesian computation via Markov-chain Monte- Carlo (MCMC) is also developed and illustrated. The course concludes with the network analysis module. This includes visualization and summarization of networks; models of networks; and models of peer effects and social influence processes. The techniques and methods developed in the two prior modules are further illustrated in this module.

Learning Objectives

1. Become adept at recognizing when data has a nested, cross-classified, longitudinal or multivariate structure and familiar with statistical techniques for analyzing such data
2. Gain a strong understanding of the fundamentals of Bayesian Analysis and develop an ability to perform Bayesian analyses
3. Be able to conduct a social network analysis from the grassroots, encompassing specification of the research question, representation of data, choice of statistical analysis, implementation of analysis and visualization of results

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121. The course has a strong "hands-on" emphasis on analyzing data while consolidating ideas through relevant methodological and intuitive insights. Linear algebra, multivariate calculus, statistics, probability and basic computer programming with an emphasis on mathematical/statistical programming. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 122

Offered: Spring.

HSE 123 - Biostatistics Consulting Lab

Instructor: Dr. Todd MacKenzie & Dr. Tor Tosteson

This is a practicum that gives students experience in biostatistics consulting. Students will collaborate with clinician and other investigators to address clinical, translational and health services questions with the guidance of a faculty biostatistician.

(0.5 unit)

Prerequisite: HSE 121: Permission of Instructor.
 Programming: Intermediate proficiency in R, Data Wrangling, Data Visualization are recommended. Open only to QBS PhD and MS of Epidemiology, Health Data Science, and Medical Informatics students, unless program and instructor permission is granted

Cross-Listed as: QBS 123

Offered: Fall, Spring, Summer, Winter.

HSE 124 - Advanced Biomedical Data Analysis

Instructor: Dr. Eugene Demidenko

This course offers innovative and advanced methods and techniques for biomedical data analysis, often overlooked in the traditional training practices, such as graphics animation, spatial statistics and disease mapping via kernel density estimation, discriminant analysis, logistic regression, and PCA for binary classification via ROC curve and optimal threshold analysis, PCA-based objects/subjects ranking, optimal number of clusters, estimation of dose-response relationships in pharmacology and toxicology, tumor growth analysis, statistical identification of drugs' synergy, nonlinear regression, D-value as an alternative to P-value, and others.

I follow the saying: "Examples are the expressway to knowledge." We will be working with large and diverse real-life data sets such as the hotspot identification of the lung cancer rate in New Hampshire, the toenail arsenic distribution, TCGA gene clustering, prediction of the absolute marathon time world record, college student admission data, city crime, T-cell counts for COVID-19 diagnosis, underage drinking, correlation heatmap animation for stock prices and bones correlation in the Goldman osteometric dataset, nonparametric regression for Forbes Worlds's biggest companies dataset, etc.

We will be using my book "Advanced Statistics with Applications in R" at www.eugened.org

(1 unit)

Prerequisite: HSE 121

Cross-Listed as: QBS 124

Offered: Spring.

HSE 126 - Analysis of Densely Collected Longitudinal Data

Instructor: Dr. Nicholas Jacobson

Rapid advances in technology has increasingly allowed for the collection of dense longitudinal data (i.e. data collected

using many repeated measurements), and this type of data now abounds within biomedical and social science research (e.g., heart rate sensors, accelerometers, electronic medical record patient visits). A large variety of tools have emerged to model and predict dynamics that evolve over the course of time. The current course will discuss tools focusing on (1) explainability and theory-testing of dynamic processes with applications towards causal inference (e.g. multilevel models, vector autoregressive models, frequency domain analysis, state-space models, person-specific data models, dynamical systems modeling, varying-coefficient models, continuous time models) and (2) maximizing predictive performance (e.g. unique considerations in cross-validation with time-series data, time-series feature engineering, nomothetic and person-specific machine learning models, recurrent neural networks). Given the breadth of the tools in this field, the focus of this course will be primarily applied. Students will need to utilize both R and Python for this course.

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121.

Cross-Listed as: QBS 126

Offered: Spring.

HSE 130 - Foundations of Epidemiology I: Theory and Methods

Instructor: Dr. Diane Gilbert-Diamond (25 Fall), Dr. Caitlin Howe (25 Summer), both Fall in 26

This is the first of a two course sequence of graduate level epidemiology (Foundations of Epidemiology I and II). The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and prepare students for conduct of epidemiology research. Design of investigations seeking to understand the cause of human disease, disease progression, treatment and screening methods include clinical trials, cohort studies, case-cohort, case-case, nested case-control and case-control designs. Concepts of incidence rates, attributable rate and relative rate, induction and latent periods of disease occurrence, confounding, effect modification, misclassification, and causal inference will be covered in depth.

(1 unit)

Prerequisite: None for graduates. Biol 029 for undergraduates. Permission of Instructor

Cross-Listed as: QBS 130, BIOL 72

Offered: Fall, Summer.

HSE 131 - Foundations of Epidemiology II: Theory and Methods

Instructor: Dr. Megan Romano

This graduate-level course is the second in a two-part sequence. The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and to prepare students to conduct epidemiologic research. Expanding upon concepts covered in Foundations of Epidemiology I, students develop an in-depth understanding of advanced concepts related to confounding (including causal diagrams), learn how to interpret and critically analyze the biomedical primary literature, and gain experience in epidemiological study design. Concepts related to weight of evidence and systematic review, outbreak investigation, and assessment of the effects of policies on health are also covered.

(1 unit)

Prerequisite: HSE 130/BIOL 072. Permission of Instructor

Cross-Listed as: BIOL 73, QBS 131

Offered: Winter.

HSE 132 - Molecular Biologic Markers in Human Health Studies

Instructor: Dr. Lucas Salas

Epidemiologists are rapidly evolving from traditional observational data collection to incorporating molecular markers of exposure, disease, and susceptibility. As technologies advance, integrating molecular targets adds complexity to epidemiological study designs. This course provides a comprehensive overview of biomarkers applications in molecular epidemiology.

The first half of the course covers historical background, basic definitions, and principles, including the use of biomarkers, statistical and bioinformatic challenges, identifying susceptible populations, exposure assessment, dose-response, molecular classification of phenotypes, and evaluating study compliance and efficacy.

The second half focuses on applications in various fields, such as cancer, neurodegenerative diseases, infectious diseases, and cardiovascular diseases, with topics selected based on student interests. Each week, students will explore the challenges and tools in molecular epidemiology. They will take turns to discuss subjects such as biomarker study designs, biomarker validation, or biobanking. Students are encouraged to choose topics relevant to their research.

(1 unit)

Prerequisite: No prerequisites are needed for this course; however, the students are encouraged to co-enroll in HSE 130.

Cross-Listed as: QBS 132

Offered: Fall.

HSE 133 - Clinical Epidemiology

Instructor: Dr. Meghan Muse

Evidence-based medicine is the cornerstone of contemporary clinical practice. Clinical epidemiology aims to quantitatively evaluate medical interventions and technology and advance prediction and decision support tools to guide medical practice. The principles, tools and statistical approaches of clinical epidemiology are widely applicable in academic research, healthcare, and industry settings. In this course, students will learn to design and analyze both randomized and observational studies evaluating the efficacy of medical interventions, therapies, devices, screening programs and tests in order to understand therapeutic efficacy, therapeutic safety, and disease prognosis. Additional topics include the construction and validation of clinical risk prediction models (including discrimination, calibration, and reclassification), synthesis of quantitative data for medical decision making (such as meta-analysis), and cost-effectiveness analysis. The course draws on examples from pharmacoepidemiology, pharmacogenomics, real problems faced by medical professionals, and novel examples of clinical research.

(1 unit)

Prerequisite: HSE 130: Foundations of Epidemiology I or instructor permission

Cross-Listed as: QBS 133

Offered: Spring.

HSE 136 - Applied Epidemiological Methods I

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, and addressing confounding and effect modification within the context of a range of epidemiological study designs. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: QBS 130 (co-requisite) or permission of the instructor

Cross-Listed as: QBS 136

Offered: Fall.

HSE 137 - Applied Epidemiological Methods II

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I and II. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, modeling, and meta-analysis approaches. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: HSE 136 or permissions of the instructor

Cross-Listed as: QBS 137

Offered: Winter.

HSE 139 - Advanced Health Services Research

Instructor: Dr. Erika Moen

This course will develop student analytic competencies to the level necessary to conceptualize, plan, carry out, and effectively communicate small research projects in health services or epidemiology. Lectures, demonstrations, and labs will be used to integrate and extend methods introduced in other QBS and TDI courses. The students will leverage synthetic electronic health record data provided by the Analytics Institute at Dartmouth-Hitchcock and publicly available data in classroom lab exercises and course assignments. Many of the labs build on one another, and the aim is that the skills developed in the labs will assist the students with their own student-led projects. The instructors will mentor students as they develop their own analytic projects. Practical skill areas include programming in R, developing an analytic workflow, data visualization, and data structure and management. The main goal of the course is to firmly ground students in the scientific process of observational research.

(1 unit)

Prerequisite: For HSE students: HSE 130, HSE 121; For MPH students: PH 141

Cross-Listed as: QBS 139, PH 147

Offered: Spring.

HSE 140 - Decision & Cost Effectiveness Analysis

Instructor: Dr. Anna Tosteson & Dr. James Stahl

This course covers the fundamental principles and mechanics of decision analysis and cost-effectiveness analysis. Topics covered in the course include basics of probability (including Bayes' Theorem), structuring decision problems as decision trees and Markov models, components of preference (value preference, time preference, and risk preference), valuing multidimensional outcomes, evaluating decision trees, sensitivity analysis, value of information, and basic principles of cost-effectiveness analysis. Weekly problem sets are also used to reinforce the concepts presented in class. The course has a weekly lab that involves the use of decision analysis software to reinforce concepts presented in class. Labs are also used for development, progress review and discussion of small group decision analysis projects, which culminate in formal presentations the last week of class.

(1 unit)

Prerequisite: PH 100, PH 139, PH 140 or permission of Instructor. Programming language: Students learn TreeAge Software.

Cross-Listed as: PH 121, QBS 140

Offered: Spring.

HSE 145 - Computational Immunology

Instructor: Dr. Li Song & Dr. Kenneth Hoehn

This course will introduce students to fundamental concepts and the latest techniques for using computational methods to analyze immunological data. After a brief introduction to immunology, the course will move to its primary focus of analyzing sequencing data from immune cells. The first part will cover the bulk RNA-seq data analysis, including cell-type deconvolution. The second part is for single-cell RNA-seq analysis, such as cell type discovery, differentially expressed gene (DGEs) analysis, and trajectory analysis. The third part is about immune repertoire analysis, including lineage tree construction. The fourth part of the course covers advanced topics, such as spatial RNA-seq analysis. In the last a few sessions, we will see how the techniques learned from the course can be applied to the studies of infectious diseases, autoimmune disorders, and cancers.

(1 unit)

Prerequisite: HSE 146 Introduction to Bioinformatics I or permission of instructors

Cross-Listed as: QBS 145

Offered: Fall.

HSE 146 - Foundations of Bioinformatics I

Instructor: Dr. Aaron McKenna

The goal of computational biology is to catalog and model the information within living systems. In this class, we use tools developed in statistics, computer science, and biology to explore how living systems encode and process information to generate complex structures and interact with the world at large. We'll review key conceptual advances and implement a number of core computational algorithms, including Gibbs sampling, clustering, and hidden Markov models, all of which we run on biological data.

(1 unit)

Prerequisite: Basic knowledge of Python programing is helpful but not required.

Cross-Listed as: GENE 146, QBS 146

Offered: Winter.

HSE 147 - Genomics: From Data to Analysis

Instructor: Dr. Olga Zhaxybayeva

Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

(1 unit)

Prerequisite: Permission of instructor required.

Cross-Listed as: BIOL 47/147, EEES 147, QBS 147

Offered: Fall.

HSE 148 - Introduction to Statistical Genetics

Instructor: Dr. Siming Zhao

This course is designed as an introduction to statistical genetics/computational biology. It reviews the key statistical concepts and methods relevant to statistical

genetics, discusses various topics that have significant statistical components in genetics and genomics. It serves as the entry point to several areas, including GWAS and post GWAS analysis, functional genomics, statistical modeling and inference.

(1 unit)

Prerequisite: HSE 119, HSE 120

Cross-Listed as: QBS 148

Offered: Spring.

HSE 177 - Methods of Statistical Learning for Big Data

Instructor: Dr. Jiang Gui

This course provides an introduction to algorithms used in data science with applications to biomedical and health data science. The goal of this course is to present an overview of many of the approaches used for big data focusing on analytical methods and algorithms. The course assumes that students have some knowledge of R. Students will be provided with 2 large data sets. Lectures on data reduction, classification, and optimization will request students complete homework for these datasets. Special attention will be given to students' active learning by programming in a statistical software package R.

(1 unit)

Prerequisite: HSE 119 or HSE 120, or permission of instructor. Co-requisite HSE 121.

Cross-Listed as: MATH 177, QBS 177

Offered: Winter.

HSE 180 - Data Visualization

Instructor: Dr. Ramesh Yapalparvi

Biomedical and health data visualization is an important and necessary step of preliminary statistical analysis. "A picture is worth a thousand words" is the impetus of this course. This course will teach best practices for visualizing data, including exploratory statistics and effective communication of statistical analysis. Data visualization is a key component that all data scientists' needs to be fluent in. Students will become competent users of Tableau, R graphics and R-Shiny. Real-life biomedical and health related data will be used throughout the course.

(0.5 unit)

Prerequisite: N/A

Cross-Listed as: QBS 180

Offered: Winter.

HSE 181 - Data Wrangling

Instructor: Dr. Carly Bobak

Data wrangling is the process of mapping and transforming data into new formats for the increased ease and efficiency of downstream analysis. In this course, students will learn about the different types of data structures and formats, and how to create, merge, subset, and manipulate these structures. Students will wrangle data using excel, SQL, and R programming as appropriate, learn the principles of tidy data and the tidy verse, learn string processing with regular expressions, and have an introduction to web scraping and API's for data collections.

(1 unit)

Prerequisite: Linear Algebra. HSE 103 or Intermediate proficiency in R.

Cross-Listed as: QBS 181

Offered: Fall.

HSE 185 - Masters Capstone Experience

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs

The goal of the capstone is to enable students to refine their skill set as they work on a research or applied data science, epidemiology or medical informatics project. The capstone also provides training in critical professional skills including scientific writing, presentation skills, and translating the findings of a research or applied project to key stakeholders who may not have expertise in the domain. Preparation for the capstone project begins in August of the first year and culminates in a written white paper and presentation at the end of the summer term.

Note: Students will enroll in HSE 185.5: Essential Skills for Career Development and Leadership (0.5 unit) in the winter quarter preceding the summer capstone.

Students may select from three tracks for their capstone. Tracks differ based on the summer term project. The pre-capstone work is required for all tracks. Students are expected to finalize their track selection in April. Tuition & Fees apply to all tracks.

- **Individual Project with Dartmouth PI:** Students will match with an investigator at Dartmouth and will work on a research or applied project under the PI's mentorship; the project may be supervised by a postdoctoral research fellow or doctoral candidate in the PI's lab. For this option, residency at Dartmouth is required. Students are encouraged to submit a conference abstract in the fall on their capstone project.

- **Individual Project-Based External Experience:** Students will complete an external internship. On-site internships with supervision may be with a for-profit company, governmental agency, non-profit organization, or another academic institution. For this option, residency at Dartmouth is not required.

- **Group Project:** Students will work in small groups (2-3 students each) on a novel project of their own choosing. Students may develop their research project using publicly available data. Faculty will assist students in defining feasible projects, creating timelines and division of labor, and ultimately oversee the work. For this option, residency at Dartmouth is required.

- Students will work on their capstone full-time (3 units) during the summer term (fall term in 2026), whether in residence at Dartmouth or at an external company/institution.

- Capstone offered during Summer 25/Fall 26 only. Full Tuition & Fees apply

**International Students enrolled in HSE 185 are eligible to apply for Curricular Practical Training (CPT) to meet coursework requirements.

** Students can be paid or unpaid for external experiences. Tuition & Fees still apply.

(3 Units)

Prerequisite: Completion of required terms of HSE 185.5 preceding the summer capstone. Programming: Completion of required terms of QBS 101 preceding the summer capstone. Completion of all core courses for the MS in Health Data Science, Epidemiology, or Medical Informatics

Offered: Fall, Summer.

HSE 185.5 - Essential skills for career development and leadership

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs.

This course is designed to provide students with the hard and soft skills needed to excel professionally within the health and biomedical fields. Topics include programming best practices, writing and visual communication of research findings, presentation skills including mastering the elevator pitch, interview skills, and ethics. Coursework is largely based on in-class learning activities and workshops.

(0.5 Unit)

Prerequisite: N/A

Offered: Winter.

HSE 192 - Health Informatics

Instructor: Dr. Inas Khayal

Our health is everywhere. It is affected by how, where, and who we live, work & play with (i.e. biological, behavioral, social, and environmental factors). The explosion of digitization of data captured both outside 'in the wild' and within the healthcare delivery system, allows us to understand and address the many factors affecting the complexity of our health. Today, health & healthcare data is continuously being generated by healthcare delivery systems, organizations, or users and can be accessed through devices, databases, or the web (e.g., APIs). Deriving information and knowledge to improve and maintain health requires health informatics. Data science plays an active role as a profession and within its research efforts in informing and developing all aspects of health informatics: data capture, data storage, and data analytics. Students will gain experience with Python. Prior experience with Python is not necessary, but students should have some prior programming and statistics experience. The goal of this course is two-fold: first, to learn about the latest topics in health informatics and second, to design and develop a health informatics project. Special topics in health informatics will be introduced through lectures and primary literature. These topics will be organized into 4 themes:

- 1.) Applications Theme: exploring several key current applications of health informatics
- 2.) Data Capture Theme: learning about data capture technologies and standards
- 3.) Data Storage Theme: presenting data formats, databases, and issues of security & privacy
- 4.) Data Analytics Theme: a brief introduction to the data analytics cycle and special topics of visualization and analytics methodologies.

(1 unit)

Prerequisite: Prior programming and statistical experience preferable

Cross-Listed as: COSC 89.17, QBS 192

Offered: Fall.

HSE 193 - Independent Journal Club

Instructor: Dr. Kristine Giffin & Faculty

Offered all quarters, this Independent Journal Club course option for QBS PhD and HSE MS students can count as a required journal club credit. Prior to the start of the quarter, a journal club proposal and outline are to be developed between the student and a QBS, or other approved, faculty member who will serve as the instructor. This proposal is to be submitted to and approved by the QBS Administration a week before the end of the drop/add period of the quarter. The student and faculty member will identify topics, develop a timeline to review selected literature, and set deliverables that are to be met by the end of the quarter. The student must meet with the instructor at least 1-1.5 hours each week in addition to conducting 3 hours per week of outside of classroom work (i.e. readings, deliverables, etc). This information must be reflected in the proposal. The faculty member is responsible for tracking and evaluating the student's progress in order to provide a grade to the QBS Administration at the end of the quarter. For more information please email Dr. Kristine Giffin.

(0.5 unit)

Prerequisite: Consult Faculty Advisor

Cross-Listed as: QBS 193

Offered: Fall, Spring, Summer, Winter.

HSE 194 - Biostatistics Journal Club

Instructor: Dr. Pablo Martinez-Cambor

The objective of this course is to discuss selected academic papers. Participants will propose topics of interest and recommend among one to four papers (on the same topic) to discuss. Topics will be related by new or classical biostatistical procedures. Both technical and practical aspects of the considered procedures will be opened to discussion. Controversial methodologies of applied clinical papers may also be welcomed. The journal club format is an informal structure, and students are free to choose the way they present their proposed topic. Students are expected to, read the proposed materials, attend class, and be willing to participate.

(0.5 unit)

Prerequisite: College-level statistics course work.

Cross-Listed as: QBS 194

Offered: Fall.

HSE 195 - HSE Independent Study

Instructor: Dr. Kristine Giffin & Faculty

This Independent Study course is structured to allow students to enhance their knowledge and training in related quantitative fields. HSE 195 may count as towards elective credit for QBS PhD students and MS of Epidemiology,

Health Data Science, and Medical Informatics students, and it is offered each academic quarter. Course proposals are to be developed between the student and a QBS, or otherwise approved, faculty member prior to the start of the quarter and submitted to QBS Administration for a approval a week before the end of the drop/add period. The proposal should reflect 3.3 hours of instruction per week and a minimum of 6.6 hours of student work per week for the entirety of the quarter. The student and faculty will work together to structure the project timeline and set deliverables that are to be met by the end of quarter. Students should clearly define the purpose, expectations, and the timeline of deliverables in their proposal. The faculty member is responsible for tracking and evaluating the student's progress in order to provide a grade to the QBS Administration at the end of the quarter. Please email Dr. Kristine Giffin for more information.

(1 unit)

**QBS PhD and MS of Epidemiology, Health Data Science, and Medical Informatics students only*

Prerequisite: Consult Faculty Advisor

Cross-Listed as: QBS 195

Offered: Fall, Spring, Summer, Winter.

HSE 271 - HSE Epidemiology Journal Club

Instructor: TBD

This course emphasizes critical evaluation of epidemiological studies and the development of effective presentation skills. Students will gain exposure to a breadth of epidemiological methodologies while examining classical and current epidemiological studies within public health and biomedical research. Class will meet weekly. Each week, all students will read one peer-reviewed, published study and an additional article or other paper for supplemental reading. One student will present on the published study, and we will all discuss the study as well as the relevance of the additional reading. Discussion will include an assessment of study components as related to study design, statistical analyses, inference and interpretation, bias, generalizability, and implications. Students will be asked to specifically discuss components of the study (e.g., to restate what one figure or table presents).

(0.5 unit)

Offered: Spring.

HSE 700 - Responsible and Ethical Conduct of Research

Instructor: Dr. Kristine Giffin & Dr. John Brand

HSE 700 is a required course for all Quantitative Biomedical Sciences graduate students as well as Masters of Epidemiology, Health Data Science, and Medical Informatics students. The course consists of five two-hour discussion-based modules that students are expected to prepare for through readings and short assignments.

Part of a campus-wide series that is required of all Dartmouth graduate students, HSE 700 covers issues regarding responsible and ethical conduct in graduate training, in biomedical research, and in industry and academic careers. Topics that will be covered are professionalism, authorship, mentoring, data collection, and rigor and reproducibility as they apply to the training and careers in the fields of bioinformatics, biostatistics, epidemiology, data science, and medical informatics. The current curriculum was developed by the Graduate Studies Office in collaboration with the Ethics Institute at Dartmouth. Over the 5 sessions, instructors will meet with first-year PhD and MS graduate students to facilitate discussions on ethical dilemmas that they may encounter as they advance through their graduate training and beyond. Case studies will be used to provide a framework for discussions on ethical issues spanning the topics described above. This course seeks to coordinate basic training in professional ethics specific to our QBS PhD and Geisel MS students, yet required of all Dartmouth graduate students, as well as provide a foundation for ethical training in the biomedical sciences that is required for NIH-sponsored research.

Cross-Listed as: QBS 700

Offered: Fall.

Master of Science in Health Data Science

Health Data Science is a crucial, rapidly growing field, blending biostatistics, programming, and advanced computational and classification algorithms like machine learning to address complex challenges within the biomedical, biobehavioral, public health, and clinical care sectors.

Dartmouth's Master of Science in Health Data Science equips the next generation of professionals to become leaders within health data science. The program offers a robust, interdisciplinary education focused on theory and application. Graduates are positioned to instantly collaborate as a health data scientist across multiple sectors, including the biotechnology and pharmaceutical industries, the healthcare and behavioral health sectors, government, non-profits, and more.

Master of Science in Health Data Science Requirements

Dartmouth's Health Data Science degree challenges students to think critically across a wide range of courses that build an unparalleled knowledge base in Health Data Science.

Students take a combination of core and elective courses, with an optional capstone completing their Master of Science degree in 12-15 months.

Master of Science in Health Data Science Courses

Visit the Master of Science in Health Data Science Curriculum website to see which courses are core and elective options.

HSE 101 - Foundations of Programming for Data Scientists

Instructor: Dr. Christian Darabos

This course is designed for graduate students with little to no prior programming experience who are eager to understand computational approaches to solving problems. This course will equip you with the foundational skills needed to excel in computational data science.

Course Highlights:

- **Foundations of Programming:** Learn the essential concepts of programming, including variables, expressions, flow control, basic algorithms, and data frames.

- **Computational Data Science:** Get comfortable with Python, Bash scripting, and High-Performance Computing (HPC) environments.

- **Hands-On Learning:** Engage in live code examples and in-class exercises that bring ideas to life without getting bogged down by computer idiosyncrasies.

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll gain practical experience with:

- **Python:** Basics of programming, using notebook environments (Jupyter Notebooks).

- **Bash Scripting:** Command line input, file input/output, and mixing languages with Python.

- **High-Performance Computing (HPC):** Introduction to Dartmouth's HPC environments like Andes, Polaris, and Discovery.

Course Experience:

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week includes:

- Live coding sessions.

- In-class exercises that reinforce your learning.

- Mock Tech Interviews (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(1 unit)

Prerequisite: None

Cross-Listed as: QBS 101

Offered: Fall, Summer.

HSE 101.1 - Intermediate Programming for Data Scientists

Instructor: Dr. Christian Darabos

Elevate your programming skills and make your research more reproducible, reusable, and maintainable. This course designed for graduate students who already have foundational programming knowledge and are eager to advance their expertise.

Course Highlights:

- **Object-Oriented Programming (OOP):** Dive deeper into OOP concepts, enhancing your ability to design robust, scalable software.

- **Reproducible Research:** Apply OOP and other best practices for ensuring your research can be easily replicated and built upon by others.

- **Code Reusability and Maintainability:** Master techniques that will make your code cleaner, more efficient, and sustainable, particularly in cloud environments

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll get practical experience with:

- **Python:** Advanced programming techniques and libraries.

- **Containerization (Docker):** Streamline your development process and ensure consistency across different computing environments.

- **Bash Scripting:** Automate tasks and enhance your productivity.

- **High-Performance Computing (HPC):** Leverage powerful computing resources to handle complex data science tasks.

- Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

Course	Experience:
Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:	

- Participate in live coding sessions.

- Complete in-class exercises that reinforce your learning.

- Take part in a Mock Tech Interview (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(0.5 unit)

Prerequisite: HSE-101

Cross-Listed as: QBS 101.1

Offered: Winter.

HSE 103 - Foundations of Data Science

Instructor: Dr. Meghan Muse and Dr. Noelle Kosarek

Strong programming and mathematics skills are the crucial foundation for any data scientist. In this course, students will have an introduction to programming in R and review of critical linear algebra and calculus that will serve as the foundation of many of their courses in this program. Students will be exposed to introductory programming practices, data visualization, data wrangling, introductory data analysis, type setting in LaTeX, using GitHub repositories, and High Performance Computing (HPC). During the calculus review, exercises in topics such as linear algebra, sequences and series, and derivatives and integration will be provided.

Mandatory for MS of Epidemiology, Health Data Science, and Medical Informatics students upon matriculation

Students in other programs need instructor approval to enroll.

(1 unit)

Prerequisite: Calculus, Multivariate Calculus, Linear Algebra. Previous coding experience highly recommended. Instructor or administration permission for non-MS of Epidemiology, Health Data Science, and Medical Informatics students.

Offered: Fall, Summer.

HSE 108 - Machine Learning

Instructor: Dr. Saeed Hassanpour & Dr. Indrani Bhattacharya

This course provides a comprehensive introduction to machine learning methods and techniques. Various machine learning concepts and methods, such as computer vision, natural language processing, and deep learning, will be described and discussed. The emphasis of this course will be providing the required background and working knowledge of the machine learning methodology to apply these techniques on new or existing research or data science problems. Through multiple project assignments, this course will provide students with the experience on the application of machine learning techniques to solve real-world complex problems, such as those in the biomedical domain.

(1 unit)

Prerequisite: Coursework: Calculus, Linear Algebra, Basic knowledge of Probability and Statistics. Programming: Intermediate proficiency in Python.

Cross-Listed as: QBS 108

Offered: Spring.

HSE 119 - Foundations of Biostatistics I: Applied Biostatistics

Instructor: Dr. Jennifer Emond

In this course, students will learn foundational topics of biostatistics including random variables and probability distributions, sampling distributions, the central limit theorem, statistical estimation and hypothesis testing, and power and sample size calculations. The course will include bivariate parametric and non-parametric statistical testing procedures including simple linear regression. Content also includes two-way ANOVA and foundational topics in classification performance metrics (e.g., sensitivity, specificity, AUC). Classwork will prominently feature active learning activities. Course material will use the R Language for Statistical Computing.

The course is intended for students who need a strong foundation in statistical thinking to pursue more advanced applied biostatistical coursework in multivariable statistical modeling. Students seeking to understand the mathematical foundations of statistical theory should enroll in HSE 120.

(1 unit)

Prerequisite: N/A

Cross-Listed as: QBS 119

Offered: Fall.

HSE 120 - Foundations of Biostatistics I: Statistical Theory for the Quantitative Biomedical Sciences

Instructor: Dr. Robert Frost

This is a time-intensive graduate-level course in mathematical statistics designed to teach the fundamental knowledge of statistical theory required to read and, with further study, contribute to the statistical methodology literature. An in depth overview of statistical estimation and hypothesis testing will be provided, including the method of least squares, maximum likelihood methods, asymptotic methods, and correction for multiple comparisons. The basic elements of statistical design and sample size calculations will be introduced. Resampling strategies will be discussed in the context of the bootstrap, as well as simulation as a tool for statistical research. The emphasis will be on theory used in modern applications in biomedical sciences, including genomics, epidemiology, and clinical and health services research. The statistical program language R will be leveraged for computational examples, problem sets and exams.

(1 unit)

Prerequisite: Dartmouth Coursework: No specific Dartmouth courses are required. See syllabus for specific prerequisites. HSE 120 is a fast-paced, calculus-based graduate mathematical statistics course with a strong theoretical component. It is assumed that students are comfortable with multivariate calculus, mathematical proofs, linear algebra and R programming. A strong internal motivation to learn the material and complete

challenging assignments is essential to success in this class. Students should expect to spend 10-15+ hours per week outside of class. Students are strongly encouraged to review the content and level of theory in the class textbook (Rice, see below) prior to registering for the class. Versions of prior problem sets (and solutions) are also available on request to help students assess the class workload, theoretical component and assumed mathematical and computational background.

Cross-Listed as: QBS 120

Offered: Fall.

HSE 121 - Foundations of Biostatistics II: Statistical Regression

Instructor: Dr. Todd MacKenzie and Dr. Tor Tosteson

We cover the theory and applications of statistical regression, as practiced in biomedical research. We present statistical inference (estimation and hypothesis testing) for linear models, generalized linear models (e.g. logistic and Poisson regression), longitudinal models for repeated measurements, and models for times-to-event (survival analysis). The course emphasizes the primary goals of regression, which are (i) prediction and (ii) causal inference. It also introduces penalized regression for large numbers of predictors and methods for missing data in regression. The statistical software R is used for applications.

(1 unit)

Prerequisite: HSE 120 or HSE 119. Calculus, linear algebra. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 121

Offered: Winter.

HSE 122 - Foundations of Biostatistics III: Modeling Complex Data

Instructor: Dr. James O'Malley

This course follows HSE 120 (Biostatistics I: Theoretical Foundations) and HSE 121 (Biostatistics II: Modeling). The first module of the course extends standard regression models to analyze data when the data are statistically dependent. This component encompasses clustered, multi-level, longitudinal and other forms of structured data and will focus on hierarchical (mixed-effect) modeling approaches. The consideration of random effects and their conditional distribution given that data links to the final two modules. Bayesian methodology is carefully developed and compared to the classical (frequentist) approach. Bayesian statistical methods are a feature of this course due to their affinity for solving challenging problems and their ubiquity across modern statistical applications. A variety of applications in which Bayesian

methods are naturally suited are considered. Bayesian computation via Markov-chain Monte- Carlo (MCMC) is also developed and illustrated. The course concludes with the network analysis module. This includes visualization and summarization of networks; models of networks; and models of peer effects and social influence processes. The techniques and methods developed in the two prior modules are further illustrated in this module.

Learning Objectives

1. Become adept at recognizing when data has a nested, cross-classified, longitudinal or multivariate structure and familiar with statistical techniques for analyzing such data
2. Gain a strong understanding of the fundamentals of Bayesian Analysis and develop an ability to perform Bayesian analyses
3. Be able to conduct a social network analysis from the grassroots, encompassing specification of the research question, representation of data, choice of statistical analysis, implementation of analysis and visualization of results

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121. The course has a strong “hands-on” emphasis on analyzing data while consolidating ideas through relevant methodological and intuitive insights. Linear algebra, multivariate calculus, statistics, probability and basic computer programming with an emphasis on mathematical/statistical programming. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 122

Offered: Spring.

HSE 123 - Biostatistics Consulting Lab

Instructor: Dr. Todd MacKenzie & Dr. Tor Tosteson

This is a practicum that gives students experience in biostatistics consulting. Students will collaborate with clinician and other investigators to address clinical, translational and health services questions with the guidance of a faculty biostatistician.

(0.5 unit)

Prerequisite: HSE 121: Permission of Instructor. Programming: Intermediate proficiency in R, Data Wrangling, Data Visualization are recommended. Open only to QBS PhD and MS of Epidemiology, Health Data

Science, and Medical Informatics students, unless program and instructor permission is granted

Cross-Listed as: QBS 123

Offered: Fall, Spring, Summer, Winter.

HSE 124 - Advanced Biomedical Data Analysis

Instructor: Dr. Eugene Demidenko

This course offers innovative and advanced methods and techniques for biomedical data analysis, often overlooked in the traditional training practices, such as graphics animation, spatial statistics and disease mapping via kernel density estimation, discriminant analysis, logistic regression, and PCA for binary classification via ROC curve and optimal threshold analysis, PCA-based objects/subjects ranking, optimal number of clusters, estimation of dose-response relationships in pharmacology and toxicology, tumor growth analysis, statistical identification of drugs’ synergy, nonlinear regression, D-value as an alternative to P-value, and others.

I follow the saying: “Examples are the expressway to knowledge.” We will be working with large and diverse real-life data sets such as the hotspot identification of the lung cancer rate in New Hampshire, the toenail arsenic distribution, TCGA gene clustering, prediction of the absolute marathon time world record, college student admission data, city crime, T-cell counts for COVID-19 diagnosis, underage drinking, correlation heatmap animation for stock prices and bones correlation in the Goldman osteometric dataset, nonparametric regression for Forbes Worlds’s biggest companies dataset, etc.

We will be using my book “Advanced Statistics with Applications in R” at www.eugened.org

(1 unit)

Prerequisite: HSE 121

Cross-Listed as: QBS 124

Offered: Spring.

HSE 126 - Analysis of Densely Collected Longitudinal Data

Instructor: Dr. Nicholas Jacobson

Rapid advances in technology has increasingly allowed for the collection of dense longitudinal data (i.e. data collected using many repeated measurements), and this type of data now abounds within biomedical and social science research (e.g., heart rate sensors, accelerometers, electronic medical record patient visits). A large variety of tools have

emerged to model and predict dynamics that evolve over the course of time. The current course will discuss tools focusing on (1) explainability and theory-testing of dynamic processes with applications towards causal inference (e.g. multilevel models, vector autoregressive models, frequency domain analysis, state-space models, person-specific data models, dynamical systems modeling, varying-coefficient models, continuous time models) and (2) maximizing predictive performance (e.g. unique considerations in cross-validation with time-series data, time-series feature engineering, nomothetic and person-specific machine learning models, recurrent neural networks). Given the breadth of the tools in this field, the focus of this course will be primarily applied. Students will need to utilize both R and Python for this course.

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121.

Cross-Listed as: QBS 126

Offered: Spring.

HSE 130 - Foundations of Epidemiology I: Theory and Methods

Instructor: Dr. Diane Gilbert-Diamond (25 Fall), Dr. Caitlin Howe (25 Summer), both Fall in 26

This is the first of a two course sequence of graduate level epidemiology (Foundations of Epidemiology I and II). The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and prepare students for conduct of epidemiology research. Design of investigations seeking to understand the cause of human disease, disease progression, treatment and screening methods include clinical trials, cohort studies, case-cohort, case-case, nested case-control and case-control designs. Concepts of incidence rates, attributable rate and relative rate, induction and latent periods of disease occurrence, confounding, effect modification, misclassification, and causal inference will be covered in depth.

(1 unit)

Prerequisite: None for graduates. Biol 029 for undergraduates. Permission of Instructor

Cross-Listed as: QBS 130, BIOL 72

Offered: Fall, Summer.

HSE 131 - Foundations of Epidemiology II: Theory and Methods

Instructor: Dr. Megan Romano

This graduate-level course is the second in a two-part sequence. The two courses are designed to teach the

underlying theory of epidemiologic study designs and analysis and to prepare students to conduct epidemiologic research. Expanding upon concepts covered in Foundations of Epidemiology I, students develop an in-depth understanding of advanced concepts related to confounding (including causal diagrams), learn how to interpret and critically analyze the biomedical primary literature, and gain experience in epidemiological study design. Concepts related to weight of evidence and systematic review, outbreak investigation, and assessment of the effects of policies on health are also covered.

(1 unit)

Prerequisite: HSE 130/BIOL 072. Permission of Instructor

Cross-Listed as: BIOL 73, QBS 131

Offered: Winter.

HSE 132 - Molecular Biologic Markers in Human Health Studies

Instructor: Dr. Lucas Salas

Epidemiologists are rapidly evolving from traditional observational data collection to incorporating molecular markers of exposure, disease, and susceptibility. As technologies advance, integrating molecular targets adds complexity to epidemiological study designs. This course provides a comprehensive overview of biomarkers applications in molecular epidemiology.

The first half of the course covers historical background, basic definitions, and principles, including the use of biomarkers, statistical and bioinformatic challenges, identifying susceptible populations, exposure assessment, dose-response, molecular classification of phenotypes, and evaluating study compliance and efficacy.

The second half focuses on applications in various fields, such as cancer, neurodegenerative diseases, infectious diseases, and cardiovascular diseases, with topics selected based on student interests. Each week, students will explore the challenges and tools in molecular epidemiology. They will take turns to discuss subjects such as biomarker study designs, biomarker validation, or biobanking. Students are encouraged to choose topics relevant to their research.

(1 unit)

Prerequisite: No prerequisites are needed for this course; however, the students are encouraged to co-enroll in HSE 130.

Cross-Listed as: QBS 132

Offered: Fall.

HSE 133 - Clinical Epidemiology

Instructor: Dr. Meghan Muse

Evidence-based medicine is the cornerstone of contemporary clinical practice. Clinical epidemiology aims to quantitatively evaluate medical interventions and technology and advance prediction and decision support tools to guide medical practice. The principles, tools and statistical approaches of clinical epidemiology are widely applicable in academic research, healthcare, and industry settings. In this course, students will learn to design and analyze both randomized and observational studies evaluating the efficacy of medical interventions, therapies, devices, screening programs and tests in order to understand therapeutic efficacy, therapeutic safety, and disease prognosis. Additional topics include the construction and validation of clinical risk prediction models (including discrimination, calibration, and reclassification), synthesis of quantitative data for medical decision making (such as meta-analysis), and cost-effectiveness analysis. The course draws on examples from pharmacoepidemiology, pharmacogenomics, real problems faced by medical professionals, and novel examples of clinical research.

(1 unit)

Prerequisite: HSE 130: Foundations of Epidemiology I or instructor permission

Cross-Listed as: QBS 133

Offered: Spring.

HSE 136 - Applied Epidemiological Methods I

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, and addressing confounding and effect modification within the context of a range of epidemiological study designs. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: QBS 130 (co-requisite) or permission of the instructor

Cross-Listed as: QBS 136

Offered: Fall.

HSE 137 - Applied Epidemiological Methods II

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data

analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I and II. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, modeling, and meta-analysis approaches. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: HSE 136 or permissions of the instructor

Cross-Listed as: QBS 137

Offered: Winter.

HSE 139 - Advanced Health Services Research

Instructor: Dr. Erika Moen

This course will develop student analytic competencies to the level necessary to conceptualize, plan, carry out, and effectively communicate small research projects in health services or epidemiology. Lectures, demonstrations, and labs will be used to integrate and extend methods introduced in other QBS and TDI courses. The students will leverage synthetic electronic health record data provided by the Analytics Institute at Dartmouth-Hitchcock and publicly available data in classroom lab exercises and course assignments. Many of the labs build on one another, and the aim is that the skills developed in the labs will assist the students with their own student-led projects. The instructors will mentor students as they develop their own analytic projects. Practical skill areas include programming in R, developing an analytic workflow, data visualization, and data structure and management. The main goal of the course is to firmly ground students in the scientific process of observational research.

(1 unit)

Prerequisite: For HSE students: HSE 130, HSE 121; For MPH students: PH 141

Cross-Listed as: QBS 139, PH 147

Offered: Spring.

HSE 140 - Decision & Cost Effectiveness Analysis

Instructor: Dr. Anna Tosteson & Dr. James Stahl

This course covers the fundamental principles and mechanics of decision analysis and cost-effectiveness analysis. Topics covered in the course include basics of probability (including Bayes' Theorem), structuring decision problems as decision trees and Markov models, components of preference (value preference, time preference, and risk preference), valuing multidimensional

outcomes, evaluating decision trees, sensitivity analysis, value of information, and basic principles of cost-effectiveness analysis. Weekly problem sets are also used to reinforce the concepts presented in class. The course has a weekly lab that involves the use of decision analysis software to reinforce concepts presented in class. Labs are also used for development, progress review and discussion of small group decision analysis projects, which culminate in formal presentations the last week of class.

(1 unit)

Prerequisite: PH 100, PH 139, PH 140 or permission of Instructor. Programming language: Students learn TreeAge Software.

Cross-Listed as: PH 121, QBS 140

Offered: Spring.

HSE 145 - Computational Immunology

Instructor: Dr. Li Song & Dr. Kenneth Hoehn

This course will introduce students to fundamental concepts and the latest techniques for using computational methods to analyze immunological data. After a brief introduction to immunology, the course will move to its primary focus of analyzing sequencing data from immune cells. The first part will cover the bulk RNA-seq data analysis, including cell-type deconvolution. The second part is for single-cell RNA-seq analysis, such as cell type discovery, differentially expressed gene (DGEs) analysis, and trajectory analysis. The third part is about immune repertoire analysis, including lineage tree construction. The fourth part of the course covers advanced topics, such as spatial RNA-seq analysis. In the last a few sessions, we will see how the techniques learned from the course can be applied to the studies of infectious diseases, autoimmune disorders, and cancers.

(1 unit)

Prerequisite: HSE 146 Introduction to Bioinformatics I or permission of instructors

Cross-Listed as: QBS 145

Offered: Fall.

HSE 146 - Foundations of Bioinformatics I

Instructor: Dr. Aaron McKenna

The goal of computational biology is to catalog and model the information within living systems. In this class, we use tools developed in statistics, computer science, and biology

to explore how living systems encode and process information to generate complex structures and interact with the world at large. We'll review key conceptual advances and implement a number of core computational algorithms, including Gibbs sampling, clustering, and hidden Markov models, all of which we run on biological data.

(1 unit)

Prerequisite: Basic knowledge of Python programing is helpful but not required.

Cross-Listed as: GENE 146, QBS 146

Offered: Winter.

HSE 147 - Genomics: From Data to Analysis

Instructor: Dr. Olga Zhaxybayeva

Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

(1 unit)

Prerequisite: Permission of instructor required.

Cross-Listed as: BIOL 47/147, EEES 147, QBS 147

Offered: Fall.

HSE 148 - Introduction to Statistical Genetics

Instructor: Dr. Siming Zhao

This course is designed as an introduction to statistical genetics/computational biology. It reviews the key statistical concepts and methods relevant to statistical genetics, discusses various topics that have significant statistical components in genetics and genomics. It serves as the entry point to several areas, including GWAS and post GWAS analysis, functional genomics, statistical modeling and inference.

(1 unit)

Prerequisite: HSE 119, HSE 120

Cross-Listed as: QBS 148

Offered: Spring.

HSE 177 - Methods of Statistical Learning for Big Data

Instructor: Dr. Jiang Gui

This course provides an introduction to algorithms used in data science with applications to biomedical and health data science. The goal of this course is to present an overview of many of the approaches used for big data focusing on analytical methods and algorithms. The course assumes that students have some knowledge of R. Students will be provided with 2 large data sets. Lectures on data reduction, classification, and optimization will request students complete homework for these datasets. Special attention will be given to students' active learning by programming in a statistical software package R.

(1 unit)

Prerequisite: HSE 119 or HSE 120, or permission of instructor. Co-requisite HSE 121.

Cross-Listed as: MATH 177, QBS 177

Offered: Winter.

HSE 180 - Data Visualization

Instructor: Dr. Ramesh Yapalparvi

Biomedical and health data visualization is an important and necessary step of preliminary statistical analysis. "A picture is worth a thousand words" is the impetus of this course. This course will teach best practices for visualizing data, including exploratory statistics and effective communication of statistical analysis. Data visualization is a key component that all data scientists' needs to be fluent in. Students will become competent users of Tableau, R graphics and R-Shiny. Real-life biomedical and health related data will be used throughout the course.

(0.5 unit)

Prerequisite: N/A

Cross-Listed as: QBS 180

Offered: Winter.

HSE 181 - Data Wrangling

Instructor: Dr. Carly Bobak

Data wrangling is the process of mapping and transforming data into new formats for the increased ease and efficiency of downstream analysis. In this course, students will learn about the different types of data structures and formats, and how to create, merge, subset, and manipulate these structures. Students will wrangle data using excel, SQL, and R programming as appropriate, learn the principles of

tidy data and the tidy verse, learn string processing with regular expressions, and have an introduction to web scraping and API's for data collections.

(1 unit)

Prerequisite: Linear Algebra. HSE 103 or Intermediate proficiency in R.

Cross-Listed as: QBS 181

Offered: Fall.

HSE 185 - Masters Capstone Experience

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs

The goal of the capstone is to enable students to refine their skill set as they work on a research or applied data science, epidemiology or medical informatics project. The capstone also provides training in critical professional skills including scientific writing, presentation skills, and translating the findings of a research or applied project to key stakeholders who may not have expertise in the domain. Preparation for the capstone project begins in August of the first year and culminates in a written white paper and presentation at the end of the summer term.

Note: Students will enroll in HSE 185.5: Essential Skills for Career Development and Leadership (0.5 unit) in the winter quarter preceding the summer capstone.

Students may select from three tracks for their capstone. Tracks differ based on the summer term project. The pre-capstone work is required for all tracks. Students are expected to finalize their track selection in April. Tuition & Fees apply to all tracks.

•

Individual Project with Dartmouth PI: Students will match with an investigator at Dartmouth and will work on a research or applied project under the PI's mentorship; the project may be supervised by a postdoctoral research fellow or doctoral candidate in the PI's lab. For this option, residency at Dartmouth is required. Students are encouraged to submit a conference abstract in the fall on their capstone project.

•

Individual Project-Based External Experience: Students will complete an external internship. On-site internships with supervision may be with a for-profit company, governmental agency, non-profit organization, or another academic institution. For this option, residency at Dartmouth is not required.

•

Group Project: Students will work in small groups (2-3 students each) on a novel project of their own choosing.

Students may develop their research project using publicly available data. Faculty will assist students in defining feasible projects, creating timelines and division of labor, and ultimately oversee the work. For this option, residency at Dartmouth is required.

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Students will work on their capstone full-time (3 units) during the summer term (fall term in 2026), whether in residence at Dartmouth or at an external company/institution.

- Capstone offered during Summer 25/Fall 26 only. Full Tuition & Fees apply

**International Students enrolled in HSE 185 are eligible to apply for Curricular Practical Training (CPT) to meet coursework requirements.

** Students can be paid or unpaid for external experiences. Tuition & Fees still apply.

(3 Units)

Prerequisite: Completion of required terms of HSE 185.5 preceding the summer capstone. Programming: Completion of required terms of QBS 101 preceding the summer capstone. Completion of all core courses for the MS in Health Data Science, Epidemiology, or Medical Informatics

Offered: Fall, Summer.

HSE 185.5 - Essential skills for career development and leadership

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs.

This course is designed to provide students with the hard and soft skills needed to excel professionally within the health and biomedical fields. Topics include programming best practices, writing and visual communication of research findings, presentation skills including mastering the elevator pitch, interview skills, and ethics. Coursework is largely based on in-class learning activities and workshops.

(0.5 Unit)

Prerequisite: N/A

Offered: Winter.

HSE 192 - Health Informatics

Instructor: Dr. Inas Khayal

Our health is everywhere. It is affected by how, where, and who we live, work & play with (i.e. biological, behavioral,

social, and environmental factors). The explosion of digitization of data captured both outside 'in the wild' and within the healthcare delivery system, allows us to understand and address the many factors affecting the complexity of our health. Today, health & healthcare data is continuously being generated by healthcare delivery systems, organizations, or users and can be accessed through devices, databases, or the web (e.g., APIs). Deriving information and knowledge to improve and maintain health requires health informatics. Data science plays an active role as a profession and within its research efforts in informing and developing all aspects of health informatics: data capture, data storage, and data analytics. Students will gain experience with Python. Prior experience with Python is not necessary, but students should have some prior programming and statistics experience. The goal of this course is two-fold: first, to learn about the latest topics in health informatics and second, to design and develop a health informatics project. Special topics in health informatics will be introduced through lectures and primary literature. These topics will be organized into 4 themes:

1.) Applications Theme: exploring several key current applications of health informatics

2.) Data Capture Theme: learning about data capture technologies and standards

3.) Data Storage Theme: presenting data formats, databases, and issues of security & privacy

4.) Data Analytics Theme: a brief introduction to the data analytics cycle and special topics of visualization and analytics methodologies.

(1 unit)

Prerequisite: Prior programming and statistical experience preferable

Cross-Listed as: COSC 89.17, QBS 192

Offered: Fall.

HSE 193 - Independent Journal Club

Instructor: Dr. Kristine Giffin & Faculty

Offered every quarter, this course provides HSE MS students with the opportunity to fulfill a required journal club credit through an independent, faculty-mentored format. Prior to the start of the quarter, the student must develop a journal club proposal in collaboration with an approved faculty mentor who will serve as the course instructor. The proposal must outline the selected topics, literature review timeline, weekly meeting schedule, and deliverables to be completed by the end of the quarter. This proposal must be submitted to and approved by the QBS

Administration no later than one week before the end of the drop/add period. The course requires a minimum of 1 to 1.5 hours of weekly meetings with the instructor, in addition to approximately 3 hours per week of independent work (e.g., readings, written assignments, presentations). These expectations must be clearly documented in the proposal. The faculty instructor is responsible for monitoring the student's progress and submitting a final grade to the QBS Administration at the end of the quarter.

For more information please email Dr. Kristine Giffin.

(0.5 unit)

Prerequisite: Consult Faculty Advisor

Cross-Listed as: QBS 193

Offered: Fall, Spring, Summer, Winter.

HSE 194 - Biostatistics Journal Club

Instructor: Dr. Pablo Martinez-Camblor

The objective of this course is to discuss selected academic papers. Participants will propose topics of interest and recommend among one to four papers (on the same topic) to discuss. Topics will be related by new or classical biostatistical procedures. Both technical and practical aspects of the considered procedures will be opened to discussion. Controversial methodologies of applied clinical papers may also be welcomed. The journal club format is an informal structure, and students are free to choose the way they present their proposed topic. Students are expected to, read the proposed materials, attend class, and be willing to participate.

(0.5 unit)

Prerequisite: College-level statistics course work.

Cross-Listed as: QBS 194

Offered: Fall.

HSE 195 - HSE Independent Study

Instructor: Dr. Kristine Giffin & Faculty

HSE 195 is designed to provide HSE MS students with the opportunity to deepen their knowledge and training in quantitative disciplines relevant to biomedical research. Offered each academic quarter, this course may be counted toward elective credit for HSE MS students. Prior to the start of the quarter, students must develop a detailed course proposal in collaboration with an approved faculty mentor. The proposal must be submitted to the QBS Administration for approval no later than one week before the end of the drop/add period. It should clearly outline the educational objectives, weekly, in-person instructional plan (equivalent to 3.3 hours per week), and an estimated 6.6 hours of independent student work per week. The proposal must also define the project's purpose, expectations,

timeline, and specific deliverables to be completed by the end of the quarter. The faculty mentor is responsible for supervising the student's progress throughout the term and submitting a final grade to the QBS Administration. Please email Dr. Kristine Giffin for more information.

(1 unit)

Prerequisite: Consult Faculty Advisor, Open only to HSE MS students

Cross-Listed as: QBS 195

Offered: Fall, Spring, Summer, Winter.

HSE 271 - HSE Epidemiology Journal Club

Instructor: TBD

This course emphasizes critical evaluation of epidemiological studies and the development of effective presentation skills. Students will gain exposure to a breadth of epidemiological methodologies while examining classical and current epidemiological studies within public health and biomedical research. Class will meet weekly. Each week, all students will read one peer-reviewed, published study and an additional article or other paper for supplemental reading. One student will present on the published study, and we will all discuss the study as well as the relevance of the additional reading. Discussion will include an assessment of study components as related to study design, statistical analyses, inference and interpretation, bias, generalizability, and implications. Students will be asked to specifically discuss components of the study (e.g., to restate what one figure or table presents).

(0.5 unit)

Offered: Spring.

HSE 700 - Responsible and Ethical Conduct of Research

Instructor: Dr. Kristine Giffin & Dr. John Brand

QBS 700 is a required course for all PhD students in the QBS program and in the Geisel MS Degree Programs in Epidemiology, Health Data Science, and Medical Informatics. As part of a campus-wide initiative, this course fulfills the Dartmouth requirement for training in the responsible and ethical conduct of research. The course consists of five two-hour, discussion-based modules, each requiring preparation through assigned readings and brief written assignments. Topics include professionalism, authorship, mentoring, data management, and rigor and reproducibility, with a focus on their application to graduate training and careers in biostatistics, epidemiology, bioinformatics, data science, and medical informatics. Developed in collaboration with Dartmouth's

Ethics Institute and the Graduate Studies Office, the curriculum uses real-world case studies to guide interactive discussions. Faculty facilitators work with first-year PhD and MS students to explore ethical challenges they may face during their training and in future academic or industry careers.

QBS 700 provides a foundational framework for ethical and professional conduct in biomedical research and satisfies NIH requirements for ethics training in federally sponsored research.

(Does not count toward core or elective credit)

Cross-Listed as: QBS 700

Offered: Fall.

Master of Science in Medical Informatics

Medical informatics has quickly expanded as a field as we face modern and complex questions in health care systems and resulting health outcomes. This program unifies computational informatics training with knowledge of healthcare systems and research methods to prepare a dual-trained medical informaticist capable of adapting computational techniques to healthcare associated questions. Database management and analysis pipelines as well as decision analyses, health data security, and cost-effective analysis form part of the skills gained in our MS in Medical Informatics. Additionally, training in managing and analyzing electronic health records (EHR) through this program will equip the student with skills as they prepare to enter the workforce post-graduation. The access to elective coursework in neighboring fields in this MS program provides abundant opportunities for deepening training in desired skillsets to enhance the focus on medical informatics.

Dartmouth's Master of Science degree in Medical Informatics trains highly qualified students to identify and solve health care system challenges with ingenuity and effectiveness. This degree provides an unmatched interdisciplinary education in the areas of data analysis, health systems pipelines, computer science, epidemiology, and healthcare for careers in government, health care, health system management, and medical research.

Master of Science in Medical Informatics Requirements

Dartmouth's Medical Informatics degree challenges students to gain computational skills applicable to health studies in a collaborative and multidisciplinary setting.

Students take a combination of core and elective courses, with an optional capstone completing their Master of Science degree in 12-15 months.

Master of Science in Health Data Science Courses

Visit the Master of Science in Medical Informatics Curriculum website to see which courses are core and elective options.

HSE 101 - Foundations of Programming for Data Scientists

Instructor: Dr. Christian Darabos

This course is designed for graduate students with little to no prior programming experience who are eager to understand computational approaches to solving problems. This course will equip you with the foundational skills needed to excel in computational data science.

Course Highlights:

- **Foundations of Programming:** Learn the essential concepts of programming, including variables, expressions, flow control, basic algorithms, and data frames.
- **Computational Data Science:** Get comfortable with Python, Bash scripting, and High-Performance Computing (HPC) environments.
- **Hands-On Learning:** Engage in live code examples and in-class exercises that bring ideas to life without getting bogged down by computer idiosyncrasies.
- **Practical Learning:** This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll gain practical experience with:
 - **Python:** Basics of programming, using notebook environments (Jupyter Notebooks).
 - **Bash Scripting:** Command line input, file input/output, and mixing languages with Python.
 - **High-Performance Computing (HPC):** Introduction to Dartmouth's HPC environments like Andes, Polaris, and Discovery.
- **Course Experience:** Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week includes:
 - Live coding sessions.

- In-class exercises that reinforce your learning.

- Mock Tech Interviews (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(1 unit)

Prerequisite: None

Cross-Listed as: QBS 101

Offered: Fall, Summer.

HSE 101.1 - Intermediate Programming for Data Scientists

Instructor: Dr. Christian Darabos

Elevate your programming skills and make your research more reproducible, reusable, and maintainable. This course designed for graduate students who already have foundational programming knowledge and are eager to advance their expertise.

Course Highlights:

- **Object-Oriented Programming (OOP):** Dive deeper into OOP concepts, enhancing your ability to design robust, scalable software.

- **Reproducible Research:** Apply OOP and other best practices for ensuring your research can be easily replicated and built upon by others.

- **Code Reusability and Maintainability:** Master techniques that will make your code cleaner, more efficient, and sustainable, particularly in cloud environments

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll get practical experience with:

- **Python:** Advanced programming techniques and libraries.

- **Containerization (Docker):** Streamline your development process and ensure consistency across different computing environments.

- **Bash Scripting:** Automate tasks and enhance your productivity.

- **High-Performance Computing (HPC):** Leverage powerful computing resources to handle complex data science tasks.

- Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

Course

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

- Participate in live coding sessions.

- Complete in-class exercises that reinforce your learning.

- Take part in a Mock Tech Interview (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(0.5 unit)

Prerequisite: HSE-101

Cross-Listed as: QBS 101.1

Offered: Winter.

HSE 103 - Foundations of Data Science

Instructor: Dr. Meghan Muse and Dr. Noelle Kosarek

Strong programming and mathematics skills are the crucial foundation for any data scientist. In this course, students will have an introduction to programming in R and review of critical linear algebra and calculus that will serve as the foundation of many of their courses in this program. Students will be exposed to introductory programming practices, data visualization, data wrangling, introductory data analysis, type setting in LaTeX, using GitHub repositories, and High Performance Computing (HPC).

During the calculus review, exercises in topics such as linear algebra, sequences and series, and derivatives and integration will be provided.

Mandatory for MS of Epidemiology, Health Data Science, and Medical Informatics students upon matriculation

Students in other programs need instructor approval to enroll.

(1 unit)

Prerequisite: Calculus, Multivariate Calculus, Linear Algebra. Previous coding experience highly recommended. Instructor or administration permission for non-MS of Epidemiology, Health Data Science, and Medical Informatics students.

Offered: Fall, Summer.

HSE 108 - Machine Learning

Instructor: Dr. Saeed Hassanpour & Dr. Indrani Bhattacharya

This course provides a comprehensive introduction to machine learning methods and techniques. Various machine learning concepts and methods, such as computer vision, natural language processing, and deep learning, will be described and discussed. The emphasis of this course will be providing the required background and working knowledge of the machine learning methodology to apply these techniques on new or existing research or data science problems. Through multiple project assignments, this course will provide students with the experience on the application of machine learning techniques to solve real-world complex problems, such as those in the biomedical domain.

(1 unit)

Prerequisite: Coursework: Calculus, Linear Algebra, Basic knowledge of Probability and Statistics. Programming: Intermediate proficiency in Python.

Cross-Listed as: QBS 108

Offered: Spring.

HSE 119 - Foundations of Biostatistics I: Applied Biostatistics

Instructor: Dr. Jennifer Emond

In this course, students will learn foundational topics of biostatistics including random variables and probability distributions, sampling distributions, the central limit theorem, statistical estimation and hypothesis testing, and power and sample size calculations. The course will include bivariate parametric and non-parametric statistical testing procedures including simple linear regression. Content also includes two-way ANOVA and foundational topics in classification performance metrics (e.g., sensitivity, specificity, AUC). Classwork will prominently

feature active learning activities. Course material will use the R Language for Statistical Computing.

The course is intended for students who need a strong foundation in statistical thinking to pursue more advanced applied biostatistical coursework in multivariable statistical modeling. Students seeking to understand the mathematical foundations of statistical theory should enroll in HSE 120.

(1 unit)

Prerequisite: N/A

Cross-Listed as: QBS 119

Offered: Fall.

HSE 120 - Foundations of Biostatistics I: Statistical Theory for the Quantitative Biomedical Sciences

Instructor: Dr. Robert Frost

This is a time-intensive graduate-level course in mathematical statistics designed to teach the fundamental knowledge of statistical theory required to read and, with further study, contribute to the statistical methodology literature. An in depth overview of statistical estimation and hypothesis testing will be provided, including the method of least squares, maximum likelihood methods, asymptotic methods, and correction for multiple comparisons. The basic elements of statistical design and sample size calculations will be introduced. Resampling strategies will be discussed in the context of the bootstrap, as well as simulation as a tool for statistical research. The emphasis will be on theory used in modern applications in biomedical sciences, including genomics, epidemiology, and clinical and health services research. The statistical program language R will be leveraged for computational examples, problem sets and exams.

(1 unit)

Prerequisite: Dartmouth Coursework: No specific Dartmouth courses are required. See syllabus for specific prerequisites. HSE 120 is a fast-paced, calculus-based graduate mathematical statistics course with a strong theoretical component. It is assumed that students are comfortable with multivariate calculus, mathematical proofs, linear algebra and R programming. A strong internal motivation to learn the material and complete challenging assignments is essential to success in this class. Students should expect to spend 10-15+ hours per week outside of class. Students are strongly encouraged to review the content and level of theory in the class textbook (Rice, see below) prior to registering for the class. Versions of prior problem sets (and solutions) are also available on request to help students assess the class workload, theoretical component and assumed mathematical and computational background.

Cross-Listed as: QBS 120

Offered: Fall.

HSE 121 - Foundations of Biostatistics II: Statistical Regression

Instructor: Dr. Todd MacKenzie and Dr. Tor Tosteson

We cover the theory and applications of statistical regression, as practiced in biomedical research. We present statistical inference (estimation and hypothesis testing) for linear models, generalized linear models (e.g. logistic and Poisson regression), longitudinal models for repeated measurements, and models for times-to-event (survival analysis). The course emphasizes the primary goals of regression, which are (i) prediction and (ii) causal inference. It also introduces penalized regression for large numbers of predictors and methods for missing data in regression. The statistical software R is used for applications.

(1 unit)

Prerequisite: HSE 120 or HSE 119. Calculus, linear algebra. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 121

Offered: Winter.

HSE 122 - Foundations of Biostatistics III: Modeling Complex Data

Instructor: Dr. James O'Malley

This course follows HSE 120 (Biostatistics I: Theoretical Foundations) and HSE 121 (Biostatistics II: Modeling). The first module of the course extends standard regression models to analyze data when the data are statistically dependent. This component encompasses clustered, multi-level, longitudinal and other forms of structured data and will focus on hierarchical (mixed-effect) modeling approaches. The consideration of random effects and their conditional distribution given that data links to the final two modules. Bayesian methodology is carefully developed and compared to the classical (frequentist) approach. Bayesian statistical methods are a feature of this course due to their affinity for solving challenging problems and their ubiquity across modern statistical applications. A variety of applications in which Bayesian methods are naturally suited are considered. Bayesian computation via Markov-chain Monte- Carlo (MCMC) is also developed and illustrated. The course concludes with the network analysis module. This includes visualization and summarization of networks; models of networks; and models of peer effects and social influence processes. The techniques and methods developed in the two prior modules are further illustrated in this module.

Learning Objectives

1. Become adept at recognizing when data has a nested, cross-classified, longitudinal or multivariate structure and familiar with statistical techniques for analyzing such data
2. Gain a strong understanding of the fundamentals of Bayesian Analysis and develop an ability to perform Bayesian analyses
3. Be able to conduct a social network analysis from the grassroots, encompassing specification of the research question, representation of data, choice of statistical analysis, implementation of analysis and visualization of results

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121. The course has a strong “hands-on” emphasis on analyzing data while consolidating ideas through relevant methodological and intuitive insights. Linear algebra, multivariate calculus, statistics, probability and basic computer programming with an emphasis on mathematical/statistical programming. Programming: Intermediate proficiency in R.

Cross-Listed as: QBS 122

Offered: Spring.

HSE 123 - Biostatistics Consulting Lab

Instructor: Dr. Todd MacKenzie & Dr. Tor Tosteson

This is a practicum that gives students experience in biostatistics consulting. Students will collaborate with clinician and other investigators to address clinical, translational and health services questions with the guidance of a faculty biostatistician.

(0.5 unit)

Prerequisite: HSE 121: Permission of Instructor. Programming: Intermediate proficiency in R, Data Wrangling, Data Visualization are recommended. Open only to QBS PhD and MS of Epidemiology, Health Data Science, and Medical Informatics students, unless program and instructor permission is granted

Cross-Listed as: QBS 123

Offered: Fall, Spring, Summer, Winter.

HSE 124 - Advanced Biomedical Data Analysis

Instructor: Dr. Eugene Demidenko

This course offers innovative and advanced methods and techniques for biomedical data analysis, often overlooked in the traditional training practices, such as graphics animation, spatial statistics and disease mapping via kernel density estimation, discriminant analysis, logistic regression, and PCA for binary classification via ROC curve and optimal threshold analysis, PCA-based objects/subjects ranking, optimal number of clusters, estimation of dose-response relationships in pharmacology and toxicology, tumor growth analysis, statistical identification of drugs' synergy, nonlinear regression, D-value as an alternative to P-value, and others.

I follow the saying: "Examples are the expressway to knowledge." We will be working with large and diverse real-life data sets such as the hotspot identification of the lung cancer rate in New Hampshire, the toenail arsenic distribution, TCGA gene clustering, prediction of the absolute marathon time world record, college student admission data, city crime, T-cell counts for COVID-19 diagnosis, underage drinking, correlation heatmap animation for stock prices and bones correlation in the Goldman osteometric dataset, nonparametric regression for Forbes Worlds's biggest companies dataset, etc.

We will be using my book "Advanced Statistics with Applications in R" at www.eugened.org

(1 unit)

Prerequisite: HSE 121

Cross-Listed as: QBS 124

Offered: Spring.

HSE 126 - Analysis of Densely Collected Longitudinal Data

Instructor: Dr. Nicholas Jacobson

Rapid advances in technology has increasingly allowed for the collection of dense longitudinal data (i.e. data collected using many repeated measurements), and this type of data now abounds within biomedical and social science research (e.g., heart rate sensors, accelerometers, electronic medical record patient visits). A large variety of tools have emerged to model and predict dynamics that evolve over the course of time. The current course will discuss tools focusing on (1) explainability and theory-testing of dynamic processes with applications towards causal inference (e.g. multilevel models, vector autoregressive models, frequency domain analysis, state-space models, person-specific data models, dynamical systems modeling, varying-coefficient models, continuous time models) and (2) maximizing predictive performance (e.g. unique

considerations in cross-validation with time-series data, time-series feature engineering, nomothetic and person-specific machine learning models, recurrent neural networks). Given the breadth of the tools in this field, the focus of this course will be primarily applied. Students will need to utilize both R and Python for this course.

(1 unit)

Prerequisite: HSE 119 and permission of instructor, or HSE 120, HSE 121.

Cross-Listed as: QBS 126

Offered: Spring.

HSE 130 - Foundations of Epidemiology I: Theory and Methods

Instructor: Dr. Diane Gilbert-Diamond (25 Fall), Dr. Caitlin Howe (25 Summer), both Fall in 26

This is the first of a two course sequence of graduate level epidemiology (Foundations of Epidemiology I and II). The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and prepare students for conduct of epidemiology research. Design of investigations seeking to understand the cause of human disease, disease progression, treatment and screening methods include clinical trials, cohort studies, case-cohort, case-case, nested case-control and case-control designs. Concepts of incidence rates, attributable rate and relative rate, induction and latent periods of disease occurrence, confounding, effect modification, misclassification, and causal inference will be covered in depth.

(1 unit)

Prerequisite: None for graduates. Biol 029 for undergraduates. Permission of Instructor

Cross-Listed as: QBS 130, BIOL 72

Offered: Fall, Summer.

HSE 131 - Foundations of Epidemiology II: Theory and Methods

Instructor: Dr. Megan Romano

This graduate-level course is the second in a two-part sequence. The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and to prepare students to conduct epidemiologic research. Expanding upon concepts covered in Foundations of Epidemiology I, students develop an in-depth understanding of advanced concepts related to confounding (including causal diagrams), learn how to interpret and critically analyze the biomedical primary literature, and gain experience in epidemiological study design. Concepts related to weight of evidence and

systematic review, outbreak investigation, and assessment of the effects of policies on health are also covered.

(1 unit)

Prerequisite: HSE 130/BIOL 072. Permission of Instructor

Cross-Listed as: BIOL 73, QBS 131

Offered: Winter.

HSE 132 - Molecular Biologic Markers in Human Health Studies

Instructor: Dr. Lucas Salas

Epidemiologists are rapidly evolving from traditional observational data collection to incorporating molecular markers of exposure, disease, and susceptibility. As technologies advance, integrating molecular targets adds complexity to epidemiological study designs. This course provides a comprehensive overview of biomarkers applications in molecular epidemiology.

The first half of the course covers historical background, basic definitions, and principles, including the use of biomarkers, statistical and bioinformatic challenges, identifying susceptible populations, exposure assessment, dose-response, molecular classification of phenotypes, and evaluating study compliance and efficacy.

The second half focuses on applications in various fields, such as cancer, neurodegenerative diseases, infectious diseases, and cardiovascular diseases, with topics selected based on student interests. Each week, students will explore the challenges and tools in molecular epidemiology. They will take turns to discuss subjects such as biomarker study designs, biomarker validation, or biobanking. Students are encouraged to choose topics relevant to their research.

(1 unit)

Prerequisite: No prerequisites are needed for this course; however, the students are encouraged to co-enroll in HSE 130.

Cross-Listed as: QBS 132

Offered: Fall.

HSE 133 - Clinical Epidemiology

Instructor: Dr. Meghan Muse

Evidence-based medicine is the cornerstone of contemporary clinical practice. Clinical epidemiology aims to quantitatively evaluate medical interventions and technology and advance prediction and decision support tools to guide medical practice. The principles, tools and statistical approaches of clinical epidemiology are widely applicable in academic research, healthcare, and industry settings. In this course, students will learn to design and analyze both randomized and observational studies

evaluating the efficacy of medical interventions, therapies, devices, screening programs and tests in order to understand therapeutic efficacy, therapeutic safety, and disease prognosis. Additional topics include the construction and validation of clinical risk prediction models (including discrimination, calibration, and reclassification), synthesis of quantitative data for medical decision making (such as meta-analysis), and cost-effectiveness analysis. The course draws on examples from pharmacoepidemiology, pharmacogenomics, real problems faced by medical professionals, and novel examples of clinical research.

(1 unit)

Prerequisite: HSE 130: Foundations of Epidemiology I or instructor permission

Cross-Listed as: QBS 133

Offered: Spring.

HSE 136 - Applied Epidemiological Methods I

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, and addressing confounding and effect modification within the context of a range of epidemiological study designs. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: QBS 130 (co-requisite) or permission of the instructor

Cross-Listed as: QBS 136

Offered: Fall.

HSE 137 - Applied Epidemiological Methods II

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I and II. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, modeling, and meta-analysis approaches. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language

R.

(0.5 unit)

Prerequisite: HSE 136 or permissions of the instructor

Cross-Listed as: QBS 137

Offered: Winter.

HSE 139 - Advanced Health Services Research

Instructor: Dr. Erika Moen

This course will develop student analytic competencies to the level necessary to conceptualize, plan, carry out, and effectively communicate small research projects in health services or epidemiology. Lectures, demonstrations, and labs will be used to integrate and extend methods introduced in other QBS and TDI courses. The students will leverage synthetic electronic health record data provided by the Analytics Institute at Dartmouth-Hitchcock and publicly available data in classroom lab exercises and course assignments. Many of the labs build on one another, and the aim is that the skills developed in the labs will assist the students with their own student-led projects. The instructors will mentor students as they develop their own analytic projects. Practical skill areas include programming in R, developing an analytic workflow, data visualization, and data structure and management. The main goal of the course is to firmly ground students in the scientific process of observational research.

(1 unit)

Prerequisite: For HSE students: HSE 130, HSE 121; For MPH students: PH 141

Cross-Listed as: QBS 139, PH 147

Offered: Spring.

HSE 140 - Decision & Cost Effectiveness Analysis

Instructor: Dr. Anna Tosteson & Dr. James Stahl

This course covers the fundamental principles and mechanics of decision analysis and cost-effectiveness analysis. Topics covered in the course include basics of probability (including Bayes' Theorem), structuring decision problems as decision trees and Markov models, components of preference (value preference, time preference, and risk preference), valuing multidimensional outcomes, evaluating decision trees, sensitivity analysis, value of information, and basic principles of cost-effectiveness analysis. Weekly problem sets are also used to reinforce the concepts presented in class. The course has a weekly lab that involves the use of decision analysis software to reinforce concepts presented in class. Labs are also used for development, progress review and discussion of small group decision analysis projects, which culminate in formal presentations the last week of class.

(1 unit)

Prerequisite: PH 100, PH 139, PH 140 or permission of Instructor. Programming language: Students learn TreeAge Software.

Cross-Listed as: PH 121, QBS 140

Offered: Spring.

HSE 145 - Computational Immunology

Instructor: Dr. Li Song & Dr. Kenneth Hoehn

This course will introduce students to fundamental concepts and the latest techniques for using computational methods to analyze immunological data. After a brief introduction to immunology, the course will move to its primary focus of analyzing sequencing data from immune cells. The first part will cover the bulk RNA-seq data analysis, including cell-type deconvolution. The second part is for single-cell RNA-seq analysis, such as cell type discovery, differentially expressed gene (DGEs) analysis, and trajectory analysis. The third part is about immune repertoire analysis, including lineage tree construction. The fourth part of the course covers advanced topics, such as spatial RNA-seq analysis. In the last a few sessions, we will see how the techniques learned from the course can be applied to the studies of infectious diseases, autoimmune disorders, and cancers.

(1 unit)

Prerequisite: HSE 146 Introduction to Bioinformatics I or permission of instructors

Cross-Listed as: QBS 145

Offered: Fall.

HSE 146 - Foundations of Bioinformatics I

Instructor: Dr. Aaron McKenna

The goal of computational biology is to catalog and model the information within living systems. In this class, we use tools developed in statistics, computer science, and biology to explore how living systems encode and process information to generate complex structures and interact with the world at large. We'll review key conceptual advances and implement a number of core computational algorithms, including Gibbs sampling, clustering, and hidden Markov models, all of which we run on biological data.

(1 unit)

Prerequisite: Basic knowledge of Python programing is helpful but not required.

Cross-Listed as: GENE 146, QBS 146

Offered: Winter.

HSE 147 - Genomics: From Data to Analysis

Instructor: Dr. Olga Zhaxybayeva

Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

(1 unit)

Prerequisite: Permission of instructor required.

Cross-Listed as: BIOL 47/147, EEES 147, QBS 147

Offered: Fall.

HSE 148 - Introduction to Statistical Genetics

Instructor: Dr. Siming Zhao

This course is designed as an introduction to statistical genetics/computational biology. It reviews the key statistical concepts and methods relevant to statistical genetics, discusses various topics that have significant statistical components in genetics and genomics. It serves as the entry point to several areas, including GWAS and post GWAS analysis, functional genomics, statistical modeling and inference.

(1 unit)

Prerequisite: HSE 119, HSE 120

Cross-Listed as: QBS 148

Offered: Spring.

HSE 177 - Methods of Statistical Learning for Big Data

Instructor: Dr. Jiang Gui

This course provides an introduction to algorithms used in data science with applications to biomedical and health data science. The goal of this course is to present an overview of many of the approaches used for big data focusing on analytical methods and algorithms. The course assumes that students have some knowledge of R. Students will be provided with 2 large data sets. Lectures on data reduction, classification, and optimization will request students complete homework for these datasets. Special attention will be given to students' active learning by programming in a statistical software package R.

(1 unit)

Prerequisite: HSE 119 or HSE 120, or permission of instructor. Co-requisite HSE 121.

Cross-Listed as: MATH 177, QBS 177

Offered: Winter.

HSE 180 - Data Visualization

Instructor: Dr. Ramesh Yapalparvi

Biomedical and health data visualization is an important and necessary step of preliminary statistical analysis. "A picture is worth a thousand words" is the impetus of this course. This course will teach best practices for visualizing data, including exploratory statistics and effective communication of statistical analysis. Data visualization is a key component that all data scientists' needs to be fluent in. Students will become competent users of Tableau, R graphics and R-Shiny. Real-life biomedical and health related data will be used thought-out the course.

(0.5 unit)

Prerequisite: N/A

Cross-Listed as: QBS 180

Offered: Winter.

HSE 181 - Data Wrangling

Instructor: Dr. Carly Bobak

Data wrangling is the process of mapping and transforming data into new formats for the increased ease and efficiency of downstream analysis. In this course, students will learn about the different types of data structures and formats, and how to create, merge, subset, and manipulate these structures. Students will wrangle data using excel, SQL, and R programming as appropriate, learn the principles of tidy data and the tidy verse, learn string processing with regular expressions, and have an introduction to web scraping and API's for data collections.

(1 unit)

Prerequisite: Linear Algebra. HSE 103 or Intermediate proficiency in R.

Cross-Listed as: QBS 181

Offered: Fall.

HSE 185 - Masters Capstone Experience

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs

The goal of the capstone is to enable students to refine their skill set as they work on a research or applied data science, epidemiology or medical informatics project. The capstone also provides training in critical professional skills including scientific writing, presentation skills, and translating the findings of a research or applied project to key stakeholders who may not have expertise in the domain. Preparation for the capstone project begins in August of the first year and culminates in a written white paper and presentation at the end of the summer term.

Note: Students will enroll in HSE 185.5: Essential Skills for Career Development and Leadership (0.5 unit) in the winter quarter preceding the summer capstone.

Students may select from three tracks for their capstone. Tracks differ based on the summer term project. The pre-capstone work is required for all tracks. Students are expected to finalize their track selection in April. Tuition & Fees apply to all tracks.

- Individual Project with Dartmouth PI: Students will match with an investigator at Dartmouth and will work on a research or applied project under the PI's mentorship; the project may be supervised by a postdoctoral research fellow or doctoral candidate in the PI's lab. For this option, residency at Dartmouth is required. Students are encouraged to submit a conference abstract in the fall on their capstone project.

- Individual Project-Based External Experience: Students will complete an external internship. On-site internships with supervision may be with a for-profit company, governmental agency, non-profit organization, or another academic institution. For this option, residency at Dartmouth is not required.

- Group Project: Students will work in small groups (2-3 students each) on a novel project of their own choosing. Students may develop their research project using publicly available data. Faculty will assist students in defining feasible projects, creating timelines and division of labor, and ultimately oversee the work. For this option, residency at Dartmouth is required.

Students will work on their capstone full-time (3 units) during the summer term (fall term in 2026), whether in residence at Dartmouth or at an external company/institution.

- Capstone offered during Summer 25/Fall 26 only. Full Tuition & Fees apply

**International Students enrolled in HSE 185 are eligible to apply for Curricular Practical Training (CPT) to meet coursework requirements.

** Students can be paid or unpaid for external experiences. Tuition & Fees still apply.

(3 Units)

Prerequisite: Completion of required terms of HSE 185.5 preceding the summer capstone. Programming: Completion of required terms of QBS 101 preceding the summer capstone. Completion of all core courses for the MS in Health Data Science, Epidemiology, or Medical Informatics

Offered: Fall, Summer.

HSE 185.5 - Essential skills for career development and leadership

Instructor: Dr. John Brand

This course is only open to students in the Health Sciences Masters of Health Data Science, Epidemiology, and Medical Informatics programs.

This course is designed to provide students with the hard and soft skills needed to excel professionally within the health and biomedical fields. Topics include programming best practices, writing and visual communication of research findings, presentation skills including mastering the elevator pitch, interview skills, and ethics. Coursework is largely based on in-class learning activities and workshops.

(0.5 Unit)

Prerequisite: N/A

Offered: Winter.

HSE 192 - Health Informatics

Instructor: Dr. Inas Khayal

Our health is everywhere. It is affected by how, where, and who we live, work & play with (i.e. biological, behavioral, social, and environmental factors). The explosion of digitization of data captured both outside 'in the wild' and within the healthcare delivery system, allows us to understand and address the many factors affecting the complexity of our health. Today, health & healthcare data is continuously being generated by healthcare delivery systems, organizations, or users and can be accessed

through devices, databases, or the web (e.g., APIs). Deriving information and knowledge to improve and maintain health requires health informatics. Data science plays an active role as a profession and within its research efforts in informing and developing all aspects of health informatics: data capture, data storage, and data analytics. Students will gain experience with Python. Prior experience with Python is not necessary, but students should have some prior programming and statistics experience. The goal of this course is two-fold: first, to learn about the latest topics in health informatics and second, to design and develop a health informatics project. Special topics in health informatics will be introduced through lectures and primary literature. These topics will be organized into 4 themes:

- 1.) Applications Theme: exploring several key current applications of health informatics
- 2.) Data Capture Theme: learning about data capture technologies and standards
- 3.) Data Storage Theme: presenting data formats, databases, and issues of security & privacy
- 4.) Data Analytics Theme: a brief introduction to the data analytics cycle and special topics of visualization and analytics methodologies.

(1 unit)

Prerequisite: Prior programming and statistical experience preferable

Cross-Listed as: COSC 89.17, QBS 192

Offered: Fall.

HSE 193 - Independent Journal Club

Instructor: Dr. Kristine Giffin & Faculty

Offered every quarter, this course provides HSE MS students with the opportunity to fulfill a required journal club credit through an independent, faculty-mentored format. Prior to the start of the quarter, the student must develop a journal club proposal in collaboration with an approved faculty mentor who will serve as the course instructor. The proposal must outline the selected topics, literature review timeline, weekly meeting schedule, and deliverables to be completed by the end of the quarter. This proposal must be submitted to and approved by the QBS Administration no later than one week before the end of the drop/add period. The course requires a minimum of 1 to 1.5 hours of weekly meetings with the instructor, in addition to approximately 3 hours per week of independent work (e.g., readings, written assignments, presentations). These expectations must be clearly documented in the proposal. The faculty instructor is responsible for

monitoring the student's progress and submitting a final grade to the QBS Administration at the end of the quarter.

For more information please email Dr. Kristine Giffin.

(0.5 unit)

Prerequisite: Consult Faculty Advisor

Cross-Listed as: QBS 193

Offered: Fall, Spring, Summer, Winter.

HSE 194 - Biostatistics Journal Club

Instructor: Dr. Pablo Martinez-Camblor

The objective of this course is to discuss selected academic papers. Participants will propose topics of interest and recommend among one to four papers (on the same topic) to discuss. Topics will be related by new or classical biostatistical procedures. Both technical and practical aspects of the considered procedures will be opened to discussion. Controversial methodologies of applied clinical papers may also be welcomed. The journal club format is an informal structure, and students are free to choose the way they present their proposed topic. Students are expected to, read the proposed materials, attend class, and be willing to participate.

(0.5 unit)

Prerequisite: College-level statistics course work.

Cross-Listed as: QBS 194

Offered: Fall.

HSE 195 - HSE Independent Study

Instructor: Dr. Kristine Giffin & Faculty

This Independent Study course is structured to allow students to enhance their knowledge and training in related quantitative fields. HSE 195 may count as towards elective credit for QBS PhD students and MS of Epidemiology, Health Data Science, and Medical Informatics students, and it is offered each academic quarter. Course proposals are to be developed between the student and a QBS, or otherwise approved, faculty member prior to the start of the quarter and submitted to QBS Administration for a approval a week before the end of the drop/add period. The proposal should reflect 3.3 hours of instruction per week and a minimum of 6.6 hours of student work per week for the entirety of the quarter. The student and faculty will work together to structure the project timeline and set deliverables that are to be met by the end of quarter. Students should clearly define the purpose, expectations, and the timeline of deliverables in their proposal. The faculty member is responsible for tracking and evaluating the student's progress in order to provide a grade to the QBS Administration at the end of the

quarter. Please email Dr. Kristine Giffin for more information.

(1 unit)

**QBS PhD and MS of Epidemiology, Health Data Science, and Medical Informatics students only*

Prerequisite: Consult Faculty Advisor

Cross-Listed as: QBS 195

Offered: Fall, Spring, Summer, Winter.

HSE 271 - HSE Epidemiology Journal Club

Instructor: TBD

This course emphasizes critical evaluation of epidemiological studies and the development of effective presentation skills. Students will gain exposure to a breadth of epidemiological methodologies while examining classical and current epidemiological studies within public health and biomedical research. Class will meet weekly. Each week, all students will read one peer-reviewed, published study and an additional article or other paper for supplemental reading. One student will present on the published study, and we will all discuss the study as well as the relevance of the additional reading. Discussion will include an assessment of study components as related to study design, statistical analyses, inference and interpretation, bias, generalizability, and implications. Students will be asked to specifically discuss components of the study (e.g., to restate what one figure or table presents).

(0.5 unit)

Offered: Spring.

HSE 700 - Responsible and Ethical Conduct of Research

Instructor: Dr. Kristine Giffin & Dr. John Brand

QBS 700 is a required course for all PhD students in the QBS program and in the Geisel MS Degree Programs in Epidemiology, Health Data Science, and Medical Informatics. As part of a campus-wide initiative, this course fulfills the Dartmouth requirement for training in the responsible and ethical conduct of research. The course consists of five two-hour, discussion-based modules, each requiring preparation through assigned readings and brief written assignments. Topics include professionalism, authorship, mentoring, data management, and rigor and reproducibility, with a focus on their application to graduate training and careers in biostatistics, epidemiology, bioinformatics, data science, and medical informatics. Developed in collaboration with Dartmouth's Ethics Institute and the Graduate Studies Office, the curriculum uses real-world case studies to guide interactive discussions. Faculty facilitators work with first-year PhD

and MS students to explore ethical challenges they may face during their training and in future academic or industry careers.

QBS 700 provides a foundational framework for ethical and professional conduct in biomedical research and satisfies NIH requirements for ethics training in federally sponsored research.

(Does not count toward core or elective credit)

Cross-Listed as: QBS 700

Offered: Fall.

Master of Science in Health Data Science Online

Health Data Science is a crucial, rapidly growing field, blending biostatistics, programming, and advanced computational and classification algorithms like machine learning to address complex challenges within the biomedical, biobehavioral, public health, and clinical care sectors.

Dartmouth's Online Master of Science in Health Data Science equips the next generation of professionals to become leaders within health data science. The program offers a robust, interdisciplinary education focused on theory and application. Graduates are positioned to instantly collaborate as a health data scientist across multiple sectors, including biotechnology and pharmaceutical industries, healthcare and behavioral health sectors, government, non-profits, and more.

The online format provides flexibility for working professionals earning a Master's degree. This 100% online program can be completed in less than 2 years, featuring weekly live lectures with consistent, predictable scheduling. Students are fully part of the Dartmouth community and are invited to attend the Health Science Education's in-person class-day ceremony at graduation.

Master of Science in Health Data Science - Online Requirements Students complete 15 core courses, which are taken sequentially over 21 months. Courses include a 10-week capstone course in the final term, where students work on a real-world data science challenge. Students also complete four capstone preparation seminars over the 21 months.

*Health Data Science Online***HSE 711 - Foundations in Data Science**

Instructor: Noelle Kosarek

Foundations of Data Science will provide students with a comprehensive introduction into data visualization, wrangling, and analytics in the R programming language. While students will be expected to enter the course with a foundational understanding of linear algebra and calculus, this course will serve as a review of sequences and series, derivatives, and integration. Students will be exposed to basic Machine Learning, LaTeX, version control with Git/GitHub, and High Performance Computing (HPC).

*0.75 Dartmouth units; (HP, P, LP, NC)*** Core Requirement for the MS in Health Data Science Online**Prerequisites: None*

Offered: Fall

HSE 712 - Foundations in Biostatistics

Instructor: Jennifer Emond

This course will cover foundational topics for biostatistics, including probability, random variables and probability distributions, sampling distributions, the central limit theorem, p-values and confidence intervals, hypothesis testing, parametric and non-parametric test statistics, and categorical data analyses. The course requires the R Language for Statistical Computing.

*0.75 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS in Health Data Science Online**Prerequisites: HSE 711*

Offered: Fall

HSE 713 - Ethics of AI in Health Data Science

Instructor: Monica Espinoza

This course will present students with the opportunity to explore various areas in the biomedical sciences where artificial intelligence (AI) is employed. We will consider the current policies, laws, and ethical guidelines which govern AI use in across these areas, determine what ethical use means for different applications, and identify gaps in ethical considerations of AI use. Students will develop a

series of questions to help determine what constitutes ethical use of AI in their chosen topic of interest and produce a written work which discusses improvements toward ethical use of AI using those questions. These academic exercises will help students determine their own ethical use of artificial intelligence as they enter their field and contribute to biomedical analytics.

*0.40 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS in Health Data Science Online**Prerequisites: None*

Offered: Winterim

HSE 721 - Data Wrangling

Instructor: Ramesh Yapalparvi

Data wrangling is the process of mapping and transforming data into new formats for the increased ease and efficiency of downstream analysis. In this course, students will learn about the different types of data structures and formats, and how to create, merge, subset, and manipulate these structures.

*0.75 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS in Health Data Science Online**Prerequisites: HSE 711*

Offered: Winter

HSE 722 - Data Visualization

Instructor: Jeremy Mikecz

Data visualization is a critical and necessary step of data analysis. This course will teach best practices for visualizing data, including exploratory data visualization and effective communication of statistical analysis. Students will become competent users of R graphics and R-Shiny. Real-life biomedical and health-related data will be used when possible.

*0.75 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS in Health Data Science Online**Prerequisites: HSE 711*

Offered: Winter

HSE 723 - Capstone Preparation

Instructor: John Brand

This series of meetings builds the foundational skills needed for project management and execution in health data science. Topics include defining and justifying a problem statement, best practices for reviewing existing evidence, building a conceptual framework, developing a data analysis pipeline and analysis plan, and best practices for communicating findings.

0.05 Dartmouth units; (CT/NC)

**Core Requirement for the MS in Health Data Science Online*

Prerequisites: None

Offered: Winter

HSE 731 - Foundations of Regression for Health Data Science

Instructor: Keith Drake

The two courses in the regression for health data science series cover the theory and applications of regression-based statistical modeling as practiced within the health data sciences. Both courses emphasize the dual goals of modeling which are (i) prediction and (ii) causal inference. This first course presents the foundations of linear regression. Topics including model fitting, statistical testing and inference, diagnostic procedures, covariate selection, and missing data. The course requires the R Language for Statistical Computing.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: HSE 712

Offered: Spring

HSE 732 - Advanced Regression for Health Data Science

Instructor: Brittny Calsbeek

This second course on regression will cover the theory and application of generalized linear models, models for clustered and longitudinal data using random effects, and applications of penalized (regularized) regression. Additional topics such as neural networks will be explored. The course requires the R Language for Statistical Computing.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: HSE 712, HSE 731

Offered: Spring

HSE 733 - Capstone Preparation

Instructor: John Brand

This series of meetings builds the foundational skills needed for project management and execution in health data science. Topics include defining and justifying a problem statement, best practices for reviewing existing evidence, building a conceptual framework, developing a data analysis pipeline and analysis plan, and best practices for communicating findings.

0.05 Dartmouth units; (CT/NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Spring

HSE 741 - Research Design for Health Data Science

Instructor: Brittny Calsbeek

This course will cover key study designs used within health data science. Key epidemiological concepts will also be covered including incidence, prevalence, attributable risk, latency of disease occurrence, confounding, effect modification, bias, and generalizability.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Summer

HSE 742 - Systems Thinking for Health Data Science

Instructor: Iben Sullivan

In this course, students will learn how to formulate a health data science research project while considering all key stakeholders along a project pipeline. This course emphasizes holistic thinking about data science and communication skills to articulate the "why" of a data science project.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Summer

HSE 743 - Capstone Preparation

Instructor: John Brand

This series of meetings builds the foundational skills needed for project management and execution in health data science. Topics include defining and justifying a problem statement, best practices for reviewing existing evidence, building a conceptual framework, developing a data analysis pipeline and analysis plan, and best practices for communicating findings.

0.05 Dartmouth units; (CT/NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Summer

HSE 751 - Statistical Learning for Big Data

Instructor: Brittny Calsbeek

The course will present an overview of many of the approaches used for big data, focusing on analytical

methods and algorithms tailored to the health data sciences. The course will use R to apply data reduction, classification, and optimization techniques using big data. Special attention will be given to students' active learning by programming in a statistical software package R.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: HSE 712, HSE 731, HSE 732

Offered: Fall

HSE 752 - Programming for Health Data Science

Instructor: Jamie Fairclough

This course covers the essential concepts of programming needed for health data sciences. Computational approaches to problem solving using live code examples and in-class exercises in Python, Bash scripting and High Performance Computing (HPC) will be presented.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Fall

HSE 753 - Genomic Data Science

Instructor: Li Song

The sequencing of the complete genomes of many organisms has transformed biology into an information science. This means a health data scientist must possess both molecular and computational skills in order to mine biological data for insights. This course will review key data science topics as applied to genomic research, including current topics.

0.40 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Winterim

HSE 761 - Foundations of Machine Learning

Instructor: Brittny Calsbeek

This course provides a comprehensive introduction to machine learning methods and techniques based on practical application. Various machine learning concepts and methods, such as natural language processing and deep learning, will be covered.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: HSE 752

Offered: Winter

HSE 762 - Applied AI

Instructor: Simon Stone

This course provides a working foundation of artificial intelligence models, with a major focus on generative AI and Large Language Models (LLMs). Topics include key concepts related to building AI-powered applications and pipelines, including pre-and post-processing, Retrieval-Augmented Generation (RAG), vector stores, tool use, and agentic behavior.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Winter

HSE 763 - Capstone Preparation

Instructor: John Brand

This series of meetings builds the foundational skills needed for project management and execution in health data science. Topics include defining and justifying a problem statement, best practices for reviewing existing evidence, building a conceptual framework, developing a data analysis pipeline and analysis plan, and best practices for communicating findings.

0.05 Dartmouth units; (CT/NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Winter

HSE 771 - Capstone

Instructor: John Brand and Jamie Fairclough

In the capstone, students participate in an intensive, self-driven project within health data science. The goals of the capstone are to apply the skills acquired from the completed coursework, while also refining the professional skills needed to formulate, execute, and disseminate project findings.

2.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Health Data Science Online*

Prerequisites: None

Offered: Spring

Master of Science in Implementation Science Online

Master of Science in Implementation Science

Implementation science is the application of methods to promote the adoption of evidence-based strategies into real-world settings. Training in implementation science

provides actionable strategies, tools, and support to ensure the successful adoption of evidence-based practices, interventions, and policies on the front lines while empowering teams to integrate evidence-based interventions into daily operations, driving meaningful and measurable outcomes.

Dartmouth's Master of Science in Implementation Science is a groundbreaking program that provides rigorous training in dissemination and implementation science, including theory, methods, and practical applications, as well as essential project management, collaboration, and leadership skills. Graduates will be equipped to apply these skills in a broad range of disciplines and communities throughout the country and the world.

Master of Science in Implementation Science Requirements

Dartmouth's online MS in Implementation Science degree challenges students to think critically across a wide range of courses that build an unparalleled knowledge base in implementation science theory, quantitative and qualitative methods, and applied practice.

Students take a set of foundational core courses with opportunities for further exploration via the Capstone IMPACT Project and an optional annual in-person symposium. In a cohort of around 30 peers, students complete this fully online MS Implementation Science degree in 9 months (accelerated, full-time), taking two courses at a time or 18 months (traditional, half-time), taking 1 course at a time.

MSIS Full-Time Academic Calendar/Curriculum

MSIS Half-Time Academic Calendar/Curriculum

Implementation Science

IS-711 - Foundations of Implementation Science

Instructor: Jeremiah Brown and Julia Shaw

Introduction to the field through focusing on applying foundational elements of implementation science, evaluating evidence-based interventions, demonstrating the use of a logic model for planning and synthesizing implementation of an evidence-based intervention, and determining strategies to engage teams and partners in implementation projects.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Fall

IS 712 - Introduction to Study Designs and Data Analysis

Instructor: Joelle Ferron

Utilizing statistical software and basic statistical principles to manage and understand quantitative data, and how it relates to the implementation of research findings into practice.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS Implementation Science Online*

Prerequisites: None

Offered: Fall

IS-713 - Application of Theories, Models and Frameworks

Instructor: Kelly Aschbrenner

Use and application of theories, models, and frameworks in implementation research (e.g. CFIR, EPIS, RE-AIM), including modification and customization of these TMs, and their practical use in real-world applications.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Fall

IS 714 - Experimental Designs

Instructor: Robert Brady and Geoffrey Curran

Applying the use of and evaluation of implementation research experimental designs including hybrid type I effectiveness-implementation, hybrid type II effectiveness-implementation, hybrid type III implementation-effectiveness trials, and adaptive randomized trial designs to guide the implementation of research findings into practice.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Fall

IS 721 - Implementation and De-Implementation Strategies

Instructor: Andrew Quanback

Social factors of exploration and evaluation of implementing and de-implementing evidence-based interventions, engagement with stakeholders and working

with diverse populations. Understanding theories, models, and frameworks of implementation and de-implementation, their barriers and facilitators, and modification strategies.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Winter

IS 722 - Qualitative and Mixed-Methods in Implementation Research

Instructor: Abby Konopasky

Understanding the theories, models, and frameworks that utilize qualitative and mixed-methods research and data (such as ethnographic, interviews, focus groups, and case studies, and combining these with quantitative statistical data) in implementing evidence-based interventions and programs.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: IS 712, IS 713

Offered: Winter

IS 723 - Education, Community-Based Participatory Research, and State Services

Instructor: Yolanda Perkins

Designing, implementing, and evaluating education, community-based, and state-based participatory research into evidence-based programing. Factors affecting engagement with stakeholders in these fields, including DEI and cultural sensitivity. Exploration of theories, models, and frameworks specifically utilized in these areas.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Winter

IS 724 - Measuring Implementation Science Context, Process, and Outcomes

Instructor: Sara Malone and Rachel Tabak

Conceptual and evaluation approaches to measuring planned and implemented interventions for appropriate context, implementation processes, and achieved outcomes, considering both theories models and

frameworks and human factors (stakeholders, community partners).

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: IS 712, IS 714

Offered: Winter

IS 731 - Behavioral Interventions: Scaling Up and Scaling Out

Instructor: Sarah Lord

Developing and adapting evidence-based interventions for larger-scale implementation of programs in the context of behavioral health.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Spring

IS 732 - Evaluation of Experimental Trials Including Cost Effectiveness

Instructor: Omar Galarraga

Analysis and evaluation of evidence-based interventions with a focus on economic impact, including intervention costing, cost-analysis, cost-effectiveness analysis, and incremental cost-effectiveness.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Spring

IS 733 - User-Centered Design Applied to Interventions and Implementation Strategies

Instructor: Elizabeth Murnane

Exploration of human and user-centered design methods in the implementation of new programs and interventions to encourage adoption. Focus on accessibility, usability, utility, and engagement for participants through the lifecycle of a program or intervention.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Spring

IS 734 - Fidelity, Adaptation, and Sustainment of Evidence-Based Interventions

Instructor: Kelly Aschbrenner

Fundamentals of operationalizing and measuring fidelity (degree which an intervention is delivered as-intended), adaptation, and sustainment of evidence-based interventions and the dynamic relationship among these constructs in implementation science.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Spring

IS 751 - Capstone IMPACT Project

Instructor: Gayle Cohen

A project designed with the course facilitator and each individual student, to serve as a culmination of concepts learned in the program. Students will take into consideration interests and career goals to develop this project.

0.25 Dartmouth units; (CT, NC)

**Core Requirement for the MS in Implementation Science Online*

Prerequisites: None

Offered: Fall

IS 752 - Capstone IMPACT Project

Instructor: Gayle Cohen

A project designed with the course facilitator and each individual student, to serve as a culmination of concepts learned in the program. Students will take into consideration interests and career goals to develop this project.

0.25 Dartmouth units; (CT, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Winter

IS 753 - Capstone IMPACT Project

Instructor: Gayle Cohen

A project designed with the course facilitator and each individual student, to serve as a culmination of concepts learned in the program. Students will take into

consideration interests and career goals to develop this project.

0.50 Dartmouth units; ((HP, P, LP, NC)

**Core Requirement for MS in Implementation Science Online*

Prerequisites: None

Offered: Spring

Master of Public Health and MS Healthcare Research

Assistant Dean of Public Health Programs: Alicia Battle, PhD, MCHES

Director of the Master of Public Health (MPH) Hybrid Program: Megan Read, MPH

Director of the Master of Public Health (MPH) and Master of Science (MS) in Health Care Research (HCR) Residential Program: Roland Lamb, MPH

The MPH Online, Hybrid and Residential Programs and the MS in Health Care Research are awarded through the Dartmouth Geisel School of Medicine.

MPH Online and Hybrid Program

Students in the MPH Hybrid Program take a prescribed sequence of courses as a cohort; there are no electives.

Requirements for the MPH Hybrid Program

To qualify for the award of MPH (Hybrid), a student must fulfill the following requirements:

1. Satisfactory completion of a graduate level core curriculum in public health
2. Attendance at three residential periods at the Geisel School of Medicine in conjunction with the core curriculum

Requirements for the MPH Residential Program

To qualify for the award of MPH (Residential), a student must satisfactorily complete all of the core courses along with electives to reach the 12 units required for the degree.

Requirements for the MS in HCR Residential Program

To qualify for the award of MS in HCR (Residential), a student must satisfactorily complete all of the core courses along with electives to reach the 12 units required for the degree.

To view the Geisel School of Medicine MPH and MS courses, [click here](#)

*Master of Public Health and Master of Science in Health Care Research***PH 100 - Inferential Methods in Epidemiology and Public Health**

Instructor: Honor Passow

In PH 100, students will learn to recognize the purpose, structure, strengths and weaknesses of common study designs: randomized controlled trials, systematic reviews, observational studies (cohort, cross-sectional, case-control, case series, and before-after) and ecological measures. Weekly discussions of published articles establish a critical appraisal framework to determine the relevance validity, and generalizability of published studies. Students apply this knowledge in two projects: an individual critical appraisal project and collaboratively writing a systematic review proposal, which includes developing a research question, conducting a preliminary literature search, and considering appropriate inclusion/exclusion criteria.

*1.00 Dartmouth units; (HP, P, LP, NC)***Core Requirement for Residential MPH & MS**Prerequisites: None*

Offered: Fall - Tuesday and Thursday 10:15 am - 11:55 am

PH 102 - Systematic Review

Instructor: Renata Yen

This course is an elective continuation of PH 100. In this course, students begin with the systematic review proposals they developed in PH 100 and conduct the proposed systematic review and optional meta-analysis. The course guides students – in groups of 3 or 4 – through the steps to complete a systematic review and write each section of a manuscript. Students are expected to incorporate peer review and teaching team feedback in the development of their project. The final product is a complete systematic review manuscript.

*1.00 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS**Prerequisites: PH 100, PH 110*

Offered: Winter - Tuesday and Thursday 8:15 am - 9:55 am

PH 110 - Public Health Foundations

Instructor: Alicia Battle

Public health is what we do as a society collectively to assure the conditions in which people can be healthy. This course introduces students to the broad landscape of public health and goes a step further to population health in discussing partnerships between health care systems, government agencies and other organizations to improve

the health of the public. Modules in this asynchronous course introduce students to the profession and science of public health, communication with diverse audiences, factors related to human health, and the structure of public health and health care systems.

*0.40 Dartmouth units; (HP, P, LP, NC)***Core Requirement for Residential MPH & MS (PH 110) and Online and Hybrid MPH (PH 201). PH 110 and PH 201 are cross listed.**Prerequisites: None*

Offered: Summer - Online asynchronous in July

PH 111 - Evaluating Medical Care for Improvement of Population Health

Instructor: David Goodman

Almost a half century after John Wennberg's seminal *Science* paper "Small Area Variations in Health Care Delivery", inquiry into health care performance and variation continues to inform public policy and identify opportunities for health system improvement. Today, making sense of health care quality and spending is the shared responsibility of researchers, public health agencies, health care providers, clinicians, and not-for-profit organizations. This course highlights the theories, methods, findings, and associated remedies of population-based health care assessment, including public reporting. This is an active learning course. Course talks are pre-recorded and are viewed along with assigned readings prior to classes. Students are engaged participants in classes with time reserved for questions, exercises and discussion of weekly course material. Students develop a policy brief that intersects course material with their own interests. Course and class engagement is central to the learning experience and is self-evaluated by each student.

*0.50 Dartmouth units; (HP, P, LP, NC)***Core Requirement for MS**Prerequisites: PH 110, PH 128*

Offered: Winter (1st half) - Monday and Wednesday 8:15 am -9:55 am

PH 112 - Medical Care & the Corporation

Instructor: Paul Gardent and Michael Zubkoff

This course examines the critical issues facing business leaders as they approach and finance health benefits for employees, manage cost, and choose the best strategy for recruiting and retaining a productive workforce. Students will build an understanding of the structure, economics and dynamics of the employer based health care system from the perspective of corporate leaders, learn how the ACA has fundamentally changed the strategic landscape and

comprehend alternative approaches to help businesses cope with these strategic issues.

Please note Geisel MPH and MS enrollment in MCC is limited.

1.0 Dartmouth unit; (HP, P, LP, NC). Enrollment in this course is officially in the fall term, although this course starts during the summer term. This course is cross-listed with Tuck School of Business course MCC.

Prerequisites: None

Offered: Fall - Wednesdays 5:10 pm - 8:40 pm

PH 113 - Health Policy

Instructor: Craig Westling, Jared Rhoads

The course begins with an investigation into how health policy is shaped by legislation, regulations and the courts. After understanding the process, each student chooses a policy topic they care about and begins to build a persuasive advocacy strategy for making the change they want to see happen. The course then delves deeply into theories of change and effective communication and negotiation with stakeholders. Each course assignment is a piece of the final project, which is a written policy advocacy strategy that includes: an analysis of a policy issue, a summary of relevant research, a stakeholder analysis, an advocacy campaign plan, a metrics-based evaluation plan, and prepared written and oral communication points that target different audiences.

1.0 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH (either PH 113 or 123 is a core requirement)*

Prerequisites: PH 110, PH 128, PH 139, PH 154

Offered: Spring - Wednesdays 8:15 am - 9:55 am

PH 114 - Contemporary Issues in Biotechnology

Instructor: Kirsten Detrick

In this course, students will gain an appreciation for the biotechnology industry, its premise and continued promise, as well as what is required for biotechnology entrepreneurs in the 21st century to attract investment capital. Areas ripe for investment and development will be explored, as will lessons that have been learned over the past four decades that have been witness to the creation of thousands of biotechnology companies, and the very way that innovation is supported by the pharmaceutical industry and regulated by worldwide governments.

0.50 Dartmouth units; (HP, P, LP, NC)

This course is cross-listed with the Tuck School of Business course CIB

Offered: Spring - Monday and Tuesday 3:20 pm - 4:50 pm

PH 115 - Value and Resource Allocation

In this course, students will build confidence in handling financial aspects of initiatives and operations. Students will apply concepts of value to make priority decisions and establish the basis of persuasive advocacy from assembling a budget to making a business case.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: PH 110, PH 128

Offered: Not being offered in AY 2526

PH 116 - Maternal Health Equity with ILE Project

Instructor: Alka Dev

Maternal and newborn morbidity and mortality outcomes are vital measures of population health and there are vast inequities in these outcomes across national and sub-national comparisons around the world. Understanding the historical and present-day contexts in which these inequities develop(ed) and how health systems respond(ed) is critical for improving population and individual health and eliminating these inequities in the long term. This course is designed to build knowledge and analytical skills in the following three areas: 1) conceptual basis for the determinants of maternal and newborn health, 2) key public health and clinical interventions designed to reduce inequities in outcomes, and 3) comparative analysis of relevant measures of inequities in these outcomes. The course will focus on both inequities in the U.S. and in low and middle-income countries to provide a global perspective on these inequities and to explore solutions across and within populations.

1.5 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for: None*

Prerequisites: PH 100, PH 110, PH 118, PH 128, PH 139, PH 154

Offered: Spring - Tuesday and Thursday 10:15 am - 11:55 am

PH 117 - Introduction to Quality Improvement in Health Systems

Instructor: Antonia Altomare and Andrew Valeras

This course develops systems thinking in health care and public health. Students explore various perspectives on healthcare services, including coproduction of health and health care, connections between communities and health systems, and making change in complex system. Students will learn and apply basic improvement skills and will be exposed to a variety of approaches and examples. Implications of health care systems on social inequities and structural bias are a central focus.

1.00 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH and MS*

Prerequisites: PH 110, PH 128, PH 139

Offered: Winter - Wednesday and Thursday 1:05 pm -2:45 pm

PH 118 - Community Health Needs Assessment

Instructor: Greg Norman and Chelsey Canavan

This course develops a defining skill in public health - assessing a community's needs - which is the foundation for designing programs to address needs and evaluating the success of those programs. Students will learn the principles of engaging with communities to conduct a needs assessment. Working in teams, students will engage in data collection activities as part of developing community health needs assessments and identify issue-specific needs.

0.50 Dartmouth units (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: PH 128, PH 139, PH 154

Offered: Fall (1st half) - Monday and Wednesday 8:15 am - 9:55 am

PH 119 - Decision and Cost-effectiveness Analysis with ILE Project

Instructor: Anna Tosteson and James Stahl

This course includes all the class meetings and weekly assignments for PH 121, but students in PH 119 complete an independent practicum project and paper instead of a small group project. Approval of a practicum project by the course instructors is required before a student can pre-register for PH 119.

1.5 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for MS (either PH 119 or PH 121)*

Prerequisites: PH 100, 139, 140, and permission from instructor.

Offered: Not being offered in AY 25-26

PH 120 - Health Coproduction

Instructor: Glyn Elwyn

Coproduction has been defined as the interdependent work of users and professionals to design, create, develop, deliver, assess and improve the health of individuals and populations, through mutual respect and partnership, that invites participants' strengths and expertise. At the core, coproduction relies on shared decision making, and to operationalize the approach, a learning health system approach is advocated.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: PH 110, PH 128

Offered: Fall (2nd half) - Tuesday and Thursday 1:05 pm - 2:45 pm

PH 121/QBS 140 - Decision and Cost Effectiveness Analysis

Instructor: Anna Tosteson, James Stahl

This course covers the fundamental principles and mechanics of decision analysis and cost-effectiveness analysis. Topics covered in the course include basics of probability (including Bayes' Theorem), structuring decision problems as decision trees and Markov models, components of preference (value preference, time preference, and risk preference), valuing multidimensional outcomes, evaluating decision trees, sensitivity analysis, value of information, and basic principles of cost-effectiveness analysis. Weekly problem sets are also used to reinforce the concepts presented in class. The course has a weekly lab that involves use of decision analysis software to reinforce concepts presented in class. Labs are also used for development, progress review and discussion of small group decision analysis projects, which culminate in formal presentations the last week of class.

1.0 Dartmouth units; (HP, P, LP, NC) *This course is cross-listed with QBS 140.*

**Core Requirement for MS if not enrolled in PH 147*

Prerequisites: PH 100, PH 139, PH 140 or instructor permission

Offered: Not being offered in AY 2526

PH 122/QBS 129 - Survey Methods

Instructor: Christine Gunn

This course will provide an overview on the topic of survey methods in public health and health care delivery. Students will learn the basic principles of designing, implementing, analyzing and disseminating a survey study, including question development and sampling strategies to produce the best data possible. Students completing the course will also be equipped with the ability to critically evaluate the methodology and findings reported in both lay and scientific forums. Students will apply didactic concepts through quizzes, assignments using real data, and through developing a survey study proposal in small groups.

1.0 Dartmouth units; (HP, P, LP, NC) *This course is cross-listed with QBS 129.*

**Core Requirement for MS*

Prerequisites: PH 139, PH 140 (P or HP)

Offered: Spring - Fridays 1:00 pm - 4:00 pm

PH 123 - Health Policy with ILE Project

Instructor: Craig Westling, Jared Rhoads

This course includes all the components, class meetings, and assignments of the PH 113 Health Policy course, plus an additional live session each week devoted to helping students build the skills needed to articulate messages in a persuasive, effective way. Students will learn the fundamentals of oratory, logic, and how to engage in structured, reasoned debate about their chosen policy topics. Weekly assignments will prepare students to participate in a live debate on their topic at the end of the course. In addition, students will prepare a presentation that synthesizes the advocacy strategy of PH 113 with the advocacy content (i.e., written argumentation) created and practiced in PH 123.

1.5 Dartmouth units; (HP, P, LP, NC)

Prerequisites: PH 100, PH 110, PH 128, PH 139, PH 154

Offered: Spring - Wednesdays 8:15 am - 9:55 am and 1:05 pm - 2:45 pm

PH 124 - Advanced Topics in Quality Improvement with ILE Project

Instructor: Tina Foster and others

This course includes all the components, class meetings, and assignments of the PH 129 Advanced Topics in Quality Improvement course, plus a project that will allow students to dive -- individually -- more deeply into one or more topics and will meet the ILE requirement

1.5 Dartmouth units; (HP, P, LP, NC)

Prerequisites: PH 110, PH 117, PH 139, PH 140 or instructor permission

Offered: Not being offered in AY 25-26

PH 125 - Qualitative Methods

Instructor: Alicia Battle

This course introduces students to qualitative design and methods in public health and health care as a stand-alone approach and in combination with quantitative approaches (mixed methods) for research, evaluation, and needs assessment. Topics include an overview of qualitative traditions, distinguishing between qualitative and quantitative approaches, when to use qualitative or mixed methods designs, how to design a qualitative study including quality standards, common qualitative methods, data collection, qualitative analysis, and presenting results.

0.50 Dartmouth units; (HP, P, LP, NC)

**Core requirement for Residential MPH*

Prerequisites: PH 110, PH 139

Offered: Fall (2nd half) - Thursdays 1:05 pm - 4:05 pm

PH 126 - Maternal Health Equity (non ILE)

Instructor: Alka Dev

Maternal and newborn morbidity and mortality outcomes are vital measures of population health and there are vast inequities in these outcomes across national and sub-national comparisons around the world. Understanding the historical and present-day contexts in which these inequities develop(ed) and how health systems respond(ed) is critical for improving population and individual health and eliminating these inequities in the long term. This course is designed to build knowledge and analytical skills in the following three areas: 1) conceptual basis for the determinants of maternal and newborn health, 2) key public health and clinical interventions designed to reduce inequities in outcomes, and 3) comparative analysis of relevant measures of inequities in these outcomes. The course will focus on both inequities in the U.S. and in low and middle-income countries to provide a global perspective on these inequities and to explore solutions across and within populations.

1.0 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for: None*

Prerequisites: PH 100, PH 110, PH 118, PH 128, PH 139, PH 154

Offered: Spring - Tuesday and Thursday 10:15 am - 11:55 am

PH 128 - Health Systems

Instructor: Emma Dean

Improving the health of populations requires understanding of health systems. This course identifies some of the current challenges facing health systems and how different countries address them (or not) through their specific approaches. These approaches include financing, organization, delivery and oversight of their health systems. The course emphasizes systems thinking and payment systems. Evaluating the potential impact of health systems on the health of populations and equity are key aspects of the course.

0.50 Dartmouth Units; (HP, P, LP, NC)

**Core Requirement for Residential MPH & MS*

Prerequisites: None

Offered: Summer - Tuesday and Thursday 8:15 am - 9:55 am

PH 129 - Advanced Topics in Quality Improvement

Instructor: Tina Foster and others

This course addresses advanced topics in improvement science and coproduction and explores implementation science, value creation in health care, coaching, and leadership/change management. Students will have the opportunity to apply skills from prior courses (PH 117,120) to case studies and other learning opportunities related to improving health and health care services. Content for the course will include both US-based and international material.

1.0 Dartmouth Units (HP, P, LP, NC)

Prerequisites: PH 110, PH 117, PH 139, PH 140 or instructor permission

Offered: Not being offered in AY 25-26

PH 130 - Practical Approaches for Today's Health Care Ethics Challenges (Elective Short Course)

Instructor: William A. Nelson

This highly interactive, inter-professional elective emphasizes critical thinking, real-world application, and decision-making to clinical, research, public health, and organizational ethics issues. Students will build practical ethical reasoning skills by applying ethics principles through case study discussions regarding challenges faced by today's health care professionals. Students will learn to use a systematic ethical analysis process to recognize, respond to, and prevent ethical conflicts to foster an ethically aligned organization.

0.50 Dartmouth units; (HP, P, LP, NC)

Prerequisites: PH 110, PH 128

Offered: Fall (2nd half) - Tuesday and Thursday 8:15 am - 9:55 am

PH 134 - U.S. Maternal and Child Health Care

Instructor: David Goodman

The health of mothers, infants, and children is dependent upon accessible and effective health care. In this course, we will critically examine the provision of health care through public and private systems to U.S. women of reproductive age, infants, and young children. The course will first provide an overview of health and social issues in this population, and then students will explore the unique funding, structure, processes, and outcomes of U.S. maternal and child health care with an emphasis on current critical issues. This is a hands-on evidence and data driven course that builds upon many of the courses and topics from the summer and fall and connects with winter and spring term courses. The course includes a lab where previously acquired epidemiologic and Stata skills will be applied to examine perinatal risk, care, and outcomes. In-

class time will be used primarily for discussion and hands-on learning.

0.75 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for: None*

Prerequisites: PH 100, PH 101, PH 110, PH 111, PH 125, PH 128, PH 139, PH 140, PH 154, PH 117 or instructor permission

Offered: Winter (1st half) - Monday and Wednesday 3:05 pm - 4:45 pm and Friday 1:05 pm - 3:35 pm (in even numbered years)

PH 135 - An Exploration of Race, Anti-Black Racism & Public Health

Instructor: Shontay Delaloe

Following the summer of 2020, a number of local municipalities in the U.S. declared 'racism is a public health crisis'. In order to grapple with the impact of racism on the health of individuals, we must first understand the concept of race and the enduring impact on specific groups. This course will examine the history of racial concepts that continue to permeate U.S. society since its founding. We will explore the social construction of race and racism – including a review of anti-black racism.

0.50 Dartmouth units; (CT/NC)

**Core Requirement for: None*

Prerequisites: None

Offered: Spring (1st half) - Thursday 2:00 pm - 5:20 pm

PH 136 - Public Health Ethics Through the Lens of Literature

Instructor: Craig Westling

This course explores major, health-related moral challenges through the lens of literature. Students will (1) choose a seminal book that explores moral dilemmas, and (2) engage in both personal reflection and class discussion to explore the issues.

0.25 Dartmouth Units (CT, NC)

**Core Requirement for: None*

Prerequisites: None

Offered: Spring (1st half) - Wednesdays from 3:00 pm-4:00 pm (on Zoom)

PH 137 - Global Health Equity & One Health

Instructor: Lisa Adams and Roland Lamb

Equity should be the guiding principle in working with historically vulnerable communities no matter the region or country. Students will examine the history of global health and its roots in colonial and tropical medicine that prioritized the health and wellbeing of the colonizers while

exploiting the Indigenous populations. This course will look at how global health has been conducted in the past, how it is practiced today, and a collective vision for global health practice in the future.

Understanding and appreciating a variety of perspectives and defending the viewpoints of those with lived experience from historically vulnerable communities is a key lesson of the course. Students will be asked to expand their views to a global perspective that considers cultures and ways of working different from their own, while being conscious of the origins of their own views. The course will also ask students to think carefully about partnerships between agencies, governments, and a variety of sectors working together, and across regions of the world (e.g. global south and north), and the impact of western colonialism.

Students will learn to design, monitor, and evaluate global health programs and projects in partnership with communities and other stakeholders, identifying and adopting interventions that the community embraces and prioritizes. At the heart of the course will be ethical approaches. We will examine the sharing of information, misinformation, and disinformation. Students will be encouraged to consider climate, migration, epidemics, pandemics, pan-epidemics, planetary health, and humanitarian and natural disasters. The course will introduce a number of tools, structures, operational frameworks, ways of working, engines for change and advocacy, UN agencies and other actors, networks/systems, that lead action in Global Health and One Health.

One Health is the triad of human, animal, and environmental health. It is a pillar that is now integrated into work by the World Health Organization, US CDC, US NIH, USAID, US White House, many governments, ministries of health, centers of disease control in other nations and regions (e.g., African CDC), and a host of NGOs working worldwide. Equity is the key principle in One Health (e.g. COVID, HIV, H5N1). In 2022 four United Nations organizations formed the Quadripartite Collaborative for One Health: These four are the World Health Organization (WHO), the World Organization of Animal Health (WOAH), the Food and Agricultural Organization (FAO), and the UN Environment Programme. (UNEP).

The course will introduce students to experts and professionals working across a spectrum of global health areas and specialties. This will include experience from the past 10 years of Dartmouth's Center for Global Health Equity under the leadership of Dr. Lisa Adams. Students will be asked to consider the impact of their work beyond the health sector such as community autonomy, local leadership, political contexts, media, economics, and foreign relations (China, US, etc.).

1.00 Dartmouth Units: (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: PH 110

Offered: Winter - Tuesday and Thursday 10:15 am - 11:55 am

PH 138 - Leadership and Negotiation

Instructor: TBD

In this course, students will develop leadership and negotiation skills to define and lead important change initiatives. Students will assess their leadership style and apply leadership principles in simulations, collaborative group activities and public health business cases to help uncover their full leadership potential. Students will also learn the fundamentals of negotiation and key elements of persuasion with numerous case studies and role plays.

0.50 Dartmouth units: (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: None

Offered: Not being offered in AY 25-26

PH 139 - Measuring Health

Instructor: Brenda Sirovich

PH 139 will develop strong foundations in introductory analytic epidemiology and cultivate the ability to communicate epidemiologic concepts in plain language. **Analytic epidemiology**, *the science of investigating patterns and determinants of disease and its consequences in populations*, is foundational to any effort to improve health or healthcare. Through published studies and hands-on data analysis, students will examine, derive, and interpret measures of disease (summary outcome measures including means, medians, risks and rates; prevalence, incidence, and mortality), its determinants and consequences (measures of effect including difference, risk ratios, attributable risk, population attributable risk, and PAR%), and the role of chance (statistical inference, including p-values and confidence intervals, hypothesis testing, Type I and Type II error) in interpreting these relationships.

0.65 Dartmouth Units: (HP, P, LP, NC)

**Core Requirement for Residential MPH and MS*

Prerequisites: None

Offered: Summer - Monday 10:15 am – 11:55 am, 1:05 pm - 2:45 pm ; Lab Wednesday 1:05pm – 4:00pm

PH 140 - Applying Health Statistics

Instructor: Brian Lucas

Students will critically appraise studies of analytic epidemiology. After classifying a study's design and acknowledging its inherent limitations, students will trace what *outcome measures* (e.g., risks) and *effect measures* (e.g., risk ratios) were used to describe the problem and assess impact. Students will appraise the choice of these numbers, how the authors explained them, and whether their conclusions were justified. Weekly laboratory sessions allow students to conduct their own analyses with Stata® on real-world datasets.

1.5 Dartmouth units; (HP, P, LP, NC)

*Core Requirement for Residential MPH and MS

Prerequisites: PH 110, PH 139

Offered: Fall - Monday and Wednesday, 10:15 am-11:55 am; Lab Wednesday from 1:05 pm - 4:00 pm

PH 141 - From Observational Data to Valid Inference: Regression and Other Approaches

Instructor: Brittany Calsbeek

In the quest to understand and improve population health and healthcare, observation is essential yet when we *observe* the world, the true nature of cause, effect, and association can be obscured. To see beyond influences that disguise underlying processes, investigators need expertise to use multivariable statistics and to understand when their use is indicated and adequate to address a question. In PH 141, students will gain proficiency in study design analysis, interpretation and communication to be able to capably address threats to inferential validity in analyses of epidemiological and other observational data, and apply these capabilities to questions about health, disease, and healthcare.

1.5 Dartmouth units; (HP, P, LP, NC)

*Core Requirement for MS

Prerequisites: PH 139, PH 140 (P or HP)

Offered: Winter - Monday 10:10 am - 12:05 pm & 1:05 pm - 2:45 pm; Lab Tuesday 1:05 pm - 5:00 pm.

PH 147/QBS 139 - Advanced Health Services Research with ILE Project

Instructor: Erika Moen

This course will develop student analytic competencies to the level necessary to conceptualize, plan, carry out, and effectively communicate small research projects in health services or epidemiology. Lectures, demonstrations, and labs will be used to integrate and extend methods introduced in other QBS and TDI courses. The students will leverage synthetic electronic health record data provided by the Analytics Institute at Dartmouth-Hitchcock and publicly available data in classroom lab exercises and course assignments. Many of the labs build on one another, and the aim is that the skills developed in

the labs will assist the students with their own student-led projects. The instructors will mentor students as they develop their own analytic projects. Practical skill areas include programming in R, developing an analytic workflow, data visualization, and data structure and management. The main goal of the course is to firmly ground students in the scientific *process* of observational research.

PH 147 is the ILE and is 1.5 Dartmouth units; (HP, P, LP, NC) This course is cross-listed with QBS 139 which is 1.00 Dartmouth units and is **not** an ILE.

*Core Requirement for MS

Prerequisites: Grade of Pass or High Pass in PH 140 & PH 141 and instructor permission

Offered: Spring - Monday 9:00 am- 12:00 pm

PH 151 - Environmental Health Sciences and Policy

Students explore major environmental and occupational health issues by applying essential tools of environmental science, including epidemiologic methods, toxicology, risk assessment, risk management, and risk communication. Students examine the relationship between environmental and occupational exposures and human disease, the role of regulatory agencies, and the interface of science and policy. Topics include air and water quality, hazardous waste, radiation, heavy metals, food safety, environmental pathogens, and occupational medicine. Teaching tools include lectures, audiovisual media, case studies, guest experts, assigned readings/exercises, and guided creation of an environmental health policy and risk communication.

0.50 Dartmouth units; (HP, P, LP, NC)

Prerequisites: PH 100, PH 110, PH 139, PH 140

Offered: Not being offered in AY 25-26

PH 152 - Leading Change in Health Policy

Instructor: Manish Mishra

This course will explore different approaches to leading change in health policy. The students will begin the class by examining two popular models used in healthcare leadership literature. The exploration will then go beyond those leadership models and meditate on the philosophical and psychological constructs that underlie those teachings. The focus of this in-depth examination will offer students a method to execute a multi-stakeholder analysis and develop strategies to be influential in leading policy changes. By the end of the course, students will be able to apply these teachings to a health care policy issue of their choice, generate specific action items pertaining to identified stakeholder groups, and be able to concisely

articulate their policy position. By the end of the course students will also gain insights on their own leadership style as they continue to influence change moving forward.

0.50 Dartmouth units; (HP, P, LP, NC)

Core Requirement for: None

Prerequisites: None

Offered: Winter - Fridays 3:00 pm - 6:00 pm

PH 153 - Historical and Political Determinants of Health

Instructor: Alicia Battle and Roland Lamb

This course examines how historical forces and political systems fundamentally shape health outcomes and inequities across populations. Students will explore how political structures and events—including governance, lawmaking, elections, international/federal/state relations and resource allocation play a critical role in health and create the conditions for health or harm. The course investigates how political ideologies, movements, and power dynamics have influenced everything from disease response to healthcare access. Students will develop the analytical tools to critically evaluate how past and present political decisions continue to influence health systems/structures, shape population health, and reinforce inequity on local, national, and global scales.

0.25 Dartmouth units; (CT, NC)

Core Requirement: None

Prerequisites: None

Offered: Spring (weeks 3-8 via zoom) 10:15 am - 11:55 am

PH 154 - Drivers of Health Inequities

Instructor: Elisabeth Wilson

This course will explore the determinants of health (social, economic, political and structural) and their impact on health equity. We will research evidence-based strategies to address health inequities, identify facilitators and barriers to public health action, and consider the role of health care in this work.

0.50 Dartmouth units; (HP, P, LP, NC)

*Core Requirement for Residential MPH

Prerequisites: None

Offered: Summer - Monday and Wednesday 8:15 am - 9:55 am

PH 161 - Independent Internship 1

Instructor: Meghan Longacre and Craig Westling

Part 1 of the Independent Internship. The public health field internship provides students with an opportunity to

apply principles and skills learned in the classroom - the measurement, organization, and improvement of population health - to real situations in the field. The placement site can be an agency or organization in any sector – government, non-profit, or for-profit – but any university-affiliated settings must be focused primarily on community engagement, typically with external partners. Students will be provided a selection of TDI-sourced Internship offerings but students may also opt to identify a self-sourced internship site. The project should be scoped such that a minimum of 120 hours will be spent at the placement site. Activities of the internship should be mutually beneficial to both the site and the student, with the student specifying learning objectives for their internship. Students will spend the Winter term contacting internship sites and applying for an internship position. By the end of the term each student will be matched and have developed a mutually agreed upon contract with their Internship Site preceptor that will require approval from the course directors before the start of the Spring term. Typically, the internship series occurs in the winter and spring terms of the year, but other arrangements are possible with permission of the course director(s).

The objective of the internship as public service is to provide skills, knowledge, and work capacity to internship sites as well as to gain personal experience and expertise to forward your career aspirations.

0.25 Dartmouth Units; (HP, P, LP, NC)

*Core Requirement for Residential MPH. Non-MPH students by PERMISSION ONLY

Prerequisites: PH 100, PH 110, PH 117, PH 128, PH 154, PH 139, PH 140 or consent of course director.

Offered: Winter - Friday 1:05 pm - 1:55 pm. Students are required to attend several informational sessions in the Summer and Fall terms in order to prepare them for the class. Attendance at these sessions impacts student timeline and matching with sites. Students who have specific questions about timeline should contact the course directors in the Summer term.

PH 162 - Independent Internship 2

Instructor: Meghan Longacre and Craig Westling

Part 2 of the independent internship. At the end of PH161 all students continuing into PH162 will have been matched to an Internship site, either sourced by TDI or by the student independently. The placement site can be an agency or organization in any sector – government, non-profit, or for-profit –. A minimum of 120 hours is to be spent at the placement site. Activities of the internship should be mutually beneficial to both the site and the student, with the student specifying learning objectives for their learning experience. After completing the internship,

each student prepares and presents their completed work and a summary of their experience to their site. At the conclusion students complete an exit appraisal of their experience and achievements.

0.75 Dartmouth Units; (HP, P, LP, NC)

**Core Requirement for Residential MPH*

Prerequisites: PH 161

Offered: Spring - Friday 9:05 am - 10:45 am

PH 165 - Skills for Public Health Leaders

Instructor: Alicia Battle, Megan Read and Roland Lamb

This course is designed to equip individuals with the essential leadership qualities, knowledge, and skills needed to effectively address public health challenges and promote positive health outcomes. This class will focus on developing interprofessional collaboration, fostering a growth mindset, motivating teams, and navigating complex policy and political contexts. This course spans four terms enabling students to explore leadership and management concepts within the context of public health and making meaningful connections to other courses within the curriculum.

0.25 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH & MS (PH 165) and Online and Hybrid MPH (PH 265) PH 165 and PH 265 are cross listed.*

Prerequisites: None

Offered: Spanning entire year for Residential MPH and MS and first year Hybrid MPH

PH 177 - Independent Integrative Learning Experience Part 1

Instructor: Albert and Margaret Mulley

The three course sequence (PH 177 - PH 178 - PH 179) results in a student presenting their own original research proposal, manuscript, or policy white paper. During the first course in this three course sequence, each student will refine a topic for an original project and develop a solid focus with a clear, feasible, answerable, research question or approach for a public health intervention. In the subsequent terms, this scholarly question will be operationalized as a grant proposal for research, a scientific manuscript or a policy white paper. Other tailored formats may be considered with special permission.

0.50 Dartmouth Units; (HP, P, LP, NC)

Prerequisites: No previous courses required, but permission of the course directors is required for enrollment in PH 177. There is an application for admission to this course due approximately two weeks before the course starts.

Offered: Fall - Monday 1:05 pm - 2:45 pm

PH 178 - Independent Integrative Learning Experience Part 2

Instructor: Albert and Margaret Mulley

The three-course sequence (PH 177 - PH 178 - PH 179) results in a student presenting their own original research proposal, manuscript, or policy white paper. During the second and third courses in the sequence, the weekly and final deliverables will be specific to the I-ILE Framework selected by the student. These I-ILE Frameworks include:

1. Proposal Framework: Students who pursue the Proposal Framework will complete a mock grant proposal using a modified National Institutes of Health format or other funding opportunity identified by the student and approved by the faculty. The proposal will include an Abstract, Specific Aims, Background & Significance, Overall Impact including Conceptual Framework, and Approach including methods for each aim, Stakeholder / Community Engagement (Spring Term), budget and budget justification (Spring Term), mock letter(s) of support (Spring Term), References and Appendices, identification of potential funders (Spring Term), and (optional) pilot results.

2. Manuscript Framework: The manuscript format involves analysis of data, either existing or collected during the project period, presented as a manuscript <3000 words in length. It will be structured similar to a JAMA Original Research article, including a Structured Abstract, Introduction, Methods, Results, Discussion & Conclusion (Spring Term), References, and up to five Tables and/or Figures. Other target journals permitted with permission from course instructors.

3. Policy White Paper Framework: The policy white paper format involves the deep research and analysis of an issue or problem, written for one or multiple policy stakeholders. It will be structured based on guidelines from the Kennedy School of Government at Harvard, including an Executive Summary, Introduction and/or Background, Background & Significance, Methodology, Literature Review, Findings, Policy Recommendations (Spring Term), Implementation / Next Steps (Spring Term), References and Appendices.

0.75 Dartmouth units; (HP, P, LP, NC)

Prerequisites: PH 177 and permission of the course directors is required for enrollment in PH 178.

Offered: Winter - Mondays 3:05 pm - 4:45 pm

PH 179 - Independent Integrative Learning Experience Part 3

Instructor: Albert and Margaret Mulley

The three-course sequence (PH 177 - PH 178 - PH 179) results in a student presenting their own original research proposal, manuscript, or policy white paper. During the second and third courses in the sequence, the weekly and final deliverables will be specific to the I-ILE Framework selected by the student. These I-ILE Frameworks include:

1. Proposal Framework: Students who pursue the Proposal Framework will complete a mock grant proposal using a modified National Institutes of Health format or other funding opportunity identified by the student and approved by the faculty. The proposal will include an Abstract, Specific Aims, Background & Significance, Overall Impact including Conceptual Framework, and Approach including methods for each aim, Stakeholder / Community Engagement (Spring Term), budget and budget justification (Spring Term), mock letter(s) of support (Spring Term), References and Appendices, identification of potential funders (Spring Term), and (optional) pilot results.

2. Manuscript Framework: The manuscript format involves analysis of data, either existing or collected during the project period, presented as a manuscript <3000 words in length. It will be structured similar to a JAMA Original Research article, including a Structured Abstract, Introduction, Methods, Results, Discussion & Conclusion (Spring Term), References, and up to five Tables and/or Figures. Other target journals permitted with permission from course instructors.

3. Policy White Paper Framework: The policy white paper format involves the deep research and analysis of an issue or problem, written for one or multiple policy stakeholders. It will be structured based on guidelines from the Kennedy School of Government at Harvard, including an Executive Summary, Introduction and/or Background, Background & Significance, Methodology, Literature Review, Findings, Policy Recommendations (Spring Term), Implementation / Next Steps (Spring Term), References and Appendices.

0.50 Dartmouth units: (HP, P, LP, NC)

Prerequisites: PH 177, 178 and permission of the course directors is required for enrollment in PH 179.

Offered: Spring - Mondays 1:00 pm - 2:40 pm

PH 182 - Research in Health Services II

Instructor: Varies

An original individual, experimental, or theoretical investigation beyond the undergraduate level in quantitative biomedical sciences. This course is open only to TDI PhD graduate students *prior* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research

rotations or dissertation labs are required to register every quarter, including summer. Advanced research is to be registered for post-qualifier examination.

2.0 Dartmouth units; (CT, NC)

**Core Requirement for PhD*

Prerequisites: None

PH 186-189 - Directed Readings

Students may participate in a Directed Readings course through arrangements with a faculty member. "Directed" coursework involves readings and special projects, and is subject to approval by an approved Geisel faculty supervisor and either the Executive Director of Education (for masters degree students) or the Chair of their program (for PhD students). Directed Readings are typically literature reviews on a topic with a paper due at the end of the term that provides an overview of the topic(s) reviewed, the references read, the process used to identify readings, and a summary of the theory and evidence found in the literature review. For PhD students, Directed Readings (PH 186-189) are for 'deep background' reading for the student's general training or exploring a topic area, while Directed Research (PH 196-199 & PH296-299) grants credit for carrying out research activity, including a specific literature review for a research proposal or dissertation, design, analysis, writing, and preparing a PhD proposal.

All terms: By arrangement. (HP/P/LP/NC)

PH 186 is 0.50 units; PH 187 is 1.0 units; PH 188 is 2.0 units; PH189 is 3.0 units.

Prerequisites: Proposal form available from the Geisel Associate Registrar must be approved on or before the first day of the term, including specified readings, products to be delivered, and timeline all signed by the supervising faculty member and the Executive Director of Education.

PH 196-199 - Directed Research

Instructor: Varies

Students may participate in Directed Research through arrangements with a faculty member. Directed research is subject to approval by an approved Geisel faculty supervisor and either the Executive Director of Education (for masters degree students) or the Chair of their program (for PhD students). Directed Research (PH 196-199) grants credit to MPH, MS, and PhD students prior to their qualifying exam for carrying out research activity on the student's own project, including a specific literature review for a research proposal or dissertation, design, analysis, writing, and preparing a PhD proposal. Directed Research (PH 296-299) grants credit exclusively to PhD candidates and post-docs for carrying out research activity. Contrast these with Directed Readings courses (PH 186-189) which are for 'deep background' reading for a student's general

training or exploring a topic area. Contrast these with Supervised Research Assistantship (PH 280-282) which are for less independent research activity that directly contributes to a faculty member's work or grant.

PH 196 is 0.50 units; PH 197 is 1.0 units; PH 198 is 2.0 units; PH 199 is 3.0 units.

Prerequisites: Proposal form available from the Geisel Associate Registrar must be approved on or before the first day of the term, including aims, specified products, and timeline all signed by the supervising faculty member and the Executive Director of Education.

PH 201 - Public Health Foundations

Instructor: Alicia Battle

Public health is what we do as a society collectively to assure the conditions in which people can be healthy. This course introduces students to the broad landscape of public health and goes a step further to population health in discussing partnerships between health care systems, government agencies and other organizations to improve the health of the public. Modules in this asynchronous course introduce students to the profession and science of public health, communication with diverse audiences, factors related to human health, and the structure of public health and health care systems.

0.40 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH & MS (PH 110) and Online and Hybrid MPH (PH 201). PH 110 and PH 201 are cross listed.*

Prerequisites: None

Offered: Summer - First Year - Online asynchronous in July

PH 203 - Health Systems

Instructor: Thom Walsh

Improving population health requires understanding of health systems. This course identifies the challenges facing health systems and how different countries address them (or not) through their specific approaches to the financing, organization, delivery and oversight of their health systems, emphasizing systems thinking and payment systems.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Prerequisites: None

Offered: Summer - First Year

PH 205 - Determinants of Health Equity

Instructor: Sanam Roder-DeWan

Public health is a multi-disciplinary field that studies and tackles complex health issues in populations. Health at the population level can rarely be described using simple causal pathways and is often inequitably distributed. This class is designed to give students core tools and capacities for critically examining and effectively addressing the determinants of health equity challenges.

0.40 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Fall - First Year

PH 207 - Inferential Methods and Measures

Instructor: Robin Larson and Julia Sabrick

This course uses a weekly “determinant of health” theme to introduce a range of **study designs** and **measures** commonly used to explore behavioral, environmental, socioeconomic, and healthcare-related questions. The 4-week course covers **observational and interventional designs** – from cross-sectional surveys to randomized trials -- and explores the calculation and interpretation of **key measures in health fields** – from dichotomous measures of events to continuous measures of laboratory results. Through repeated application to different designs each week, students hone skills for **critically appraising** the methods, measures, findings and conclusions of published examples, and gain appreciation for how each design and measure impacts the **validity of causal inferences**. The course prepares students for future study of epidemiology and biostatistics, while reinforcing preceding content from PH 205 Determinants of Health and Inequities.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Fall - First Year

PH 209 - Introduction to Improvement Methods

Instructor: TBD

An appreciation of systems and systems thinking is essential for improving public health and healthcare systems. A systematic approach to assessing a specific context and testing changes for improvement uses specific “tools” and requires a clear measurement strategy which reflects equity as the underpinning of quality. This course develops systems thinking in health care and public health and introduces students to commonly used methods to systematically approach understanding context, testing change, and measuring improvement in a specific setting. Students will explore the use of common improvement “tools” which can be used in a wide variety of settings.

0.40 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Fall - First Year

PH 210 - Epidemiology of Health and Healthcare

Instructor: Robin Larson and Julia Sabrick

This course is designed to equip students with the knowledge, skills, and shared vocabulary needed to **recognize a wide range of study designs** used to evaluate public health questions, and to **critically assess the relevance and validity of their conclusions**. In doing so, the course provides students with a **framework for further learning and application**, whether it be moving on to biostatistics and advanced methods courses, using data and/or literature to make persuasive policy arguments grounded in awareness of the strengths and weaknesses of the available evidence, or designing and implementing high quality studies of their own in which sources of bias are minimized and limitations to the conclusions are thoughtfully acknowledged.

0.625 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Prerequisites: PH 207

Offered: Winter - First Year

PH 212 - Biostatistics: Interpretation & Appraisal

Instructor: Carlos Jackson

At the end of this six-week course, students will be confident, critical readers of the literature so they can appraise evidence to inform action. Students will have a shared vocabulary about basic statistics; and have skill in conducting and interpreting descriptive statistics, distinguishing between a sample and population, interpreting inferential statistics from hypothesis tests and multiple linear regression, and appraising the validity and generalizability of data and findings. Students will also be prepared for further learning and application, whether in biostatistics or advanced methods courses or using data and literature to make persuasive policy arguments.

0.625 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Winter - First Year

PH 214 - Introduction to Survey Methods for Public Health and Healthcare

Instructor: TBD

This course introduces students to the use of survey methods in public health and healthcare. Students will learn basic principles of survey study design and data collection, focusing on evidence-based designs such as the tailored design survey approach. Specific activities used to learn survey methods include writing and critiquing survey questions, evaluating survey formats, and designing survey studies, including sampling, survey mode and recruitment based on the study question, context and target population. Students will also learn principles and strategies for reporting survey results.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Spring - First Year

PH 218 - Introduction to Qualitative Methods in Public Health Practice

Instructor: Karen Schifferdecker

This course will provide students an overview of qualitative methods in public health, with an emphasis on applied skill development. Students will learn the theoretical underpinnings and appropriate applications of qualitative methods in public health practice. We will then turn to principles of qualitative study design, including developing qualitative research questions; identifying sampling strategies and open-ended data collection techniques; analyzing and interpreting text-based data; and using standards for reporting qualitative findings. Students will gain hands-on practice with the semi-structured interviewing, qualitative data coding and thematic analysis, and the presentation of qualitative data.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Spring - First Year

PH 220 - Anchor Institutions and Population Health

Instructor: Gregory Norman

This course will introduce students to ways that Anchor Institutions such as health systems and institutions of higher education can intentionally adapt their existing business functions to address disparities in social, environmental, and systemic/structural drivers of health.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Spring - Second Year

PH 222 - Ethics in Health and Healthcare

Instructor: TBD

This highly interactive, inter-professional, case-focused course is designed to give students an overview of health care ethics, including recognizing and responding to contemporary public health, clinical, research and organizational ethics conflicts. Students will become familiar with the application of ethics principles to the health care challenges faced by today's various health care professionals. Emphasis throughout the course will be placed on critical thinking, real-world application, and decision-making in a professional environment.

0.50 Dartmouth units; (CT, NC)

Required for Online and Hybrid MPH

Offered: Spring 2nd Year

PH 224 - Enhancing Communication & Teamwork

Instructor: Nan Cochran

Working effectively in public health depends on our ability to communicate clearly, to motivate and manage teams, and to engage effectively in conflict. As a public health practitioner, you will have difficult conversations and negotiate conflict everyday. You will learn how to elicit others' perspectives, identify others' interests, and both give and receive constructive feedback. Each session will include a brief didactic and discussions, in addition to interactive exercises and simulations done in pairs and small groups. You will receive individual coaching and regular feedback.

0.40 Dartmouth units; (CT, NC)

Required for Online MPH

Offered: Spanning 1st Year

PH 226 - One Health: Pan-Epidemics in our Anthropocene

Instructor: Dan Lucey

This course will focus on understanding epidemics from the lens of the One Health triad of human, animal, and environmental health. Grading will be based on student discussion boards and student responses to prompts. Discussion of "pan-epidemics" will include past outbreaks due to a given pathogen, if any. Emphasis will be given to how best anticipate, recognize and act with regard to present and future outbreaks from a One Health perspective. Readings will be from publications and online sources e.g., the World Health Organization (WHO), the Scientific American special edition Fall 2021 titled "The Age of Humans", and The Smithsonian Museum of Natural History Exhibit 2018-2022 and 2022-2024 based on the theme "One Health proposed in 2015 by the PH 226 faculty and originator of the Smithsonian Exhibit, as well as the book "Spillover: Animal Infections and the Next

Human Pandemic", by David Quammen. The course will include zoonotic virus outbreaks and "pan-pandemics" including Ebola, Coronaviruses, Influenza and Nipah virus.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Summer - Second Year

PH 230 - Health Coproduction

Instructor: Glyn Elwyn

This course explores how the broad concept of coproduction can be applied to healthcare, encompassing the design and delivery of services across various domains, including public health and primary care. It will compare approaches to engaging different populations in decision making, design, delivery, and improvement. Specifically, there will be a focus on the principles of shared decision-making and how this approach can be fostered, evaluated, and measured. We will consider the concepts of value chains, value shops, and value-generating networks, and explore how these different approaches can be operationalized. The course will describe how patient registries can utilize patient-reported outcome measures and examine the value that the design and implementation of learning health systems can generate.

0.40 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Prerequisites: None

Offered: Summer - Second Year

PH 233 - Applied Improvement Methods

Instructor: Daisy Goodman and Trinidad Tellez

This course builds on PH 209 "Introduction to Improvement Methods." It will provide opportunities to apply selected improvement methods in real-world small systems. Building from the tenet that equity is foundational for quality, the course will explore the important roles of measurement, effective collaboration, coproduction, and understanding of context, and change management in improving public health and health care using case studies and examples from the literature.

0.40 Dartmouth units; (HP, P, LP, NC)

Required for Online MPH

Prerequisites: PH 209

Offered: Summer - Second Year

PH 238 - Leading Change in Health Policy

Instructor: Manish Mishra

This course will explore different approaches to leading change in health policy. The students will begin the class by examining two popular models used in healthcare leadership literature. We will then go beyond those leadership models and meditate on the philosophical and psychological constructs that underlie those teachings. The focus of this depth examination will offer students a method to execute a multi-stakeholder analysis and develop strategies to be influential in leading policy changes. By the end of the course, students will be able to apply these teachings to a health care policy issue of their choice, generate specific action items pertaining to identified stakeholder groups, and be able to concisely articulate their policy position. Students will also understand their own leadership style as they continue to influence change moving forward.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Fall - Second Year

PH 242 - Health Services Administration

Instructor: Eric Wadsworth and Bonnie Blanchfield

Recent shifts in US healthcare policy toward reimbursement structures that incent high quality and efficient care, shift the focus from volume to value, increase revenue and cost pressures, and push leaders in public health to do more with less. Managing for program outcomes and financial soundness has become ever more demanding. The goal of the Health Services Administration course is to enable students to make value enhancing decisions and be effective leaders in the evolving health care market.

This course will teach students the basic principles of financial and managerial accounting and how to make a business case for a program or innovation.

0.625 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Fall - Second Year

PH 243 - The Psychology of Public Health Impact

Instructor: Manish Mishra

This course explores psychological mechanisms that underpin effective advocacy work in public health. This course is a longitudinal experience that will span the entire second year of the Hybrid MPH curriculum. Students will read an ethnography examining 5 rural New England families whose lives were destabilized by the shortcomings of their local healthcare systems. This ethnographic text will be analyzed with particular attention to learning how

to attune to narratives of suffering with an operational lens. Focused skill sessions will be held throughout the year to augment students' abilities to listen for nuance and augment advocacy impact using creative reading practices.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Spans Second Year

PH 252 - Health Policy

Instructor: Craig Westling and Jared Rhoads

The purpose of this course is to introduce students to the health-policy making process and examine how it is shaped by legislation, regulations and the courts. After understanding the process, students will choose a policy topic and begin to build a strategy for making the change they want to see happen. Each course assignment leads up to the final project, which is a policy advocacy strategy that includes: an analysis of a policy issue, a summary of relevant research, a stakeholder analysis and management plan, a metrics-based evaluation plan, and prepared written and oral communication points. The final deliverable puts all the pieces are together, so each student will have created a map to manifest their desired change.

0.50 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Winter - Second Year

PH 256 - Strategy for Population Health

Instructor: Eric Wadsworth

The goal of the Strategy for Population Health course is to enable students to make value enhancing decisions and to be effective leaders in the evolving health and healthcare market. Building on financial skills, this course develops strategic thinking skills, which are critical for achieving those goals. Specifically, strategy describes what a health and healthcare delivery system should be doing to determine: where it's going and how it intends to get there. The strategy modules are intended to help students recognize, develop, articulate, and implement strategy; and to expose them to a broad range of strategies for re-designing healthcare delivery and public health.

0.40 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Spring - Second Year

PH 261 - Practicum 1

Instructor: Meghan Longacre

The Geisel Hybrid MPH includes a concurrent practicum course that runs throughout the entire program, combining aspects of both the Master's thesis and internship. Students develop and execute their own

individual practicum with faculty support, focusing on a specific problem area or question. Skills gained in the program serve to improve health and/or health care, develop or refine policy, or generate new knowledge in a real-world setting. Using systems thinking, qualitative and quantitative methods, along with effective inquiry, student practicums will provide actionable insights and feasible recommendations.

0.75 Dartmouth units; (CT, NC)

Required for Online and Hybrid MPH

Offered: Summer/Fall - First Year

PH 262 - Practicum 2

Instructor: Meghan Longacre

The Geisel Hybrid MPH includes a concurrent practicum course that runs throughout the entire program, combining aspects of both the Master's thesis and internship. Students develop and execute their own individual practicum with faculty support, focusing on a specific problem area or question. Skills gained in the program serve to improve health and/or health care, develop or refine policy, or generate new knowledge in a real-world setting. Using systems thinking, qualitative and quantitative methods, along with effective inquiry, student practicums will provide actionable insights and feasible recommendations.

1.00 Dartmouth units; (CT, NC)

Required for Online and Hybrid MPH

Offered: Winter/Spring - First Year

PH 263 - Practicum 3

Instructor: Meghan Longacre

The Geisel Hybrid MPH includes a concurrent practicum course that runs throughout the entire program, combining aspects of both the Master's thesis and internship. Students develop and execute their own individual practicum with faculty support, focusing on a specific problem area or question. Skills gained in the program serve to improve health and/or health care, develop or refine policy, or generate new knowledge in a real-world setting. Using systems thinking, qualitative and quantitative methods, along with effective inquiry, student practicums will provide actionable insights and feasible recommendations.

1.00 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Prerequisites: PH 261, PH 262

Offered: Summer/Fall - Second Year

PH 264 - Practicum 4

Instructor: Meghan Longacre

The Geisel Hybrid MPH includes a concurrent practicum course that runs throughout the entire program, combining aspects of both the Master's thesis and internship. Students develop and execute their own individual practicum with faculty support, focusing on a specific problem area or question. Skills gained in the program serve to improve health and/or health care, develop or refine policy, or generate new knowledge in a real-world setting. Using systems thinking, qualitative and quantitative methods, along with effective inquiry, student practicums will provide actionable insights and feasible recommendations.

1.00 Dartmouth units; (HP, P, LP, NC)

Required for Online and Hybrid MPH

Offered: Winter/Spring - Second Year

PH 265 - Skills for Public Health Leaders

Instructor: Alicia Battle, Megan Read and Roland Lamb

This course is designed to equip individuals with the essential leadership qualities, knowledge, and skills needed to effectively address public health challenges and promote positive health outcomes. This class will focus on developing interprofessional collaboration, fostering a growth mindset, motivating teams, and navigating complex policy and political contexts. This course spans four terms enabling students to explore leadership and management concepts within the context of public health and making meaningful connections to other courses within the curriculum.

0.25 Dartmouth units; (HP, P, LP, NC)

**Core Requirement for Residential MPH & MS (PH 165) and Online and Hybrid MPH (PH 265) PH 165 and PH 265 are cross listed.*

Prerequisites: None

Offered: Spanning entire year for Residential MPH and MS and first year Hybrid MPH

PH 280-282 - Supervised Research Assistantship

Supervised Research Assistantship grants credit when the work to be completed is for a grant or work of the faculty member, the student would not qualify for first authorship on reports or publications, and the intended work is considered training as a research assistant.

Contrast these with Directed Research (PH 196-199, 296-299) which are for more independent research activity.

All terms: By arrangement. PH 280 is 0.50 Dartmouth units; PH 281 is 1.0 units; PH 282 is 2.0 units (CT, NC). Prerequisites: PhD Students, PhD Candidates, or non-degree-seeking postdoctoral fellows with a thesis degree

PH 290 - Doctoral Seminar

Instructor: Varies

This three-term seminar aims to enhance skills in research communication. Based on participants' background and interest, the seminar will cover a range of topics including PowerPoint presentations, talks to professional and lay audiences, posters, abstracts, articles for professional journals, and research grants. The course leaders will present brief didactic material, but the primary method is alternating peer presentations.

The seminar meets for three terms (10 sessions each term) for PhD students, post-docs, and junior faculty (maximum 10 participants). Participants must be actively writing papers and grants.

Because we expect considerable interest in this seminar series, seminar faculty will be interviewing potential participants to ensure that the seminar meets their needs and interests.

0.50 Dartmouth units; (Credit/No Credit)

PH 700 - Responsible and Ethical Conduct of Research

Instructor: Alex Thorngren

This course is part of a campus-wide series that provides training in professional research conduct and is required of all Dartmouth MS & PhD students. PH 700 covers issues regarding the responsible and ethical conduct of biomedical research, including topics in professionalism, authorship, mentoring, data collection, and rigor and reproducibility in the practice of science. The current curriculum was developed by the Graduate Studies Office in collaboration with the Ethics Institute at Dartmouth. In five live sessions in the fall term, graduate training faculty meet with small groups of first-year graduate students and postdoctoral fellows to facilitate discussions on ethical dilemmas that biomedical scientists may encounter in their careers. Case studies will be used to provide a framework for discussions on ethical issues occurring in scientific research.

0.10 Dartmouth units: (CT, NC)

**Core Requirement for Residential MS and PhD*

Offered: Fall (2nd half) - Friday 9:00 am - 11:00 am

PH 701 - Protection of Research Participants

Required course for all Geisel MPH and MS graduate students. Students must complete CITI Training for Human Research both the Biomedical Research Basic Course (Group 1) and the Social/Behavioral Research Basic Course (Group 2). Within each module are seven sections: Introduction; Research Misconduct; Data Acquisition and Management; Peer Review; Mentor & Trainee Responsibilities; Conflict of Interest; and Collaborative Research. Successful completion of this training is a requirement for participation in research at Dartmouth.

0.10 Dartmouth units: (CT, NC)

**Core Requirement for Online and Hybrid MPH, Residential MPH and MS*

Offered: Summer - Online asynchronous

Cancer Biology - Graduate

Program Director: Steven Leach

Program Chair: Steven Fiering

Professors B.C. Christensen (Epidemiology, Community and Family Medicine and Molecular and Systems Biology), M.D. Cole (Molecular and Systems Biology), D.A. Compton (Biochemistry and Cell Biology), S.N. Fiering (Microbiology and Immunology), S.A. Gerber (Molecular and Systems Biology and Biochemistry and Cell Biology), S.D. Leach (Molecular and Systems Biology, Surgery, and Medicine); Associate Professors A.N. Kettenbach (Biochemistry and Cell Biology), T.W. Miller (Molecular and Systems Biology), P.A. Pioli (Microbiology and Immunology), K.S. Samkoe (Engineering and Surgery); Assistant Professors A.B. Gaur (Neurology), B.W. Lau (Pediatrics), A. McKenna (Molecular and Systems Biology), K. Pointer (Radiation Oncology), L. Salas (Epidemiology), P.C. Rosato (Microbiology and Immunology), S. Zhao (Biomedical Data Sciences), X. Wang (Molecular and Systems Biology)

Requirements

All MCB component programs including CANB require that students complete a set of common requirements for their degree, including:

- Three research rotations (Fall, Winter, Spring of the first year).
- Three terms of MCB core courses (Fall, Winter, Spring of the first year).
- One term of a teaching assistantship.*
- One ethics course.
- An on-topic (thesis-related) qualifying examination consisting of a written proposal and an oral defense.
- Three advanced elective courses from the approved elective list.
- Attendance at and participation in Journal Club meetings in 3 out of 4 terms each year.
- Attendance at MCB program functions.
- Preparation, presentation (seminar and defense), and submission of a thesis.

Complete rules can be found

at: <https://graduate.dartmouth.edu/mcb/academics/degree-requirements/about>

* this requirement may be waived for students who transfer into MCB from another program, subject to approval by the MCB Graduate Committee.

In addition to the above requirements, CANB requires that students complete:

- Cancer Biology (CANB 126) as one of the advanced courses.
- Introductory Applied Biostatistics with R (CANB 103) as one of the advanced courses.
- Attendance at $\geq 75\%$ of CANB Student Seminar Series events, and presentation of a seminar annually (subject to schedule availability and at the discretion of the CANB Executive Committee). These events will be held approximately once every other week, but no more than once per week, to provide seminar presentation opportunities for all CANB students.

CANB 126 - Cancer Biology

Instructor: Fiering

This course will present a comprehensive survey of the biology, biochemistry, pharmacology, and genetics of cancer. Students will become familiar with such areas as cancer terminology, epidemiology, carcinogenesis, tumor promotion, metastasis, oncogenes, tumor suppressor genes, growth factors, hormones, immunology, and therapy. Where possible, emphasis will be placed on the most recent cellular and molecular aspects of cancer. The class will be in lecture format and meet for 3 hours each week. Faculty lectures, discussion, and student presentations. Students must be in second year or later in a Geisel PhD program (or receive permission for exception from Course Director).

CANB 132 - Clinical Management of Care

This course will expose non-clinical researchers to the clinical realities of managing cancer through classroom lectures, tumor board case review sessions, and observation of everyday oncology clinic experiences. Students will gain insight into the issues associated with the clinical management of diverse cancer subtypes; an understanding of the complexities involved in treating people/patients, not just the cancer, including consideration and management of the side effects of therapy; and exposure to translational and clinical approaches to cancer research. The format will be a one-hour lecture each week by a practicing clinician, attendance at 5 one-hour tumor board sessions, and 5 half-days of observation in oncology clinics. Students must be in second year or later in a Geisel PhD program (or receive permission for exception from Course Director).

CANB 197 - Grad Research I Level A

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

CANB 198 - Grad Research I Level B

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

CANB 199 - Grad Research I Level C

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

CANB 261 - Cancer Mechanisms and Therapeutics Journal Club

Instructor: Christensen

An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. All students will be required to participate in at least one Journal Club presentation each term that describes work from the current literature and one Research in Progress presentation each academic year that describes their own research.

CANB 297 - Grad Research II Level A

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting

research and also electing two or more other graduate or undergraduate courses.

CANB 298 - Grad Research II Level B

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

CANB 299 - Grad Research II Level C

Instructor: Staff of the program

An original individual experimental or theoretical investigation beyond the undergraduate level in Cancer Biology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Engineering Sciences - Graduate

Chair: Vicki V. May

Professors M. Ackerman, I. Baker, S. Chin, B. Cushman-Roisin, G. Cybenko, E. Fossum, I. Georgakoudi, T. U. Gerngross, K. E. Griswold, R. Halter, K. Keller, J. Liu, L. R. Lynd, G. P. Parker, K. D. Paulsen, B. Pogue, L. R. Ray, E. Santos Jr., R. Sarpeshkar, E. M. Schulson, C. R. Sullivan, S. Taylor, D. Van Citters, X. Zhang; Professors Emeriti J. P. Collier, E. Garmire, U. J. Gibson, R. J. Graves, E. Hansen, A. Hartov, C. E. Hutchinson, F. E. Kennedy, W. Lotko, D. R. Lynch, U. Osterberg, V. F. Petrenko, H. J. Richter, B. U. O. Sonnerup, G. B. Wallis; Associate Professors S. G. Diamond, H. Fang, H. J. Frost, W. Li, G. P. Luke, C. Meyer, K. Odame, M. Q. Phan, K. S. Samkoe, W. J. Scheideler, H. L. Seroussi, J. T. Stauth, V. Vaze, J. Zhao; Assistant Professors A. Boys, T. E. Burgin, C. Chen, B. Ferguson, M. Fitzpatrick, R. Gallivan, B. Goods, K. Hixon, J. Lee, Y. Li, W. Marrero Colon, E. Mayfield, B. Mazaheri, E. L. Murnane, Y. Nakayama, H. Nguyen, W. Ouyang, A. Rizzo, W. J. Scheideler; Senior Lecturers M. Albert, E. Bish, P. Bonfert-Taylor, D. Cullen, U. Gibson, O. Goodenough, P. J. Hoopes, K. Hoyt, K. Kawiaka, E. Korsunskiy, M. Laser, R. Lasky, D. Macaulay, V. May, S. Peterson, P. Robbie, S. Shepherd, M. Testorf, J. Wilson; Lecturers R. Barry, P. Bruza, M. Carpenter, S. Davis, X. Fan, C. Hackett, J. Hannon, R. Harder, M. Kokko, E. Monroe, N. Montgomery, A. Murdza, E. Murphy, G. Pope, B. Schweitzer, F. Shubitidze, P. T. Staats, R. Steinhauer, E. Truex, R. White, P. P. Yu.

To view Engineering Sciences Graduate courses, click here. (p. 904)

To view Engineering Graduate courses, click here. (p. 902)
Additional Thayer School of Engineering graduate courses and program details are available in the Thayer School Guide to Programs and Courses and on the Thayer School of Engineering website.

To view Engineering Sciences Undergraduate requirements, click here. (p. 286)

To view Engineering Sciences Undergraduate courses, click here. (p. 293)

The undergraduate Engineering Sciences major leads to an A.B. degree. It provides engineering students with a common core of Science and Engineering Sciences courses. Interest in the various branches of engineering is accommodated through electives and usually through additional study leading to a Bachelor of Engineering or higher degree. For those students considering careers in such diverse fields as medicine, management, or law, the Engineering Sciences major enables them to better understand our increasingly technological society.

Students interested in a career in Engineering should plan on completing the Bachelor of Engineering or a Master's program. The Bachelor of Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone (410) 347-7700; it is equivalent in technical content to the Bachelor of Science degree in Engineering offered at many other universities but is broader in scope. It requires a minimum of 9 courses beyond the engineering sciences major requirements for the Bachelor of Arts (A.B.). At least 6 courses must have significant engineering design content. Required courses and electives include mathematics, basic science, engineering sciences, and engineering design. The B.E. generally requires up to three terms in residence beyond the 12 terms required for the A.B. degree. Students who enter Dartmouth with advanced standing may be able to complete the B.E. at the same time as the A.B. (i.e., in four years).

The graduate degrees are differentiated according to function. The Master of Engineering (MEng) degree is an entirely course-based program that prepares students for a professional engineering career through a foundational mastery in one of six engineering tracks. The Master of Engineering Management (MEM) is a professional degree for students interested in becoming leaders in both the engineering and business aspects of technology. The Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) are suitable for those interested primarily in research. Additionally a joint M.D./Ph.D. and joint M.D./MEng program is offered in conjunction with the Dartmouth Medical School and a joint MEM/MBA and MEng/MBA program with the Tuck School of Business.

The Thayer School Guide to Programs and Courses should be consulted for detailed information on all engineering programs beyond the A.B. engineering sciences major (i.e. the B.E. and above).

Requirements for the Master of Engineering (MEng)

The Master of Engineering (MEng) degree program is aimed at students seeking to become professional engineers or engineers already in the profession seeking to add depth or acquire specialized knowledge within one of six areas of concentration: Biological and Chemical Engineering; Biomedical Engineering; Electrical and Computer Engineering; Energy Engineering; Materials Science and Engineering; and Mechanical, Operational, and Systems Engineering. The MEng is a course-based degree program that does not require the completion of a thesis. Students are required to complete nine courses, including five core courses and four electives. The Thayer School Guide to Programs and Courses should be consulted for specific academic requirements and detailed information regarding the Master of Engineering degree, including options for Dartmouth students to count courses towards multiple engineering degrees.

Requirements for the Master of Engineering Management (MEM)

The Master of Engineering Management (MEM) program is a professional degree program that combines engineering and management courses taught by faculty from Thayer and Tuck School of Business. Graduates of the program are engineers who understand the business of technology. Students are generally required to complete 14 courses which include required engineering management core courses, applied mathematics electives, open electives, and an industry internship course. The degree is generally completed over the course of five terms. The Thayer School Guide to Programs and Courses should be consulted for specific academic requirements and detailed information regarding the Master of Engineering Management degree, including options for Dartmouth students to count courses towards multiple engineering degrees.

Requirements for the Master's Degree (M.S.)

The Faculty of the Thayer School believes that the education of all graduate students should include reasonable breadth in the areas of applied mathematics and

engineering. The degree requirements are summarized below, and the Thayer School Guide to Programs and Courses should be consulted for specific academic requirements and more detailed information.

In addition to the basic requirements for the Master's degree, which include three terms in residence at Dartmouth, the Department requires:

For the M.S. in Engineering Sciences:

1. All students entering the program are required to take six graduate-level courses. Students with prior graduate credits may transfer up to a maximum of three graduate course credits to count towards their required MS coursework, provided they were not used to satisfy bachelor's degree requirements. Students pursuing multiple degrees at Thayer may count up six applicable classes towards both the Bachelor of Engineering (BE) and Master of Science (MS) degrees.
2. Satisfaction of the following distribution requirements:
 - a. One Applied Mathematics Course (see listings on the Thayer School of Engineering website)
 - b. Minimum of two courses in engineering breadth
 - c. Minimum of three courses in engineering depth
3. A thesis approved by the student's graduate committee and the faculty, demonstrating the ability to do research and contribute to the field.
4. An oral defense of the thesis.

Each student is admitted with a specific faculty advisor who aids in developing their program. The individual course of study must be submitted to, and approved by, the Senior Associate Dean of Research and Graduate Programs during the student's first term of residency. The thesis must be approved by a thesis committee. The thesis committee generally consists of three faculty members from the student's department/program of study (including the thesis advisor). One of the three may be from outside the department/program, but this is not a requirement.

For students recommended for the award of the M.S. degree, the faculty may also recommend the award of the B.E. degree if a substantial portion of the student's undergraduate program was taken at Dartmouth or in one of its official exchange programs and, if in meeting M.S. requirements, the ABET criteria for the award of the B.E. are also satisfied. Students wishing to take advantage of this opportunity should plan their M.S. programs appropriately. At least one term prior to the scheduled M.S. thesis defense, the B.E./M.S. candidate submits a Bachelor of Engineering program plan approved by both their advisor and the Director of the Bachelor of Engineering program to the Registrar.

Requirements for the Doctor's Degree (Ph.D.)

Students with a master's degree (or outstanding performance on a bachelor's degree) in engineering or the physical sciences are eligible for admission to the Doctor of Philosophy program. Consult the current Thayer School Guide to Programs and Courses for additional details on program requirements and procedures. In summary, the requirements for the Ph.D. are as follows:

1. At least nine terms in residence following the Bachelor's degree, three of which will take place after successfully completing the Oral Qualifying Examination. In addition, students are required to:
 - a. Complete ENGG 195, Seminar on Science, Technology and Society (the "Jones Seminar"). This one-hour seminar is a weekly, school-wide meeting of the Thayer community of scholars - faculty, researchers, and graduate students. Credit for ENGG 195 is awarded once a student has attended a minimum of 28 seminars, and
 - b. Participate annually in a Research-in-Progress Workshop (ENGG 198), at which each Candidate in residence presents their individual research progress.
 - c. Complete ENGG 197.1, Professional Development. Credit for ENGG 197.1 is awarded once a student has completed 20 assignments associated with professional development workshops and discussions which are offered on an ongoing basis to Thayer PhD students.
2. Satisfaction of the following course requirements, as part of a program plan submitted to, and approved by, the Senior Associate Dean of Research and Graduate Programs:
 - a. Two applied math courses
 - b. At least two courses representing engineering breadth
 - c. As least four courses representing engineering specialization
3. Technical proficiency in principles and methods of engineering, applied science, and applied mathematics underlying the anticipated thesis research, as evidenced by performance on an oral qualifying examination. The examination covers at least three fundamental areas selected by the Candidate in consultation with their special advisory committee and approved by the Senior Associate Dean of Research and Graduate Programs.
4. Technical breadth in engineering or applied science, as demonstrated by either an approved course of study in

one or more areas outside or secondary to the Candidate's main area of specialization, defense of a research proposal or completion of a project in an area outside the Candidate's main area of specialization.

5. Specialization with mastery at an advanced level of the body of knowledge pertaining to the Candidate's chosen area of research, as demonstrated by the successful oral defense of a thesis proposal, and by completion of a program of study approved by the Senior Associate Dean of Research and Graduate Programs. The extent and content of this program are designed to meet the individual interests and needs of the Candidate.
6. Original research making a significant contribution to knowledge, combined with demonstration of professional expertise in the chosen area of study, as demonstrated by at least the following:
 - a. presentation of elements of the doctoral research at a professional meeting with the Candidate as first author,
 - b. a dissertation of professional quality certified by the Candidate's thesis committee,
 - c. acceptance of at least one manuscript on the doctoral research for publication with the Candidate as first author, and
 - d. public oral presentation and defense of the dissertation.

Please consult the Thayer School Guide to Programs and Courses for additional details regarding Ph.D. Program, including the oral examination, procedures for demonstrating technical breadth, the thesis proposal and defense, and other program information.

Ph.D. Program in Innovation

Thayer School offers a Ph.D. Program in Innovation, which supplements the student's engineering research with specific coursework and practice in applying entrepreneurial skills to move research discoveries to market. Students in the Program in Innovation meet all requirements for admission to candidacy and full admission to the Ph.D. program, including passing an oral qualifying examination and defending a Ph.D. thesis proposal. Specific requirements for the candidates in the Program in Innovation can be found in the Thayer School Guide to Programs and Courses.

Ph.D. Program - Industry Research Op

The PhD industry research option is for people working in industry who wish to conduct research at the company

where they work while pursuing a Dartmouth Engineering PhD with a faculty advisor, or for students performing their dissertation research in industry after completing residency requirements at Dartmouth. Applicants for the PhD industry research option must have spent either at least two years in Industry or have an MS degree and have worked at least one year in Industry.

The student must satisfy all the thesis, course, and other requirements of the PhD program, with the following modifications:

- Students are expected to spend at least six terms in residence (rather than the standard nine terms), and a waiver for reduced residency may be requested, but at minimum the student must be engaged at Dartmouth for no less than three quarters, either continuously or in parts.
- The professional development requirement (ENGG 197.1) is optional for students in this track.

Please consult the Thayer School Guide to Programs and Courses and Thayer website for additional details.

M.D.-Ph.D. Program in Biomedical Engineering

Thayer School of Engineering and the Dartmouth Medical School offer an M.D./Ph.D. program in biomedical engineering. Students must apply to the Medical School, indicating their interest in the joint program. The requirements for the Ph.D. portion of the program are modified to permit a more efficient completion of the dual degree program.

A student may begin by first pursuing two years of study in basic science at the Medical School. Enrollment in Thayer School for two years follows, during which the student would take courses, qualify for Ph.D. candidacy, pass the oral examination, and initiate dissertation research. Alternately, some students prefer to satisfy basic Ph.D. requirements before starting medical school. The research would then be continued in concert with years 3 and 4 of the M.D. program (the clinical years), especially during year 4 where dissertation research would be counted as elective courses toward the M.D. Both degrees are awarded simultaneously after typically 6 to 6 1/2 years of study.

Specific requirements of this program are:

M.D. component: Completion of the 4-year M.D. curriculum. Elective time of year 4 can be devoted to Ph.D. dissertation research. (Consult the Dartmouth Medical School Catalog for details.)

Ph.D. component: Completion of all the requirements for the PhD in Engineering Sciences with the following modifications:

- Students in the M.D./Ph.D. program are expected to spend at least six terms in residence (rather than the standard nine terms), one of which will take place after successfully completing the Oral Qualifying Examination (rather than the standard three terms).
- For M.D./Ph.D. students, credit for ENGG 195 is awarded once a student has attended a minimum of 14 seminars (rather than the standard 28).

All other Ph.D. requirements are identical to those described for the PhD in Engineering Sciences.

Please consult the Thayer School Guide to Programs and Courses for additional details regarding M.D.-Ph.D. Program.

Advanced Graduate Courses

Courses at the 300 level are ‘advanced graduate’ courses, distinguished from 100 and 200-level courses by the standard of accomplishment that is required. These advanced graduate courses comprise an in-depth study of an area of engineering or engineering sciences up to the point where the student is able effectively to read and evaluate current literature in the field and to the point where the student should be ready to undertake original work in the field.

Most 300-level courses are tutorials. The small size of Thayer School allows students to work closely with professors—a significant feature in courses that are expected to provide in-depth study.

These courses reflect areas of significant faculty professional involvement or areas in which they are engaged in advanced research or development.

Please consult the Thayer School Guide to Programs and Courses for the 300 level courses, Engineering Management courses and Project, Research, Independent Study, Seminar and Workshop courses.

Engineering

100 level

ENGG 113 - Image Visualization and Analysis

The goal of this course is to introduce graduate level and senior undergraduate students who are working in imaging research to image processing and visualization in 3D using advanced libraries and fully functional software development framework. The most widely used open source software tools for medical image analysis and visualization will be used as the platform: The Insight Registration Segmentation Toolkit (ITK), the Visualization Toolkit (VTK), OpenCV, Qt, and CMake. ITK is an open-

source, widely adopted, cross-platform system that provides developers with an extensive suite of software tools for image analysis, including fundamental algorithms for image segmentation and registration. VTK is an open-source, widely adopted, software system for 3D computer graphics, modeling, image processing, volume rendering, scientific visualization, and information visualization. The student will gain understanding of the working of all subroutines and practical application implementing these routines into customized workflow. The course will also introduce the use of OpenCV for applying computer vision and machine learning algorithms to biomedical images and data. Moreover, a full software development environment will be employed to create release-quality applications. This will include the use of source version control to track code changes and bugs, Qt for user interface development, CMake for development environment control, and Visual Studio C++ for the coding environment (Python is also permitted for students with substantial experience working with the language). This state of the art forms the basis for most medical visualization software used today, and students will learn the use of these tools and complete required exercises and projects, with an emphasis on real-world clinical applications.

Prerequisite: ENGS 65 or permission of instructor.

ENGG 122 - Advanced Topics in Semiconductor Devices

The MOS device structure is the backbone of nearly all modern microelectronics. In this course the gate-insulator-semiconductor structure, commonly referred to as the metal-oxide-semiconductor or MOS structure, will be studied. The historical background of MOS devices and their fabrication will be briefly reviewed, as well as the basic MOS structure for accumulation, depletion and inversion. Advanced issues such as work function, trapped charge, interface traps, non-equilibrium operation and re-equilibration processes will be covered. Analysis of MOS in 1D including capacitance will be performed. The MOSFET will be analyzed with attention on short-channel effects, scaling, drain-induced barrier lowering, etc. The relationship between physics-based MOS device analysis and TCAD modelling will be explored. Other devices utilizing the MOS concept will be discussed, including power devices, CCDs and imaging devices, and FINFETs. The effects of radiation and other reliability issues will also be addressed. There may be a small number of remote students, who are part of a designated fully remote MEng program, enrolled in this course.

Prerequisite: ENGS 60 or equivalent

ENGG 148 - Structural Mechanics

Development and application of approximate and "exact" analytical and computational methods of analysis to a variety of structural systems, including trusses, two- and three-dimensional frames, plates and/or shells. Modeling

of structural systems as one and multi degree of freedom lumped systems permits analysis under a variety of dynamic loads as well as providing an introduction to vibration analysis.

Prerequisite: ENGS 33

ENGG 149 - Introduction to Systems Identification

This course provides the fundamentals of system identification theory and its applications to mechanical, electrical, civil, and aerospace systems. Several state-of-the-art identification algorithms in current engineering practice will be studied. The following topics are covered: discrete-time and continuous-time models, state-space and input-output models, Markov parameters, observer Markov parameters, discrete Fourier transform, frequency response functions, singular value decomposition, least-squares parameter estimation, minimal realization theory, observer/Kalman filter identification, closed-loop system identification, nonlinear system identification, recursive system identification, and introduction to adaptive control.

Prerequisite: ENGS 22 and ENGS 26, or equivalent

ENGG 168 - Biomedical Radiation Transport

This course will provide a general overview of radiation transport mechanisms in matter, beginning with a derivation of the Boltzmann radiation transport equation, and examining the various approximations possible. Focus on the single-energy Diffusion approximation will be examined in detail, as it relates to neutron diffusion nuclear reactors and optical photon diffusion. Review of photon diffusion in tissue will be discussed as it relates to tissue spectroscopy and imaging. Fundamental research papers in this field will be presented and reviewed, covering aspects of multiple scattering, Mie scattering, and scattering phase functions. Stochastic model-based approaches will be covered as well, such as the Monte Carlo model. Numerical approaches to solving these models will be introduced.

Prerequisite: ENGS 23 or equivalent

ENGG 193 - Statistical Methods in Engineering

Statistics involves the collection, analysis, interpretation, and presentation of data. These tasks are fundamental elements of the engineering profession and, in an increasingly information-driven society, also play an important role in our everyday lives. This course will provide students with tools for structuring data-driven problems, identifying and describing sources of uncertainty, performing inference and hypothesis tests, designing effective experiments, and graphically communicating results. Numerical analysis will be performed using Microsoft Excel and R, a popular open-source statistical programming language. Due to significant overlap in material, students may not earn credit for both ENGS 93 and ENGG 193.

Prerequisite: MATH 13, and working proficiency with probability basics and random variables as taught in ENGS 27, MATH 10, AP Statistics, etc.

ENGG 199 - Special Topics in Engineering Sciences

A special topics lecture course in lieu of, or supplementary to, a 100-level course, as arranged by a faculty member to be used in satisfaction of advanced degree requirements. The course must be approved by the graduate programs committee in advance of the term in which it is offered. No more than two such courses should be used in satisfaction of requirements for any degree. To permit action prior to the term's end, requests for approval must be submitted to the graduate director no later than the eighth week of the term preceding the term in which the course is to be offered. Proposed courses should include full syllabus, resources, and student evaluation methods. Courses that have a 100-level prerequisite should use ENGG 299. ENGG 199 - Special Topic courses are offered a maximum of 3 terms as a 199.xx course. Course topics may be added over the course of the academic year. Please check the Thayer website for which courses are scheduled in any upcoming terms.

200 Level

ENGG 210 - Spectral Analysis

An advanced treatment of digital signal processing for the analysis of time series. A study is made of parametric and nonparametric methods for spectral analysis. The course includes a review of probability theory, statistical inference, and the discrete Fourier Transform. Techniques are presented for the digital processing of random signals for the estimation of power spectra and coherency. Examples are taken from linear system theory and remote sensing using radar. Laboratory exercises will be assigned requiring the use of the computer.

Prerequisite: ENGS 110

ENGG 212 - Communications Theory

An advanced treatment of communications system engineering with an emphasis on digital signal transmission. The course includes a review of probability theory, random processes, modulation, and signal detection. Consideration will be given to channel modeling, the design of optimum receivers, and the use of coding.

Prerequisite: ENGS 110

ENGG 230 - Fatigue and Fracture

A study of the fracture and fatigue behavior of a wide range of engineering materials (metals, ceramics, polymers, biological materials, and composites). Topics include work of fracture, fracture mechanics (linear elastic, elastic-plastic and plastic), fracture toughness measurements, crack stability, slow crack growth,

environmentally assisted cracking, fatigue phenomenology, the Paris Law and derivatives, crack closure, residual stress effects, and random loading effects. These topics will be presented in the context of designing to avoid fracture and fatigue.

Prerequisite: ENGS 130 or permission of the instructor.

ENGG 261 - Biofuels and Bioenergy

Bioenergy technologies will be surveyed, including feedstocks, bioelectricity production, biofuel production, and conversion technologies. Fermentation-derived biofuels will then be considered in more detail including first, and second, generation biofuels as well as the fundamentals of microbial cellulose utilization. Consolidated bioprocessing will be examined with respect to feedstock solubilization, metabolic engineering, technoeconomic analysis, and research frontiers. Sustainability tools will be introduced, and assessments discussed. The course will feature readings from the literature, guest lectures by field leaders, and student projects.

Prerequisite: ENGS 157 and ENGS 161 and permission

Engineering Sciences-Graduate

100 Level

ENGS 100 - Methods in Applied Mathematics I

Concepts and methods used in the treatment of linear equations with emphasis on matrix operations, differential equations, and eigenvalue problems will be developed following a brief review of analytic function theory. Topics include the Fourier integral, finite and infinite dimensional vector spaces, boundary value problems, eigenfunction expansions, Green's functions, transform techniques for partial differential equations, and series solution of ordinary differential equations. Properties and uses of orthogonal polynomials and special functions such as the hypergeometric, Bessel, Legendre, and gamma functions are included. Applications in engineering and physics are emphasized.

Prerequisite: ENGS 23 or permission of instructor

ENGS 102 - Game-theoretic Design, Learning and Engineering

Game theory is a field of applied mathematics that describes and analyzes interactive decision-making when two or more parties are involved. Since finding a firm mathematical footing in the 1920's, it has been applied to a wide variety of fields, including economics, political science, foreign policies, engineering, and machine learning, just to name a few. This course will serve both as an introduction to as well as a survey of applications of game theory, as it has been useful for designing wireless networks, devising market incentives, implementing

auction, making resource allocation, designing voting schemes, just to name a few. Therefore, after covering the mathematical foundational work with some measure of mathematical rigor, we will examine many real-world applications, both historical and current. Topics include 2-person/n-person game, cooperative/non-cooperative game, static/dynamic game, strategic/coalitional game, learning in games, price of anarchy, mechanism design and generative adversarial networks and their respective examples and applications. We will also spend some time discussing well known examples such as prisoner's dilemma, trust game, etc. Further attention will be given to the meaning and the computation complexity of finding of Nash equilibrium as well as Programming at the level of Python and ML software packages (PyTorch, Tensorflow, etc.) will be used to supplement the understanding of the mathematics and algorithms.

Prerequisite: MATH 1 or 3, and MATH (8 or 9) or MATH 24, MATH 20 is a plus; and some level of proficiency in a programming language such as C/C++, Julia, Python, R, or MATLAB required

ENGS 103 - Operations Research

This course provides an overview of a broad range of deterministic and probabilistic operations research models with a focus on engineering applications. Emphasis is on developing strong formulations, understanding key solution concepts, developing efficient algorithms, and grasping the advantages and limitations of each approach. After a brief overview of linear and discrete optimization models, the course covers four main types of techniques: network models, queuing theory, discrete events simulation and game theoretic analysis. Various network models and the corresponding solution algorithms are discussed. Key results and applications of queuing models are presented. Uncertainty associated with real-world modeling is captured through simulation techniques with specific emphasis on discrete events simulation. Equilibrium modeling concepts for strategic form games and extensive form games are introduced as extensions of the core optimization concepts. Application examples are drawn from aerospace, biomedical, civil, computer, electrical, industrial, mechanical, and systems engineering.

Prerequisite: ENGS 93 or equivalent

ENGS 104 - Optimization Methods for Engineering Applications

An introduction to various methods of optimization and their uses in modern engineering. Students will learn to formulate and analyze optimization problems and apply optimization techniques in addition to learning the basic mathematical principles on which these techniques are based. Topic coverage includes linear programming, nonlinear programming, dynamic programming, combinatorial optimization and Monte Carlo methods.

Prerequisite: MATH 22 and ENGS 27 or equivalents, or permission of instructor

ENGS 105 - Computational Methods for Partial Differential Equations

This course concentrates on the numerical solution of partial differential equations commonly encountered in Engineering Sciences. Finite difference and finite element methods are used to solve problems in heat flow, wave propagation, vibrations, fluid mechanics, hydrology, and solid mechanics. The course materials emphasize the systematic generation of numerical methods for elliptic, parabolic, and hyperbolic problems, and the analysis of their stability, accuracy, and convergence properties. Weekly computer exercises will be required to illustrate the concepts discussed in class.

Prerequisite: MATH 23 and ENGS 91 (COSC 71), or equivalents

ENGS 106 - Principles of Machine Learning

Machine learning is a set of algorithms in the discipline of AI that enables various systems to learn and improve from data and experience without being explicitly given a set of rules or formulas. It almost seems like magic sometimes, but a distinct goal in this course is to learn that machine learning is not magic but, rather, is based on very rigorous mathematics and engineering principles with a vast number of applications. This course will start with requisite mathematical backgrounds (probability theory, statistics, some basic linear algebra, etc.). Then we will discuss supervised ML models, namely linear regression and classification models, neural network models, and kernel machine models. Finally, we will pivot to unsupervised learning and discuss unsupervised ML learning algorithms, such as probabilistic graphical models, K-clustering algorithm, EM (Expectation Maximization) algorithm, autoencoders, variational inference, PCA/ICA, density estimate, etc. we will also discuss sampling as time permits. Programming at the level of Python and ML software packages (PyTorch, Tensorflow, etc.) will be used to supplement the understanding of the mathematics and algorithms covered in this course. To be sure, the topics covered in this course are relevant for building, understanding, and analyzing wide range of current state-of-the-art machine learning models, but the focus will be on laying a strong theoretical foundation and engineering principles for understanding how the ideas of machine learning are used in fields such as economics, finance, policymaking, and healthcare, just to name a few.

Prerequisite: Multi-variable calculus (MATH 8 or MATH 9), linear algebra (MATH 22 or MATH 24), and probability (MATH 20, ENGS 27, or ENGS 93) or equivalent. ENGS 96 encouraged.

Cross-Listed as: COSC 179

ENGS 107 - Bayesian Statistical Modeling and Computation

This course will introduce Bayesian approaches to statistical modeling as well as the computational methods necessary to implement these approaches in research and applications. We will cover methods of statistical learning and inference for a variety of subject areas. Students will have the opportunity to apply these concepts and methods in the context of their own research or area of application in the form of a term project.

Prerequisite: ENGS 93 or comparable course in probability and statistics; previous programming experience with Matlab, C, S, R, Julia, or similar language. (MATH 71/COSC 71, ENGS 91, COSC 70/COSC 170 are examples for appropriate ways to fulfill the programming requirement.), or permission of the instructor.

ENGS 108 - Applied Machine Learning

This course will introduce students to modern machine learning techniques as they apply to engineering and applied scientific and technical problems. Techniques such as recurrent neural networks, deep learning, reinforcement learning and online learning will be specifically covered. Theoretical underpinnings such as VC-Dimension, PAC Learning and universal approximation will be covered together with applications to audio classification, image and video analysis, control, signal processing, computer security and complex systems modeling. Students will gain experience with state-of-the-art software systems for machine learning through both assignments and projects. Because of the large overlap in material covered, no student will receive credit for both ENGS 108 and COSC 74/174.

Prerequisite: ENGS 20 or equivalent, MATH 22 or equivalent, ENGS 27 or ENGS 93 or equivalent.

ENGS 109 - High-dimensional Sensing and Learning (HdSL)

Sparsity has become a very important concept in recent years in applied mathematics, signal and image processing, and machine learning. The key idea is that many classes of natural signals can be described by only a small number of significant degrees of freedom. This course offers a complete coverage of the recently-emerged field of compressed sensing, which asserts that, if the true signal is sparse to begin with, accurate, robust, and even perfect signal recovery can be achieved from just a few randomized measurements. The course will then proceed to explore how and why this key concept of sparsity may play an important role in sampling theory and learning theory and be applied to a wide variety of real-world applications such as hyper-spectral imaging, cognitive radio, MRI, speech recognition, etc. The focus is on describing the novel ideas that have emerged in sparse recovery with emphasis on theoretical foundations, practical numerical algorithms, and various related signal processing

applications. Students from diverse background (engineering, medicine, mathematics, etc.) who are either interested in the subject or want to apply this new theory for their research are encouraged to attend.

Prerequisite: (MATH 8 or MATH 9) or (MATH 22 or MATH 24); MATH 20 is a plus; some proficiency of programming language (ENGS 20 or COSC 10)

ENGS 110 - Signal Processing

Continuous and discrete-time signals and systems. The Discrete Fourier Transform and the Fast Fourier Transform. Linear filtering of signals and noise. Characterization of random signals using correlation functions and power spectral densities. Problems will be assigned that require the use of the computer.

Prerequisite: ENGS 32 and ENGS 92 or equivalents

ENGS 111 - Digital Image Processing

Digital image processing has come into widespread use in many fields including Medicine, industrial process monitoring, military and security applications, as well as satellite observation of the earth. This course will cover many aspects of image processing which students will find valuable in their research or personal interest. Topics will include: image sources, computer representation of images and formats, operations on images and image analysis. In this course we will stretch the conventional notion of images from 2D pixel arrays to include 3D data sets and we will explore how one can process such stacks of voxels to produce useful information. This course will also touch on some advanced topics in image processing which may vary based on students interests. This course will require the completion of a project selected by the student.

Prerequisite: ENGS 92 and ENGS 93, or equivalents

ENGS 112 - Modern Information Technologies

This course covers current and emerging information technologies, focusing on their engineering design, performance and application. General topics such as distributed component and object architectures, wireless networking, web computing and information security will be covered. Specific subjects will include Java, CORBA, JINI public key cryptography, web search engine theory and technology, and communications techniques relevant to wireless networking such as Code Division Multiple Access protocols and cellular technology.

Prerequisite: ENGS 20, ENGS 93 and ENGS 27 or COSC 60. ENGS 93 can be taken concurrently

ENGS 114 - Networked Multi-Agent Systems

Design and analysis of networked systems comprised of interacting dynamic agents will be considered. Inspired by the cohesive behavior of flocks of birds, we design self-organizing engineering systems that mimic a sense of coordinated motion and the capability of collaborative

information processing similar to flocks of birds. Examples include multi-robot networks, social networks, sensor networks, and swarms. The course combines concepts in control theory, graph theory, and complex systems in a unified framework.

Prerequisite: ENGS 26, MATH 23, or equivalents plus familiarity with MATLAB

ENGS 115 - Parallel Computing

Parallel computation, especially as applied to large scale problems. The three main topics are: parallel architectures, parallel programming techniques, and case studies from specific scientific fields. A major component of the course is laboratory experience using at least two different types of parallel machines. Case studies will come from such applications areas as seismic processing, fluid mechanics, and molecular dynamics.

Prerequisite: ENGS 91 (or COSC 71) or equivalent

ENGS 116 - Computer Engineering: Computer Architecture

This course provides an introduction to the field of computer architecture. The history of the area will be examined, from the first stored program computer to current research issues. Topics covered will include successful and unsuccessful machine designs, cache memory, virtual memory, pipelining, instruction set design, RISC/CISC issues, and hard-ware/software tradeoffs. Readings will be from the text and an extensive list of papers. Assignments will include homework and a substantial project, intended to acquaint students with open questions in computer architecture.

Prerequisite: ENGS 31 and COSC 51; COSC 57, COSC 58, or equivalent recommended.

Cross-Listed as: COSC 251

ENGS 117 - Computational Imaging

An examination of computational methods in imaging science. An introduction into imaging theory is presented, including wave propagation, image formation, imaging systems, image quality, and noise sources. Then, advanced topics such as super-resolution imaging, compressed sensing, spectroscopic imaging, wavefront shaping, and holography are studied. Material draws heavily from recent literature. The course incorporates programming projects, critical reviews of journal articles, and construction of original review papers.

Prerequisite: ENGS 92 or equivalent

ENGS 120 - Electromagnetic Waves: Analytical and Modeling Approaches

Conceptual development, analysis, and modeling in electromagnetic wave propagation, including boundary conditions, material properties, polarization, radiation,

scattering, and phased arrays; emerging research and applications in the areas of electromagnetics and materials.

Prerequisite: ENGS 64 or equivalent

ENGS 121 - Implementations of Quantum Information

In this course, you will learn how to build a quantum computer. We will start with a review of the basic principles of quantum computing. Then, we will discuss the latest experimental platforms for quantum information processing, including trapped ions, superconducting, neutral atoms, quantum dots, topological, and photonic qubits. We will explore how each platform stores, manipulates, and measures quantum information. We will also discuss the challenges of building a large-scale quantum computer, such as error correction and scalability, through reading seminal papers in the field. Upon completion of the course, you will be prepared to critically evaluate experimental papers in quantum computing and evaluate the error rates and scalability of different platforms.

Prerequisite: PHYS 50, and one of: ENGS 53 or PHYS 75; or their equivalents. A basic knowledge of Python is assumed.

ENGS 123 - Optics

The physical principles and engineering applications of optics, with an emphasis on optical systems. Geometric optics: ray tracing, first-order analysis, imaging, radiometry. Wave optics: polarization, interference, diffraction, Fourier optics. Sources and detectors. Fiber optic systems.

Prerequisite: ENGS 23 or PHYS 41, and ENGS 92 or equivalent

Cross-Listed as: PHYS 123

ENGS 124 - Optical Devices and Systems

Light has now taken its place beside electricity as a medium for information technology and for engineering and scientific instrumentation. Applications for light include telecommunications and computers, as well as instrumentation for materials science, biomedical, mechanical and chemical engineering. The principles and characteristics of lasers, detectors, lenses, fibers and modulators will be presented, and their application to specific optical systems introduced. The course will be taught in an interdisciplinary way, with applications chosen from each field of engineering. Students will choose design projects in their field of interest.

Prerequisite: ENGS 23

Cross-Listed as: PHYS 124

ENGS 125 - Power Electronics and Electromechanical Energy Conversion

Controlled use of energy is essential in modern society. As advances in power electronics extend the capability for precise and efficient control of electrical energy to more applications, economic and environmental considerations provide compelling reasons to do so. In this class, the principles of power processing using semiconductor switching are introduced through study of pulse-width-modulated dc-dc converters. High-frequency techniques such as soft-switching are analyzed. Magnetic circuit modeling serves as the basis for transformer, inductor, and electric machine design. Electromechanical energy conversion is studied in relation to electrostatic and electromagnetic motor and actuator design. Applications to energy efficiency, renewable energy sources, robotics, and micro-electromechanical systems are discussed. Laboratory exercises lead to a project involving switching converters and/or electric machines.

Prerequisite: ENGS 23 and ENGS 32

ENGS 126 - Analog Integrated Circuit Design

Design methodologies of very large scale integration (VLSI) analog circuits as practiced in industry will be discussed. Topics considered will include such practical design considerations as size and cost; technology processes; modeling of CMOS, bipolar, and diode devices; advanced circuit simulation techniques; basic building blocks; amplifiers; and analog systems. A design project is also required in which the student will design, analyze, and optimize a small analog or mixed analog/digital integrated circuit. This design and some homework assignments will require the student to perform analog and digital circuit simulations to verify circuit operation and performance. Lectures will be supplemented by guest lecturers from industry.

Prerequisite: ENGS 32 and ENGS 61, or permission of instructor

ENGS 127 - Bioelectronics

In this course, the fundamentals and applications of micro- and nano-technology-based bioelectronics are introduced. Topics include bioelectricity, biosensor basics, bioelectronic device fabrication, integrated circuit packaging, and in-depth discussions on biopotential electrodes for the recording and stimulation of bioelectricity. Medical device regulations will also be introduced together with safety and ethical issues as critical considerations towards biomedical device translation and commercialization. The course emphasizes the design and analysis methods in developing new bioelectronics. The course project is designed for students to gain experiences and insights in utilizing what's learned in this course to conduct in-depth critical reviews of recent bioelectronic developments.

Prerequisite: ENGS 22 and CHEM 5, or graduate student standing

ENGS 128 - Advanced Digital Systems Design

Field-programmable gate arrays (FPGAs) have become a major fabric for implementing digital systems, rivaling application-specific integrated circuits (ASICs) and microprocessors/microcontrollers, particularly in applications requiring special architectures or high data throughput, such as digital signal processing. Hardware description languages (HDLs) have become the dominant method for digital system design. This course will advance the student's understanding of FPGA design flow and ability to perform HDL-based design and implementation on FPGAs. Topics include: FPGA architectures, digital arithmetic, pipelining and parallelism, efficient design using register transfer level coding and IP cores, computer-aided tools for simulation, synthesis, and debugging. The course is graded on a series of laboratory exercises and a final project.

Prerequisite: ENGS 31 and ENGS 62 or COSC 51

ENGS 129 - Biomedical Circuits and Systems

This course covers the fundamental principles of designing electronic instrumentation and measurement systems, including (i) operation and use of a range of transducers (ii) design of sensor interface circuits (iii) operation and use of different analog-to-digital converters (iv) signal processing algorithms and (v) event-driven microcontroller programming. While these engineering principles will be illustrated in the context of biomedical applications, they are equally relevant to other instrumentation and measurement scenarios. In the first half of the course, there are weekly labs during which students build various biomedical devices, such as an ECG-based heart rate monitor, an electronic stethoscope and an automatic blood pressure monitor. Each of these labs underscores a specific principle of instrumentation and measurement system design. The second half of the course is focused on a group project to build a single, moderately-complex piece of instrumentation, such as a blood oxygenation monitor.

Prerequisite: ENGS 28 and ENGS 32

ENGS 130 - Mechanical Behavior of Materials

A study of the mechanical properties of engineering materials and the influence of these properties on the design process. Topics include tensorial description of stress and strain, elasticity, plastic yielding under multiaxial loading, flow rules for large plastic strains, microscopic basis for plasticity, viscoelastic deformation of polymers, creep, fatigue, and fracture.

Prerequisite: ENGS 24 and ENGS 33, or equivalent

ENGS 131 - Science of Solid State Materials

This course provides a background in solid state physics and gives students information about modern directions in research and application of solid state science. The course serves as a foundation for more advanced and specialized courses in the engineering of solid state devices and the properties of materials. The main subjects considered are crystal structure, elastic waves-phonons, Fermi-Dirac and Bose-Einstein statistics, lattice heat capacity and thermal conductivity, electrons in crystals, electron gas heat capacity and thermal conductivity, metals, semiconductors, superconductors, dielectric and magnetic properties, and optical properties. Amorphous solids, recombination, photoconductivity, photoluminescence, injection currents, semiconductor lasers, high temperature superconductors, and elements of semiconductor and superconductor microelectronics are considered as examples.

Prerequisite: ENGS 24 or PHYS 24 or CHEM 76 or equivalent

ENGS 132 - Thermodynamics and Kinetics in Condensed Phases

This course discusses the thermodynamics and kinetics of phase changes and transport in condensed matter, with the objective of understanding the microstructure of both natural and engineered materials. Topics include phase equilibria, atomic diffusion, interfacial effects, nucleation and growth, solidification of one-component and two-component systems, solubility, precipitation of gases and solids from supersaturated solutions, grain growth, and particle coarsening. Both diffusion-assisted and diffusionless or martensitic transformations are addressed. The emphasis is on fundamentals. Applications span the breadth of engineering, including topics such as polymer transformations, heat treatment of metals, processing of ceramics and semiconductors. Term paper.

Prerequisite: ENGS 24 and ENGS 25, or equivalent

ENGS 133 - Methods of Materials Characterization

This survey course discusses both the physical principles and practical applications of the more common modern methods of materials characterization. It covers techniques of both microstructural analysis (OM, SEM, TEM, electron diffraction, XRD), and microchemical characterization (EDS, XPS, AES, SIMS, NMR, RBS and Raman spectroscopy), together with various scanning probe microscopy techniques (AFM, STM, EFM and MFM). Emphasis is placed on both the information that can be obtained together with the limitations of each technique. The course has a substantial laboratory component, including a project involving written and oral reports, and requires a term paper.

Prerequisite: ENGS 24 or permission

Cross-Listed as: PHYS 128 and CHEM 137

ENGS 134 - Nanotechnology

Current papers in the field of nanotechnology will be discussed in the context of the course material. In the second half of the term, students will pick a topic of interest and have either individual or small group meetings to discuss literature and research opportunities in this area. The students will prepare a grant proposal in their area of interest.

Prerequisite: ENGS 24 or PHYS 19 or CHEM 6, or equivalent

ENGS 135 - Thin Films and Microfabrication Technology

This course covers the processing aspects of semiconductor and thin film devices. Growth methods, metallization, doping, insulator deposition, patterning, and analysis are covered. There are two major projects associated with the course - an experimental investigation performed in an area related to the student's research or interests, and a written and oral report on an area of thin film technology.

Prerequisite: ENGS 24 or equivalent

ENGS 136 - Electrochemical Energy Materials

Electrochemical energy materials and devices are playing a vital role in our technology driven society, and are in massive and rapidly growing demand for applications ranging from portable electronics to electric cars, from grid-scale energy storage to defense purposes. This course will give an introduction to the materials developments and characterizations in diverse electrochemical devices, with a focus on various electrode materials and technologies. Topics include, for example, basic principles of electrochemistry; introduction of a series of electrochemical energy storage devices; materials in emerging new battery technologies; photoelectrochemistry and photovoltaic devices. This course focuses on understanding materials science and challenges in modern electrochemical devices. For example, how to engineer the structures and properties of materials to maximize their electrochemical performances? How to characterize structures and compositions of electrochemical materials? The course also includes guest lectures to introduce a variety of energy materials for broad applications, such as solar cells and electrochemical sensing. (It is assumed that students do not have background in electrochemistry.)

Prerequisite: ENGS 24 or permission of instructor

ENGS 137 - Molecular and Materials Design using Density Functional Theory

Density Functional Theory (DFT) has become a very powerful tool to compute and predict the properties of molecules and materials. This class will focus on how DFT can be used to compute a large range of materials and molecules properties. The class will expose the

fundamentals of DFT but also the practical aspects involved in running computations. A comprehensive number of properties will be studied: structural, mechanical, thermodynamical, optical, electrical and magnetic. The student will learn how to use a DFT code through computational problem sets. The class will as well focus on case studies from the scientific literature presented by students and discussed in class. A strong emphasis will be on the critical assessment of the results obtained by DFT and on the use of the technique to perform prediction and design.

Prerequisite: ENGS 24 or PHYS 24 or CHEM 76 or equivalent

ENGS 138 - Corrosion and Degradation of Materials

This course gives an introduction to the basic principles and applications of corrosion science that underpin extensions to practice. Topics include the thermodynamics and kinetics of electrochemical reactions to the understanding of such corrosion phenomena as passivity, crevice corrosion and pitting, and mechanically assisted corrosion; discussion of methods of corrosion control and prevention; mechanism and application of high-temperature oxidation (dry corrosion); applications to current materials degradation problems in marine environments, petrochemical and metallurgical industries, and energy storage/conversion systems.

Prerequisite: ENGS 24

ENGS 139.1 - Polar Science & Engineering: Solidification, Sea Ice, Strength & Fracture of Ice

This course focusses on three topics relevant to science and engineering within the polar regions of Earth: solidification of fluids, the nature of sea ice and the strength and fracture of ice. Each topic is treated as a separate module, 8-10 lectures in length.

Prerequisite: ENGS 23 or permission of the instructor

ENGS 139.2 - Polar Science & Engineering: Physics & Chemistry of Ice, Polar Glaciology, Remote Sensing

This course focusses on three topics relevant to science and engineering within the polar regions of Earth: physics and chemistry of ice, glacial hydrology and remote sensing of polar landscapes., 8-10 lectures in length.

Prerequisite: ENGS 24, general chemistry (full year), or permission of the instructor

ENGS 142 - Intermediate Solid Mechanics

Exact and approximate solutions of the equations of elasticity are developed and applied to the study of stress and deformation in structural and mechanical elements. The topics will include energy methods, advanced problems in torsion and bending, stress concentrations, elastic waves and vibrations, and rotating bodies. Although most applications will involve elastic deformation, post-

yield behavior of elastic-perfectly plastic bodies will also be studied. The course will also include numerous applications of finite element methods in solid mechanics.

Prerequisite: ENGS 71 or ENGS 76 or equivalent

ENGS 144 - Engineering Simulation for Mechanical Design and Analysis

This course emphasizes the practical application of state-of-the-art engineering simulation tools and techniques for mechanical design and analysis. Students will create virtual prototypes and conduct fluid flow, heat transfer, and structural analyses using sophisticated computational models to predict mechanical performance under real life conditions. The course includes a survey of techniques for coupled multiphysics simulations such as thermo-fluid and fluid-structure interactions. Performance-based, simulation-driven design and design optimization concepts will be introduced. Topics presented in the classroom will be reinforced through hands-on tutorial exercises and the completion of a simulation project.

Prerequisite: ENGS 76 plus at least one of ENGS 23, ENGS 25, or ENGS 34 (or permission of the instructor)

ENGS 145 - Modern Control Theory

A continuation of ENGS 026, with emphasis on digital control, state-space analysis and design, and optimal control of dynamic systems. Topics include review of classical control theory; discrete-time system theory; discrete modeling of continuous-time systems; transform methods for digital control design; the state-space approach to control system design; optimal control; effects of quantization and sampling rate on performance of digital control systems. Laboratory exercises reinforce the major concepts; the ability to program a computer in a high-level language is assumed.

Prerequisite: ENGS 26

ENGS 146 - Computer-Aided Mechanical Engineering Design

An investigation of techniques useful in the mechanical design process. Topics include computer graphics, computer-aided design, computer-aided manufacturing, computer-aided (finite element) analysis, and the influence of manufacturing methods on the design process. Project work will be emphasized.

Prerequisite: ENGS 76

ENGS 147 - Mechatronics

Mechatronics is the systems engineering approach to computer-controlled products. This course will integrate digital control theory, real-time computing, software design, sensing, estimation, and actuation through a series of laboratory assignments, complementary lectures, problem sets, and a final project. Topics covered will include microprocessor based real-time computing, digital

control, state estimation, signal conditioning, sensors, autonomous navigation, and control architectures for autonomous systems.

Prerequisite: ENGS 26 or ENGS 145 and two of ENGS 31, ENGS 32, ENGS 33, ENGS 76 or equivalent

ENGS 150 - Intermediate Fluid Mechanics

Following a review of the basic equations of fluid mechanics, the subjects of potential flow, viscous flows, boundary layer theory, turbulence, compressible flow, and wave propagation are considered at the intermediate level. The course provides a basis for subsequent more specialized studies at an advanced level.

Prerequisite: ENGS 25 and ENGS 34, or permission of the instructor

ENGS 151 - Environmental Fluid Mechanics

Applications of fluid mechanics to natural flows of water and air in environmentally relevant systems. The course begins with a review of fundamental fluid physics with emphasis on mass, momentum and energy conservation. These concepts are then utilized to study processes that naturally occur in air and water, such as boundary layers, waves, instabilities, turbulence, mixing, convection, plumes and stratification. The knowledge of these processes is then sequentially applied to the following environmental fluid systems: rivers and streams, wetlands, lakes and reservoirs, estuaries, the coastal ocean, smokestack plumes, urban airsheds, the lower atmospheric boundary layer, and the troposphere. Interactions between air and water systems are also studied in context, e.g. sea breeze in the context of the lower atmospheric boundary layer.

Prerequisite: ENGS 25, ENGS 34 and ENGS 37, or equivalents

ENGS 152 - Geophysical Fluid Dynamics

Geophysical Fluid Dynamics is the study of planetary flows in the atmosphere and ocean basins. It underpins the study of climate dynamics. After a review of the physics of mass, momentum, and energy balances within approximations suitable to planetary flows, and exposition of the effect of planetary rotation (the Coriolis effect), the course continues with the study of boundary layers, waves, instabilities, mixing and turbulence in their planetary manifestations. These concepts are then utilized to study the general oceanic and atmospheric circulations, heat transfer at the hemispheric scale, and climate-affecting large-scale oscillations such as the North Atlantic Oscillation (NAO), the Atlantic Multidecadal Oscillation (AMO), and the El Niño/Southern Oscillation (ENSO). It concludes with specific topics related to sea-ice interactions.

Prerequisite: PHYS 34 or equivalent, or permission of the instructor

ENGS 153 - Computational Plasma Dynamics

Theory and computational techniques used in contemporary plasma physics, especially nonlinear plasma dynamics, including fluid, particle and hybrid simulation approaches, also linear dispersion codes and data analysis. This is a "hands-on" numerical course; students will run plasma simulation codes and do a significant amount of new programming (using Matlab).

Prerequisite: PHYS 68 or equivalent with ENGS 91 or equivalent recommended, or permission of the instructor

Cross-Listed as: PHYS 118

ENGS 155 - Intermediate Thermodynamics

The concepts of work, heat, and thermodynamic properties are reviewed. Special consideration is given to derivation of entropy through information theory and statistical mechanics. Chemical and phase equilibria are studied and applied to industrial processes. Many thermodynamic processes are analyzed; the concept of exergy (availability) is used to evaluate their performance, and identify ways to improve their efficiency.

Prerequisite: ENGS 25

ENGS 156 - Heat, Mass, and Momentum Transfer

Fundamentals of convection, conduction, radiation, mass, and momentum transport. Basic conservation laws and rate equations in laminar and turbulent flows. Exact solutions. Approximate solutions using boundary layer or integral techniques. Empirical methods. Analysis of engineering systems.

Prerequisite: ENGS 25 and ENGS 34

ENGS 157 - Chemical Process Design

An in-depth exposure to the design of processes featuring chemical and/or biochemical transformations. Topics will feature integration of unit operations, simulation of system performance, sensitivity analysis, and system-level optimization. Process economics and investment return will be emphasized, with extensive use of the computer for simulation and analysis.

Prerequisite: ENGS 36

ENGS 158 - Chemical Kinetics and Reactors

The use of reaction kinetics, catalyst formulation, and reactor configuration and control to achieve desired chemical transformations. The concepts and methods of analysis are of general applicability. Applications include combustion, fermentations, electrochemistry, and petrochemical reactions.

Prerequisite: ENGS 36

ENGS 159 - Molecular Sensors & Nanodevices in Biomedical Engineering

Introduction to fundamentals and major types of molecular sensor systems, scaling laws of device miniaturization, and detection mechanisms, including molecular capture mechanisms; electrical, optical, and mechanical transducers; micro-array analysis of biomolecules; semiconductor and metal nanosensors; microfluidic systems; and microelectromechanical systems (MEMS, BioMEMS) design, fabrication and applications for bioengineering. Three lab sessions are designed to gain hands-on experience on microfluidic chip and soft lithography, gold nanorods-based biomolecular sensors, micro-reactors using colloidal chemistry in engineering of nanoparticles for biomedical applications in sensing and imaging.

Prerequisite: ENGS 22, CHEM 6, or equivalent

ENGS 161 - Metabolic Engineering

Metabolic engineering combines aspects of chemical engineering, systems biology and synthetic biology. This course focuses on developing a quantitative understanding of metabolic processes within the cell. Although metabolism is a complex process, it is determined by a small number of physical constraints, including enzyme activity, mass balance and thermodynamics. In this course you will learn to perform a mass balance, construct and analyze a stoichiometric network, simulate a series of kinetic reactions, and analyze isotope tracer experiments. Key genetic techniques, including CRISPR, will be presented. Computational analysis will be performed using COBRA and Equilibrator via Python and associated tools in the Python Data Science stack. These tools will be applied first to several canonical examples from the metabolic engineering literature and then to a project of your choosing.

Prerequisite: ENGS 35/ENGS 160 and a non-introductory course in biochemistry or molecular biology, or permission of the instructor

ENGS 162 - Basic Biological Circuit Engineering

This course will provide a comprehensive introduction to the design, modeling, and experimental implementation of synthetic bio-molecular circuits in living cells. Simple but sophisticated synthetic biological circuits will be implemented and tested in microbial cells in the laboratory. Computer aided design, modeling, and simulation will use an industry standard electronic circuit design tool showing how to design, model, and fit actual experimental biological data such that engineering circuit theory and biological experiment agree. Not open to students who

have taken ENGS 59.

Prerequisite: MATH 3 or MATH 8 or equivalent experience in Basic Calculus, CHEM 5, BIOL 13. Experience in Molecular Biology is useful (e.g. ENGS 35, BIOL 45, & BIOL 46 or equivalent) but not necessary. Experience in Signals and System Modeling is also useful (e.g. ENGS 22) but not necessary.

ENGS 163 - Advanced Protein Engineering

This course will build on molecular engineering fundamentals introduced in ENGS 58 and equip students to formulate novel engineered molecules by translating methods into practical design proposals. The three components of any protein engineering effort will be surveyed: host strain, library design, and selective pressure. Both gold standard and novel engineering methodologies will be studied, and tradeoffs among different techniques will be examined through detailed case studies. Data presentation and interpretation skills will be developed by examining current literature focused on proteins with practical utility.

Prerequisite: ENGS 58, or ENGS 160, or BIOCHEM 101. Equivalent courses accepted with instructor's permission.

ENGS 164 - Tissue Engineering

This course will provide an overview of the field of Tissue Engineering, focusing on the development of biological constructs to replace, restore, and regenerate tissue. Content will include key concepts related to tissue structure, cellular fate processes, biomaterials, and the large-scale production of tissue engineered scaffolds. This course will incorporate lectures, quizzes, journal articles, and group projects for students to build a strong background in tissue engineering and experience the steps of designing a tissue engineered construct to be moved to market.

Prerequisite: ENGS 56 or ENGS 165, or both ENGS 24 and BIOL 12, or equivalent

ENGS 165 - Biomaterials

Consideration of material problems is perhaps one of the most important aspects of prosthetic implant design. The effects of the implant material on the biological system as well as the effect of the biological environment on the implant must be considered. In this regard, biomaterial problems and the bioelectrical control systems regulating tissue responses to cardiovascular and orthopedic implants will be discussed. Examples of prosthetic devices currently being used and new developments of materials appropriate

for future use in implantation will be taken from the literature.

Prerequisite: ENGS 24, or equivalent

ENGS 166 - Quantitative Human Physiology

This is a comprehensive review of the integrated functions of cells, organs, and systems of the human body, focusing both on physiology and quantitation. The hierarchy of systems is reviewed with basic explanation as well as function-based analysis. The educational goal is to acquire a working knowledge of most major body systems, and an expert level ability for quantitative modeling and measurement of their function.

Prerequisite: ENGS 22 or equivalent; BIOL 12 or BIOL 14 or BIOL 30; ENGS 23 or MATH 23 or PEMM 101

ENGS 167 - Medical Imaging

A comprehensive introduction to all major aspects of standard medical imaging systems used today. Topics include radiation, dosimetry, x-ray imaging, computed tomography, nuclear medicine, MRI, ultrasound, and imaging applications in therapy. The fundamental mathematics underlying each imaging modality is reviewed and an engineering picture of the hardware needed to implement each system is examined. The course will incorporate a journal club review of research papers, term tests, and a term project to be completed on an imaging system.

Prerequisite: ENGS 92 (may be taken concurrently)

ENGS 169 - Intermediate Biomedical Engineering

A graduate section of ENGS 57. Students taking the course for graduate credit will be expected to write a research proposal aimed at developing a specific surgical technology. Groups of 2-3 students will work together. The proposal will require an extensive literature review, a detailed proposal of research activities, alternative methods, and timeline, and a detailed budget and budget justification for meeting the research objectives. Weekly meetings will take place between the groups and the instructor to discuss progress. By the end of the term the groups are expected to have a complete proposal drafted. Not open to students who have taken ENGS 57.

Prerequisite: ENGS 23 and ENGS 56 or equivalent

ENGS 170 - Neuroengineering

This course will introduce students to currently available and emerging technologies for interfacing with the human brain. Students will study the fundamental principles, capabilities and limitations of a range of relevant technologies within the scope of noninvasive brain-computer interfaces, neural implants, neurostimulation, sensory substitution and neuroinformatics. The ethical and societal ramifications of these technologies will also be considered. Applications of neuroengineering technology

in medicine will be emphasized such as the diagnosis and treatment of neurological diseases and neural rehabilitation.

Prerequisite: ENGS 22 and ENGS 56

ENGS 171 - Sustainable Product Design

A product's environmental impacts result from its design, manufacturing, use, and end-of-life choices. Sustainable design identifies economic ways to improve these environmental impacts, chiefly by designing for low-impact materials, circular material flows, dematerialization, energy efficiency, and system thinking. It may also extend to changing user behavior and switching from selling a consumer product to providing a service. The objectives of this course are to become proficient with these approaches, to learn the associated tools, and—above all—to practice these by redesigning a product for the environment in a term-long team project. Projects need to fall under a specify theme, which varies with every offering of the course. Student activities include critical reviews of current literature, working on in-class exercises, pursuit of the term-long project, and defending their design in front of a review board.

Prerequisite: For continuing students at Thayer School: ENGS 21 and ENGS 37. For other students: Instructor permission based on a general understanding of environmental impacts of human activities as well as prior experience with engineering design and team project.

ENGS 172 - Climate Change and Engineering

Earth's climate is result of interplay between continental and moving atmospheric and oceanic systems with multiple forcing mechanisms and internal feedbacks. Fundamental heat, mass, and radiative transfer processes impacting the climate system will be examined to understand the drivers of current and past climate. Published regional and global impact projections and adaptation strategies for the future will be examined. Mitigation and sustainable energy will be investigated, and choices on the international, national and local scales will be discussed. Students will be required to actively participate in class by leading class discussions and actively engaging in small group activities. In addition, students will conduct a research project to design an adaptation and mitigation strategy for a community or business in a region of their choice, and will write a term paper and make an oral presentation of their findings.

Prerequisite: ENGS 151 or ENGS 156 or EARS 178, or equivalent

ENGS 172.20 - Techno-economic Analysis in a Developing Context

This course will address the application of techno-economic analysis (TEA) to evaluate the profitability and broader social and environmental impact of potential

business ventures involving technologies located in developing countries. Elements of techno-economic analysis will be discussed, including process design and simulation; profitability analysis; and life-cycle assessment. Aspects unique to developing countries – such as poor infrastructure, financing limitations, and unfavorable government policies – will also be considered. Ongoing review and discussion of illustrative TEA examples, including case studies of actual ventures, will reinforce key concepts. The course will also feature a series of expert guest speakers from industry, academia, and non-profit organizations.

ENGS 173 - Energy Utilization

Industrial societies are presently powered primarily by fossil fuels. Continuing to supply energy at the rate it is now used will be problematic, regardless of the mix of fossil fuels and alternatives that is used; yet western consumption patterns spreading through the rest of the world and other trends portend large increases in demand for energy services. Increased energy efficiency will be essential for meeting these challenges, both to reduce fossil-fuel consumption and to make significant reliance on alternatives feasible. Technical issues in efficient systems for energy utilization will be surveyed across major uses, with in-depth technical analysis of critical factors determining possible, practical, and economical efficiency improvements in both present technology and potential future developments. Areas addressed include lighting, motors and drive systems, heating, ventilation and air conditioning, transportation, appliances and electronics.

Prerequisite: ENGS 22 and at least two of the following: ENGS 25, ENGS 32, ENGS 34, ENGS 44, ENGS 52, ENGS 76, ENGS 104, ENGS 125, ENGS 150, ENGS 155, ENGS 156, and ENGM 184, or permission. ENGS 25 is strongly recommended.

ENGS 174 - Energy Conversion

This course will address the science and technology of converting key primary energy sources — fossil fuels, biomass, solar radiation, wind, and nuclear fission and fusion — into fuels, electricity, and usable heat. Each of these topics will be analyzed in a common framework including underlying fundamentals, constraints on cost and performance, opportunities and obstacles for improvement, and potential scale.

Prerequisite: ENGS 22 and at least two of the following: ENGS 25, ENGS 32, ENGS 34, ENGS 36, ENGS 44, ENGS 52, ENGS 76, ENGS 104, ENGS 125, ENGS 150, ENGS 155, ENGS 156, and ENGM 184, or permission. ENGS 25 is strongly recommended.

ENGS 175 - Energy Systems

A consideration of energy futures and energy service supply chains at a systemic level. Dynamic development of demand and supply of primary energy sources and key

energy carriers will be considered first assuming continuation of current trends, and then with changes to current trends in order to satisfy constraints such as limiting carbon emissions and changing resource availability. Integrated analysis of spatially-distributed time-variable energy systems will also be addressed, with examples including generation, storage, and distribution of electricity and production of energy from biomass.

Prerequisite: ENGS 25, ENGS 51, either ENGS 173 or ENGS 174 or permission of the instructor.

ENGS 177 - Decision-Making under Uncertainty

Decision Making under Uncertainty introduces the foundational ideas of making good decisions despite an unknown environment. This course will start with a review of probability and will mainly focus on solution techniques for single-stage and sequential decision problems. Specifically, the course will be divided into four main parts: (1) overview and probabilistic models; (2) solution techniques for single-stage decision problems; (3) model-based solution techniques for sequential decision problems; and (4) model-free solution techniques for sequential decision problems. The approaches for solving decision-making problems covered in this course are relevant for a wide range of fields including engineering, computer science, finance, supply chain management, transportation, and healthcare. The goal of this course is to provide students with the required knowledge to apply solution techniques in real-world situations.

Prerequisite: ENGS 103 or permission of the instructor. Additionally, students should be proficient in a programming language such as Julia, Python, R, or MATLAB.

ENGS 190 - Engineering Design Methodology and Project Initiation

This course employs a team project to explore elements of the engineering design process as a means of enhancing student ability in problem definition, development and evaluation of creative alternatives, application and methods of technical and economic analysis, identification and application of ethical and legal constraints, client-consultant interaction, and effective presentation of technical information. Engineering design projects are developed from objectives, requirements, and specifications submitted by industry and other organizations and are pursued over the course of two quarters as a team project. A written and oral Pre-Proposal and a Proposal are required for the project during the fall term. A project advisor is required for each design team to help guide the team's efforts. ENGS 190 is the first half of the two-term course sequence (ENGS 190/290) that must be taken consecutively. ENGS 190/290 is the MEng version of 89/90.

Prerequisite: ENGS 21; completion of AB or equivalent UG degree; Admission to MENG program; No more than

6 courses remaining in an approved BE program plan (including this capstone sequence (ENGS 190/290))

200 Level

ENGS 262 - Advanced Biological Circuit Engineering

Instructor: Sarpeshkar

This course will provide advanced techniques for the design, modeling, and experimental implementation of complex synthetic biological circuits including feedback control and regulation. Advanced & complex synthetic circuits will be designed and tested in bacteria in the laboratory. Computer aided design, modeling, and simulation will use CADENCE, an industry standard electronic circuit design tool. Applications of synthetic biology to medicine and biotechnology will be discussed. In addition, the students will be expected to design a synthetic biological circuit with feedback and control techniques for a class project.

Prerequisite: Basic Biological Circuit Engineering (ENGS 59 or 162); OR Equivalent experience in Molecular Biology Techniques (Either ENGS 35, BIOL 45, BIOL 46) AND equivalent experience in Signals and System Modeling (e.g. ENGS 22).

ENGS 200 - Methods in Applied Mathematics II

Continuation of ENGS 100 with emphasis on variational calculus, integral equations, and asymptotic and perturbation methods for integrals and differential equations. Selected topics include functional differentiation, Hamilton's principle, Rayleigh-Ritz method, Fredholm and Volterra equations, integral transforms, Schmidt-Hilbert theory, asymptotic series, methods of steepest descent and stationary phase, boundary layer theory, WKB methods, and multiple-scale theory.

Prerequisite: ENGS 100, or equivalent

Cross-Listed as: PHYS 110

ENGS 202 - Nonlinear Systems

The course provides basic tools for modeling, design, and stability analysis of nonlinear systems that arise in a wide range of engineering and scientific applications including robotics, autonomous vehicles, mechanical and aerospace systems, nonlinear oscillators, chaotic systems, population genetics, learning systems, and networked complex systems. There are fundamental differences between the behavior of linear and nonlinear systems. Lyapunov functions are powerful tools in dealing with design and stability analysis of nonlinear systems. After addressing the basic differences between linear and nonlinear systems, the course will primarily focus on normal forms of nonlinear systems and Lyapunov-based control design methods for a variety of applications with an emphasis on

robotics, mechanical control systems, and particle systems in potential fields.

Prerequisite: ENGS 100 and ENGS 145 or equivalents and familiarity with MATLAB

ENGS 205 - Computational Methods for Partial Differential Equations II

Boundary Element and spectral methods are examined within the numerical analysis framework established in ENGS 105. The boundary element method is introduced in the context of linear elliptic problems arising in heat and mass transfer, solid mechanics, and electricity and magnetism. Coupling with domain integral methods (e.g. finite elements) is achieved through the natural boundary conditions. Extensions to nonlinear and time-dependent problems are explored. Spectral methods are introduced and their distinctive properties explored in the context of orthogonal bases for linear, time-invariant problems. Extension to nonlinear problems is discussed in the context of fluid mechanics applications. Harmonic decomposition of the time-domain is examined for nonlinear Helmholtz-type problems associated with EM and physical oceanography.

Prerequisite: ENGS 105

ENGS 220 - Electromagnetic Wave Theory

Continuation of ENGS 120, with emphasis on fundamentals of propagation and radiation of electromagnetic waves and their interaction with material boundaries. Selected topics include propagation in homogeneous and inhomogeneous media, including anisotropic media; reflection, transmission, guidance and resonance; radiation fields and antennas; diffraction theory; and scattering.

Prerequisite: ENGS 100 and ENGS 120 or permission of the instructor.

ENGS 250 - Turbulence in Fluids

An introduction to the statistical theory of turbulence for students interested in research in turbulence or geophysical fluid dynamics. Topics to be covered include the statistical properties of turbulence; kinematics of homogeneous turbulence, phenomenological theories of turbulence; waves, instabilities, chaos and the transition to turbulence; analytic theories and the closure problem; diffusion of passive scalars; and convective transport.

Prerequisite: ENGS 150 or equivalent.

ENGS 262 - Advanced Biological Circuit Engineering

This course will provide advanced techniques for the design, modeling, and experimental implementation of complex synthetic biological circuits including feedback control and regulation. Advanced & complex synthetic circuits will be designed and tested in bacteria in the laboratory. Computer aided design, modeling, and

simulation will use CADENCE, an industry standard electronic circuit design tool. Applications of synthetic biology to medicine and biotechnology will be discussed. In addition, the students will be expected to design a synthetic biological circuit with feedback and control techniques for a class project.

Prerequisite: ENGS 162 (Basic Biological Circuit Engineering); OR Equivalent experience in Molecular Biology Techniques (Either ENGS 35, BIOL 45, BIOL 46) AND equivalent experience in Signals and System Modeling (e.g. ENGS 22).

ENGS 290 - Engineering Design Methodology and Project Completion

This course is the second unit in the two-course team engineering design sequence ENGS 190/290. The objective of the course is to develop the students' professional abilities by providing a realistic project experience in engineering analysis, design, and development. Students continue with the design teams formed in ENGS 190 to complete their projects. Design teams are responsible for all aspects of their respective projects: science, innovation, analysis, experimentation, economic decisions and business operations, planning of projects, patents, and relationships with clients. ENGS 290 is the MEng version of ENGS 90.

Prerequisite: Successful completion of ENGS 190

Comparative Literature - Graduate

Program Chair: Veronika Fuechtner

M.A. Director: Miya Qiong Xie

Faculty with joint appointments: A. Coly (African and African American Studies), J. Dorsey (Asian Societies, Cultures and Languages), V. Fuechtner (German), G. Gemünden (German), A. Gomez-Quiñones (Spanish and Portuguese), L. D. Kritzman (French and Italian), E. S. Morsi (Comparative Literature), G. Parati (French and Italian), R. Risham (Film), M. R. Warren (Comparative Literature), D. Washburn (Asian Societies, Cultures and Languages, Film);

Faculty with joint titles: R. E. Biron (Spanish and Portuguese), D. P. LaGuardia (French and Italian), A. Martín (Spanish and Portuguese), K. Mladek (German), I. Reyes (Spanish and Portuguese), A. Tarnowski (French and Italian);

Associated faculty: Y. Komska (German), M. McGillen (German); R. Stewart (Classics), Miya Qiong Xie (ASCL);

Affiliated faculty: T. Aquado (Spanish and Portuguese), J. Baron (Library), J. Beckman (English), M. Broner (Spanish and Portuguese), N. Canepa (French and Italian), M. Caplan (COLT), M. Chaney (English), W. Cheng (Music), H. Denzel (German), T. El-Ariss (Middle Eastern Studies), Y. Elhariry (French and Italian), M. Gilebbi

(French and Italian), L. Hollister (French and Italian), E. Kane (French and Italian), L. Kolomiyets (EEER), M. Larose (French and Italian), A. McCann (English), S. Mefoude Obiono (French and Italian), K. Milich (MALS), C. C. Minchillo (Spanish and Portuguese), C. Richter-Nilsson (COLT), J. Smolin (Middle Eastern Studies), J. Smolin (COLT), P. Stuelke (English), N. Tanoukhi (English and Creative Writing), M. Wyatt (French and Italian), Y. Zheng (COLT);

Courses in Comparative Literature are designed to meet the needs of students whose literary interests are broader than those that can be met by the curriculum of any single department.

To view Comparative Literature Graduate courses, click here. (p. 917)

To view Comparative Literature Undergraduate courses, click here.

Requirements for the Master of Arts in Comparative Literature

Each graduate student must receive credit for at least 10 courses for the nine and a half month Master of Arts degree and complete a major text presentation and prepare an essay of professional quality.

To receive the Masters degree in Comparative Literature a candidate must satisfactorily:

Complete ten credit courses as described below:

COLT 100, Contemporary Literary Criticism and Theory (required)

COLT 101, Topics in Literary and Cultural Theory (required)

COLT 102, Graduate Tutorial (required)

COLT 103, Graduate Seminar (required)

COLT 105, Workshop in Critical Writing (required)

COLT 110, Supervised Undergraduate teaching in Comparative Literature (one term required)

COLT 700, Responsible and Ethical Conduct of Research (required)

Four elective courses in relevant Dartmouth language and literature departments including one upper level course in the candidate's first foreign language. These courses must be approved by the MA director.

A major text presentation. In conjunction with the Tutorial (COLT 102) and the Graduate Seminar (COLT 103), students will prepare a 20-minute public presentation on a

major text (read in its original language) related to their research area.

An M.A. essay. During spring term, in conjunction with COLT 105 (Workshop in Critical Writing), the candidate will prepare a paper of professional quality which will be reviewed by a subcommittee of the Graduate Committee.

Comparative Literature

COLT 100 - Contemporary Literary Criticism and Theory

Instructor: Gomez

Critical theory is an assemblage of practices used to interpret the social, political, and material structures that give meaning to diverse kinds of objects: texts, spaces, bodies, communities, photographs, films, discourses, identities, etc. This course will consider the multiple ways in which theory has done its interpretative work on a variety of cultural productions from diverse global contexts. Texts by Barthes, Foucault, Derrida, Benjamin, Adorno, Kristeva, Butler, Lacan, Zizek, Spivak, Bhabha, Said, Fanon, and others.

Offered: Fall.

COLT 101 - Topics in Comparative Literature

Instructor: McCann

In this seminar, students will learn about how to coherently compare literary texts that may share a common theme but belong to different genres and come from heterogeneous temporal and geographical background.

Offered: Winter.

COLT 102 - Graduate Tutorial

Instructor: Xie

Faculty tutorial organized by the graduate director in consultation with individual MA students. The tutorial—i.e., intensive work with a faculty tutor on a Comparative Literature subject, offers an opportunity to read in a focused way the texts most relevant to the students' winter presentation and spring essay. It is designed as an extended independent study. As soon as possible after beginning of the fall term and no later than mid-October, each student will have chosen/been assigned a tutor in the area of interest. During the remainder of the fall term, both parties meet informally to discuss the student's reading and to map out independent continued reading and writing for the winterim (break) and winter term. By late October at the latest, each student should have decided on the topic of

their MA essays, on which they will concentrate for the remainder of the year.

During the winter term, the student and the tutor are expected to meet as mutually agreed upon (at least once every two weeks). Ideally, this tutor continues to serve as **one of the two official advisors**/primary readers for the rest of the academic year. The second advisor should also be secured by the end of the fall term (**November 25**) and notified of the student's progress by the student. The Director of Graduate Studies retains a consultative and supporting role throughout.

While there is no specific writing component to the tutorial, the more the students write, the better. Writing may include notes for readings and short position papers that could serve as building blocks of the MA essay. The students will also use the Fall Ethics course to start compiling an annotated bibliography of primary and secondary sources relevant to their MA essay.

Students enroll in the Fall but the course is ongoing in Winter term.

Offered: Fall.

COLT 103 - Graduate Seminar

Instructor: Xie

This course is led by the Director of Graduate Studies and designed to integrate the students' work in the theory courses (COLT 100 and COLT 101) with their independent research projects. The course serves as an introduction to the field and to its various academic practices, especially close reading and oral presentations, and also addresses more practical issues related to research and pedagogy. The major text presentation, to be held by early February, constitutes part of the grade for COLT 103.

Offered: Winter.

COLT 105 - Workshop in Critical Writing

Instructor: Risham

Critical thinking and concise, persuasive writing are prerequisites for any professional career. In fact, they go hand in hand. The Workshop in Critical Writing continues graduate students' introduction to advanced research techniques, to the conventions of scholarly discourse, and to the various kinds of writing practiced in literary and cultural studies. Students will be asked to prepare and submit a scholarly article based on their tutorial project and major text presentation. The workshop format of the course permits students to read and critique each other's work and to sharpen their editorial skills. In the last part of the course students practice writing an abstract (based on their

MA essay or part of their MA essay) and prepare for the final oral presentation in mid-May.

Offered: Spring.

COLT 110 - Supervised UG Teaching in COLT

Instructor: Xie

Teaching in COLT and other literature/language undergraduate courses under the supervision of a faculty member.

Normally students enrolled in this course teach alongside faculty and/or lead discussion sections.

This course is open only to COLT MA students and required by all students one term except if a student is working for the Max Kade center.

Offered: Fall, Spring, Winter.

COLT 700 - Responsible and Ethical Conduct of Research

Instructor: Baron

This course promotes inquiry into what it means to responsibly and ethically conduct research, as well as write, share, receive mentoring, and collaborate with others in graduate school. Drawing from a combination of scholarly and popular articles, case studies, podcasts, and personal experiences, we will explore some of the complicated choices members of a graduate student community must make when doing research, writing, and creative work.

Offered: Fall.

Computer Science - Graduate

Chair: Devin Balkcom

Professors D. Balkcom, S. L. Bratus, A. Breuer, A. T. Campbell, M. Casey, A. Chakrabarti, D. Chakrabarty, H. Chang, C. Hauser, W. Jarosz, P. Jayanti, S. Jayanti, S. Jin, K. Kim, D. F. Kotz, A. Pediredla, B. Plancher, S. Preum, A. Quattrini Li, D. Rockmore, N. Singh, S. W. Smith, Y-W. Tai, S. Vosoughi, T. Vu, P. Winkler, Y. Yan, Y. Yang; Research Professors L. Loeb, T. Pierson, O. Saydjari; Lecturers V. Kommineni, J. Mahoney, T. Tregubov; Adjunct Professors H. Chang, I. Bhattacharya, P. Chin, R. Coto Solano, G. Cybenko, J. Gui, Y. Halchenko, S. Hassanpour, N. Jacobson, I. Khayal, M. D. McIlroy, E. Murnane, J. O'Malley, E. Santos, L. Song, T. Thesen, O. Zhaxybayeva.

To view the Computer Science Graduate courses, click here. (p. 923)

To view the Computer Science Undergraduate requirements, click here. (p. 218)

To view the Computer Science Undergraduate courses, click here. (p. 221)

Graduate Study in Computer Science

The Department of Computer Science offers programs leading to the Ph.D. and M.S. degrees in Computer Science. Each is described below. All graduate students are expected to complete COSC700 in their first year.

Requirements for the Doctor's Degree (Ph.D.)

During the first year, students engage in research projects with faculty and start to take a set of core graduate courses and topics courses. In the second year and beyond, students become progressively more engaged in research while completing their course requirements. The requirements for the Ph.D. degree in Computer Science are as follows:

1. Admission to the degree program by an admissions committee of the Computer Science faculty.
2. Students should take a minimum of two terms of research in each of their first and second years under the supervision of a tenure-track faculty member.
3. During the first year, at the end of Winter term at the Technigala, each student should present his or her research efforts and results to date following a poster format, including motivation, relation of the student's work to the work of others, and specifics about results or obstacles faced in obtaining results.
4. By the end of Fall term of the second year, each student must have a Ph.D. advisor who is a member of the tenure-track faculty in Computer Science. Students may change advisors after this point, but they should not be without an advisor for more than a term.
5. Completion of a course of study that includes the following:
 - a. All PhD students must obtain a grade P or HP in one course numbered 230–249, one course numbered 250–269, and one course numbered 270–289. These constitute the breadth requirements for the PhD program.
 - b. All students must pass at least eight courses numbered between 130 and 189 or between 230 and 289, including the breadth courses listed in requirement (a) above. The special topics courses, numbered 149, 169, 189, 249, 269, and 289 may be taken multiple times and will be counted as distinct courses for this purpose. At most one course from outside Computer Science may be substituted, with permission of the Ph.D. program director.

- c. All students must complete COSC 700 in their first year.

A student's course of study is subject to the approval of the Ph.D. Program Director. Students normally take the breadth courses specified in requirement (a) above by the end of their second year.

6. Students are expected to pass the Research Presentation Exam by the end of the winter term of their third year. An examining committee consisting of three faculty members, appointed by the departmental Ph.D. Program Director, will select a paper for the student to present. The student will have a month to read the paper, and will then present the paper to the committee and will orally answer questions on the paper. The committee will evaluate the student's presentation and performance answering questions, and will determine whether the student passes the examination. A student is allowed two attempts to pass the exam. In a second attempt, the student is assigned a new paper, but not necessarily a new committee. Passing the Research Presentation Exam is a prerequisite to thesis proposal (see requirement 8 below). For more details on this exam, consult the Computer Science department web page.
7. At least one term of participation in undergraduate teaching. That is, the student must pass COSC 296.
8. Each student must display readiness for research in one area by giving a written and a public oral presentation of his or her research plan. This thesis proposal will be judged by a faculty committee which shall be formed for the purpose of guiding the student's research; the rules used for the composition of this committee are the same as for a Ph.D. defense committee; this committee does not require the approval of the Dean of Graduate Studies, but must be approved by the departmental Ph.D. Program Director. The presentation will be followed by a question period in which the student demonstrates mastery of the relevant area and defends the proposed thesis plan.
9. Six terms in residence at Dartmouth. (This is a College requirement.)
10. Preparation of a thesis acceptable to a faculty committee and a public defense of this thesis. The rules governing the composition of this committee are stated on the department's website. This committee must be approved by department Ph.D. Program Director and the Dean of Graduate Studies. All members of the committee shall read and sign the thesis in its final form.

Requirements for the Master of Science Degree (M.S.)

There are two core concentrations for the MS Degree in Computer Science--one a is an MS Degree in Computer

Science and the other is an MS Degree in Computer Science with a Concentration in Digital Arts. Within each of these degree types, there are a variety of ways to earn the degrees.

MS in Computer Science

We have two tracks in the M.S. program: a coursework track and a thesis track. Again, both tracks require completion of COSC 700 in the first year.

1. For the coursework track, the student must satisfactorily complete at least thirteen Computer Science courses taken for graduate credit, and submit an essay, approved by the program director, explaining how these courses form a coherent whole. At least five of these courses must be numbered 130 or higher. At least one of these thirteen must be an advanced topics graduate course in Computer Science (listed as COSC 149/249, COSC 169/269, and COSC 189/289). Any courses taken outside of the Computer Science department must be approved by the MS Program Director. The student may use up to two research credit courses (e.g., 297–299) to satisfy these requirements, but only if the student earns a P or an HP and the MS Program Director approves the substitution. Per department policy, selected upper-level undergraduate courses may count for graduate credit for the M.S. degree. COSC 191, 200, 210, 295, and 296 do not count for MSCS graduate credit.
2. For the thesis track, the student must satisfy these coursework and research requirements:
 - a. The student must satisfactorily complete at least nine Computer Science courses taken for graduate credit. At least one of these nine must be an advanced topics graduate course in Computer Science (listed as COSC 149/249, COSC 169/269, and COSC 189/289). Any courses taken outside of the Computer Science department must be approved by the MS Program Director. No research credit courses (e.g., 297–299) may be used to satisfy these requirements. Per department policy, selected upper-level undergraduate courses may count for graduate credit for the M.S. degree. Computer science courses numbered 100-129 do not qualify for any M.S. required course. COSC 191, 200, 210, 295, and 296 do not count for MSCS graduate credit.
 - b. By the end of the third term of enrollment, the student must petition to and be accepted for the thesis track by the departmental Master's committee.
 - c. The student must successfully complete at least five course equivalents of research from COSC 297, COSC 298, or COSC 299.

- d. The student must prepare a thesis acceptable to a faculty committee and give a public defense of this thesis. The thesis should represent mostly independent work, and be of sufficient quality to merit publication (with suitable revision) in a refereed venue. The committee shall be formed for the purpose of guiding the student's research. The chair of this committee, who is the student's primary research advisor, must be a tenure-track or research-track faculty member in the Computer Science department. In addition to the chair, the committee must include at least one other tenure-track or research-track Computer Science faculty member. The committee must comprise at least three faculty members, one of whom may be from outside the Computer Science department, though an outside member is not required. This committee must be approved by the MS Program Director and by the Dean of Graduate Studies. All members of the committee shall read and sign the thesis in its final form. We expect that the thesis, including a copy of the signature page, shall be published as a departmental Technical Report.

All students start out in the coursework track. As noted in 2(b) above, students may then apply to move to the thesis track. (Students may also petition to move back to the coursework track, although we expect that will be uncommon.)

Students are expected to complete the M.S. degree in a maximum period of seven consecutive terms in residence. Summer terms would not count, unless the student is enrolled then.

Students who finish the requirements in fewer than seven terms may remain and take courses in the remaining terms, as long as these courses are approved beforehand by the M.S. Program Director as being an intellectually legitimate part of their graduate education in Computer Science. For these additional terms, students must also meet the appropriate enrollment rules of the Dartmouth's Graduate Office; international students should consult with OVIS for guidance on maintaining their status.

Students who are currently enrolled in a Ph.D. program in a department other than Computer Science at Dartmouth may apply for a tuition scholarship and to be considered for concurrent enrollment.

The Computer Science M.S. degree is not intended to be an outlet for students leaving the Computer Science Ph.D. program (nor is it intended to be a degree concurrent with a Computer Science Ph.D.).

4+1 A.B./M.S. Program in Computer Science

Dartmouth undergraduates can potentially stay for as little as one additional year and obtain an M.S. degree in Computer Science. Per the Department's Course Transfer Policy, a student may apply to transfer up to five courses

taken as a Dartmouth undergraduate into the M.S. degree, making possible an M.S. degree with as few as eight additional courses in the coursework track or as few as four additional courses (not counting research credits) in the thesis track. The eligible courses are those that are cross-listed as graduate courses (those numbered xx/1xx), as well as the courses available for graduate credit that are listed on the department website; the Department's Course Transfer Policy may have additional restrictions, including minimum grade requirements. Dartmouth Computer Science majors who apply to the 4+1 program need not submit GRE scores.

MSDA in Computer Science

M.S. Degree in Computer Science with a Concentration in Digital Arts

Students in this concentration complete a mix of Computer Science courses, Digital Arts courses, and research/thesis. They experience a rigorous and focused computer science education, foundational courses in digital arts, and a deep dive into a research topic within the areas of visual computing and digital arts (e.g., computer graphics, human-computer interaction, digital fabrication, digital art and media, computer vision, virtual reality, and artificial reality). Students in this concentration, by design, will come from a wide variety of backgrounds. All students will have successfully completed an undergraduate degree at a four-year college/university. Dartmouth students are encouraged to apply to the Integrated 4+1 Program in Computer Science with a Concentration in Digital Arts. All students must have completed the equivalent of Dartmouth's COSC 1 and COSC 10 courses, with a grade of B+ or better and we encourage students to have completed additional courses in algorithms, linear algebra, software engineering, if possible. Students are also expected to have majored or minored in at least one of the areas we consider a foundational area of visual computing and Digital Arts. These areas include, but are not limited to, Computer Science, Digital Arts, Engineering, Studio Art/Design, Computer Animation/Modeling, Computational Photography, Physics, Mathematics, and Architecture.

The M.S. Degree in Computer Science with a Concentration in Digital Arts is divided into three areas: Technical Courses (general graduate-level Computer Science courses); Digital Art Courses; and Research/Thesis Courses. At the end of the program, all students will write a thesis based on their research and then present and defend their work. Courses required for the degree will depend on the background of each student. All students must take 18 credits of which up to 12 will be coursework and up to 9 will be research credits. Students

can take a maximum of three undergraduate courses for credit towards their coursework requirement.

Students are expected to complete their degree in a maximum of seven consecutive terms (excluding the summer). An interim evaluation will be made after each term and continuation within the master's Program will be recommended for those students whose work demonstrates the capacity for satisfactory independent research. Students who finish the requirements in fewer than seven terms may remain and take courses in the remaining terms, if these courses are approved beforehand by the MSDA Program Director as being an intellectually legitimate part of their graduate education in Computer Science. For these additional terms, students must also meet the appropriate enrollment rules of the Dartmouth's Graduate Office; international students should consult with OVIS for guidance on maintaining their status

1. Required Pre-Requisite Courses

- a. All students must complete two of the following courses or have completed these courses or their equivalent prior to enrolling: COSC 30, COSC 31, COSC 50, COSC 70. Courses taken to meet this requirement do not count as one of the five technical courses (#2 below). Students must receive a B- or better, in the undergraduate grading format, for the course to count towards this requirement.

2. Technical Courses

- a. Students must satisfactorily complete at least five Computer Science courses with numbers in the ranges (131- 189) or (231- 289). At least one must be an advanced topics graduate course in Computer Science (listed as COSC 149/249, COSC 169/269, and COSC 189/289). No research credit courses (e.g., 297-299) may be used to satisfy these requirements. Per department and program policy, certain undergraduate courses may fulfill this requirement. A grade of B- or better is required in Computer Science courses graded on an undergraduate scale.

3. Digital Arts Courses:

- a. Students must complete at least two courses in digital arts or a related arts field. Students are encouraged to take one of those courses outside the computer science department. The courses outside the CS department will round out the graduate education and provide hands-on arts (digital arts, performing arts, visual arts, musical arts, design) experience. The Director of the MSDA Program (in consultation with the student's primary research advisor) must approve any courses taken outside the

Computer Science department. All Digital Arts coursework must be completed by the end of the fifth term, and a grade of B or better is required in courses graded on an undergraduate scale.

4. Research Requirement:

- a. The student must successfully complete at least six course equivalents of research from COSC 294, COSC 297, COSC 298, or COSC 299.

5. Thesis Requirement:

- a. Each student must complete a research project based on independent, original research. Students can work in a team if their work is easily identified and with the permission of the research advisor. The research project results in a written thesis. The research/thesis must be approved by the research advisor and successfully defended in an oral presentation.
- b. The student must prepare a thesis acceptable to a faculty committee and give a public defense of this thesis.
- c. The research/thesis should be of sufficient quality to merit publication or exhibition (with suitable revision) in a refereed venue. Projects will be suitable for distribution, use and/or exhibition
- d. The committee shall be formed for the purpose of guiding the student's research. The chair of this committee, who is the student's primary research advisor, must be a tenure-track or research-track faculty member in the Computer Science department. In addition to the chair, the committee must include at least one other tenure-track or research-track Computer Science faculty member. The committee must comprise at least three members, one of whom may be from outside the Computer Science department or outside Dartmouth, though an outside member is not required. This committee must be approved by the MSDA Program Director and by the Dean of Graduate Studies.
- e. All members of the committee will read and sign the thesis in its final form. We expect that the thesis, including a copy of the signature page, shall be published as a departmental Technical Report.

- f. Students must follow the Guarini Graduate School requirements for the thesis.

Integrated 4+1 A.B./M.S. Program in Computer Science with a Concentration in Digital Arts

We encourage Dartmouth undergraduates to consider staying on for a Computer Science M.S. degree with a concentration in Digital Arts.

Objective and Overview: A 4+1 program to provide Dartmouth undergraduate students an opportunity to acquire a broader and deeper education in Digital Arts through a combination of coursework and independent research under the direction of one of the program faculty. With integration of the courses and a substantial effort in the independent research carried out during the senior year, the M.S. can be obtained in one year directly after completing the A.B. at Dartmouth.

Prerequisites:

Students wishing to enter the program must demonstrate proficiency in each of the following areas: Computer Science and Digital Arts. Such proficiency will normally be demonstrated by completing [COSC 1](#) and [COSC 10](#), plus three courses numbered COSC 20-29 or equivalent arts courses. Students planning to apply for this program must meet with the-MSDA Program Director by the end of their junior year at Dartmouth. Students are strongly encouraged to complete COSC 30, 31, and 50 before entering the program.

Students are expected to complete their degree within a maximum of five consecutive terms (excluding the Summer). An interim evaluation will be made after each term and continuation within the Master's Program will be recommended for those students whose work demonstrates the capacity for satisfactory independent research.

Specific Requirements for the Integrated 4+1 A.B./M.S. Program in Computer Science with a Concentration in Digital Arts are as follows:

Course Distribution Requirements: This is a four-term program (fall, winter, spring, summer/or fall). Each student must pass with a grade of P or better six courses and six research credits. It is expected that the six courses be completed as early in the program as possible.

Technical Courses

1. Students must complete the equivalent of two of the following courses: COSC 30, COSC 31, COSC 50,

COSC 70 prior to graduating from this program (either as an undergraduate or graduate student).

2. At least three CS courses between 130 and 289.

Digital Arts Courses

1. At least one digital arts course between COSC 120-129, or COSC 56/ENGS 31, ENGS 21, COSC 73, MUS 102, or MUS 103.
2. Courses not listed may be approved by the MSDA Graduate Director as substitutes for courses above.

Elective Courses

1. Students take either Digital Arts or Technical courses to equal six course credits. At least four courses must be graduate level courses.

Research Credits

1. Students must complete six research credits by passing a combination of COSC 294, COSC 297, COSC 298, and COSC 299.

Thesis Requirement:

Each student must complete a research project based on independent, original research. Students can work in a team as long as their work is easily identified and with the permission of the MSDA Graduate Director in consultation with the primary advisor for the thesis. The research project will result in a written thesis. The research/thesis must be approved by the graduate advisor and successfully defended in an oral presentation, according to the following guidelines:

1. The student must prepare a thesis acceptable to a faculty committee and give a public defense of this thesis.
2. The research/thesis should be of sufficient quality to merit publication or exhibition (with suitable revision) in a refereed venue. Projects will be suitable for distribution, use and/or exhibition.

3. The committee shall be formed for the purpose of guiding the student's research. The chair of this committee, who is the student's primary research advisor, must be a tenure-track or research-track faculty member in the Computer Science department. In addition to the chair, the committee must include at least one other tenure-track or research-track Computer Science faculty member. The committee must comprise at least three members, one of whom may be from outside the Computer Science department or outside Dartmouth, though an outside member is not required. This committee must be approved by the departmental advisor to M.S. students and by the Dean of Graduate Studies.
4. All members of the committee shall read and sign the thesis in its final form. We expect that the thesis, including a copy of the signature page, shall be published as a departmental Technical Report.
5. Students must follow the Guarini Graduate School requirements for the thesis.

COSC-Computer-Science

COSC 700 - Responsible and Ethical Conduct of Research

Required course for all Computer Science graduate students. Generally consists of five two hour sessions as well as additional reading and preparation.

COSC-Computer Science-Graduate

COSC 129 - Topics in Digital Arts

This course studies an advanced topic in Digital Arts that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct.

COSC 149 - Topics in Algorithms and Complexity

This course studies an advanced topic in algorithms and complexity that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Not suitable for PhD breadth requirement.

COSC 162 - Applied Cryptography

Cryptography is the fundamental building block for establishing and maintaining trustworthy connections and communications in the Internet; it's the first line of defense for keeping adversaries from spying on credit card numbers being sent to Amazon or on whistleblower reports sent to journalists. This course will examine what's in this toolkit: symmetric ciphers, public-key cryptography, hash functions, pseudorandomness. To enable the well-cultured computer scientist to understand how these tools are used in the real world, this course will cover these topics from multiple perspectives: theoretical foundations, use in practical computing, implementation and management challenges, weaknesses and attacks, censorship circumvention, public policy questions, and prospects for the future.

Prerequisite: COSC 30, COSC 50. COSC 51 and COSC 55 are recommended.

COSC 165 - Smartphone Programming

This course teaches students how to design, implement, test, debug and publish smartphone applications. Topics include development environment, phone emulator, key programming paradigms, UI design including views and activities, data persistence, messaging and networking, embedded sensors, location based services (e.g., Google Maps), cloud programming, and publishing applications. Concepts are reinforced through a set of weekly programming assignments and group projects.

Prerequisite: COSC 10

COSC 169 - Topics in Computer Systems

This course studies an advanced topic in computer systems that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Not suitable for PhD breadth requirement.

COSC 183 - Computer Vision

This course provides an introduction to computer vision, the art of teaching computers to see. Topics include image formation, feature detection, segmentation, 3D reconstruction from multiple views, motion estimation, and object recognition.

Prerequisite: COSC 1 or ENGS 20; COSC 70/70.01 (formerly COSC 11), or MATH 22, or MATH 24.

COSC 184 - Mathematical Optimization and Modeling

Planning, scheduling, and design problems in large organizations, economic or engineering systems can often be modeled mathematically using variables satisfying linear equations and inequalities. This course explores these models: the types of problems that can be handled, their formulation, solution, and interpretation. It introduces the theory underlying linear programming, a natural extension of linear algebra that captures these types of models, and also studies the process of modeling concrete problems, the algorithms to solve these models, and the solution and analysis of these problems using a modeling language. It also discusses the relation of linear programming to the more complex frameworks of nonlinear programming and integer programming. These paradigms broaden linear programming to respectively allow for nonlinear equations and inequalities, or for variables to be constrained to be integers.

Prerequisite: COSC 1 or ENGS 20; COSC 70/70.01 (formerly COSC 11), or MATH 22 or MATH 24; or permission of the instructor.

COSC 186 - Computational Structural Biology

Computational methods are helping provide an understanding of how the molecules of life function through their atomic-level structures, and how those structures and functions can be applied and controlled. This course will introduce the wide range of complex and fascinating challenges and approaches in computational structural biology, and will give hands-on experience applying and implementing some important methods.

Prerequisite: COSC 10 or permission of the instructor

COSC 189 - Topics in Applied Computer Science

This course studies an advanced topic in applied Computer Science that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Not suitable for PhD breadth requirement.

COSC 191 - Writing, Presenting, and Evaluating Technical Papers in Computer Science

Students will learn how to write technical papers in computer science, how to present technical papers in a conference-talk setting, and how program committees and journal editors evaluate technical papers. Writing topics include the proper use of technical typesetting software, organization of technical papers, and English usage. Students will write technical papers, produce official course notes, and give oral presentations. Enrollment limited.

Prerequisite: Each student must submit a short expository piece to be evaluated by the instructor at the start of the course; only those students meeting a required level of competence will be permitted to take the course for a grade. Students should also have a Computer Science background sufficient to understand research papers.

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COSC 200 - Current Topics in Computer Science

In this course, students read, present, and discuss a set of research papers selected to represent particular focus areas in computer science. The course helps students develop skills in critical analysis and communication of computational methods and results, along with an understanding of the general context underlying a research area. All students are expected to make oral presentations and both lead and participate in discussions, and they are evaluated on the quality and effectiveness of the presentations and contributions to discussions. Open only to graduate students, with instructor permission. This course is only available to Ph.D. students. M.S. students may take this course with instructor permission. This course does not count towards the degree requirements.

COSC 232 - Advanced Algorithms

This course follows up on our basic undergraduate-level algorithms course, covering a number of advanced topics and ideas in algorithm design and analysis. You will learn about the use of advanced data structures, amortized analysis, randomization, linear programming, and approximation. The focus will be on methodology and broadly-applicable fundamental principles, rather than specific problem domains.

Pre-req: An undergraduate-level course in Algorithms (such as COSC 31) and strong mathematics background.

COSC 235 - Data Stream Algorithms

This course studies algorithms that process massive amounts of data; so massive that they will not fit in a computer's storage. The course will cover a wide variety of techniques for summarizing such large amounts of data into succinct "sketches" that nevertheless retain important and useful information. The course starts from the basics, assuming only a basic knowledge of algorithms, and builds up to advanced techniques from recent research. The necessary mathematical tools are developed within the course.

Prerequisite: COSC 31 or permission of the Instructor.

COSC 236 - Approximation Algorithms

Many problems arising in computer science are NP-hard and therefore we do not expect efficient algorithms for solving them exactly. This has led to the study of approximation algorithms where algorithms are supposed

to run fast but can return approximate solutions. This course provides a broad overview of the main techniques involved in designing and analyzing such algorithms. It also explores connections between algorithms and mathematical fields such as algebra, geometry, and probability.

Prerequisite: A first course on algorithms and mathematical maturity to read and write proofs will be assumed. Prerequisite Courses: COSC 31, COSC 30.

COSC 237 - Information Theory in Computer Science

This course introduces students to information theory, a mathematical formalism for quantifying and reasoning about communication. While traditionally a part of electrical engineering, it has found several powerful applications in the theory of algorithms and complexity and adjacent fields such as combinatorics and game theory. The first third of the course will teach students the basics of information theory (Shannon entropy, mutual information, Kullback-Liebler divergence). The rest of the course will sample topics from error correcting codes, communication complexity, data structures, and optimization, in each case highlighting applications of information theory.

Prerequisites

COSC 31 or COSC 30 plus permission of the instructor (based on strong mathematical background)

COSC 240 - Computational Complexity

This course covers the basics of computational complexity, whose broad goal is to classify computational problems into classes based on their inherent resource requirements. Five key computational resources are studied: time, space, nondeterminism, randomness, and interaction. Key concepts studied include reductions, the polynomial hierarchy, Boolean circuits, pseudorandomness and one-way functions, probabilistic proof systems, and hardness of approximation.

Prerequisite: COSC 39 or equivalent. Students need to be familiar with the formalism of the Turing Machine and with the notion of NP-completeness.

COSC 249 - Topics in Algorithm & Complexity

This course studies an advanced topic in algorithms and complexity that is not covered in the regular curriculum. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Suitable for PhD breadth requirement.

COSC 257 - Compilers

Techniques for automatic translation of programming languages are discussed. The course includes a brief survey of various techniques and formalisms that can be used for describing the syntax and semantics of programming

languages, for describing abstract and concrete machine architectures, and for describing program translation and transformation. This course includes a project to construct a compiler that will translate a program written in a high-level language into machine code for a conventional-architecture machine.

Prerequisite: COSC 50. COSC 51 is recommended.

COSC 258 - Operating Systems

This course studies how computer operating systems allocate resources and create virtual machines for the execution of user jobs. Topics covered include storage management, scheduling, concurrent processing, shared access to files, synchronization, and data protection. Both abstract models and actual examples of operating systems will be studied.

Prerequisite: COSC 50 and COSC 51

COSC 268 - Advanced Operating Systems

This course covers advanced topics in operating systems, including issues such as the hardware/software interface, operating-system structure, CPU scheduling, concurrency, virtual memory, interprocess communication, file systems, protection, security, fault tolerance, and transaction processing. The course also considers many of these topics in the context of distributed systems.

Prerequisite: A grade of B+ or better in COSC 58/258, or passing an examination administered by the department to demonstrate competency in the material of COSC 58/258.

COSC 269 - Topics in Computer Systems

This course studies an advanced topic in Computer Systems that is not covered in the regular curriculum. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Suitable for PhD breadth requirement

COSC 273 - Computational Aspects of Digital Photography

Computational photography lies at the intersection of photography, computer vision, image processing, and computer graphics. At its essence, it is about leveraging the power of digital computation to overcome limitations of traditional photography. The course will cover the optics of cameras and sensors, how cameras form images, and how we can represent them digitally on a computer. We will focus on software techniques like image processing algorithms for photography, high-dynamic-range photography and tone mapping, and the math and algorithms behind popular image manipulation tools like Photoshop. Coursework will include taking some photos

and implementing several algorithms to manipulate those photos in weekly programming assignments (in C). We will also read, present and discuss recent research papers in the field. By the end of the term, students should have an understanding of the capabilities and limitations of photography today, and have sufficient background to implement new solutions to photography challenges.

Prerequisite: COSC 10 and COSC 70/70.1(formerly COSC 11); COSC 50 is recommended.

COSC 274 - Machine Learning and Statistical Data Analysis

This course provides an introduction to statistical modeling and machine learning. Topics include learning theory, supervised and unsupervised machine learning, statistical inference and prediction, and data mining. Applications of these techniques to a wide variety of data sets will be described.

Prerequisite: COSC 1 or ENGS 20; MATH 22 or MATH 24

COSC 275 - Introduction to Bioinformatics

Bioinformatics is broadly defined as the study of molecular biological information, and this course introduces computational techniques for the analysis of biomolecular sequence, structure, and function. While the course is application-driven, it focuses on the underlying algorithms and information processing techniques, employing approaches from search, optimization, pattern recognition, and so forth. The course is hands-on: programming lab assignments provide the opportunity to implement and study key algorithms.

Prerequisite: COSC 10. COSC 30 is recommended.

COSC 276 - Artificial Intelligence

An introduction to the field of Artificial Intelligence. Topics include games, robotics, motion planning, knowledge representation, logic and theorem proving, probabilistic reasoning over time, understanding of natural languages, and discussions of human intelligence. Students will write software that implements solutions to classical problems in Artificial Intelligence. Graduate students will also be expected to read papers and report on current and past research in the field.

Prerequisite: COSC 10. COSC 30 is recommended.

COSC 277 - Computer Graphics

This course provides a broad introduction to the mathematical and programmatic foundations of computer graphics, including modeling, rendering (drawing), and animating three-dimensional scenes. Topics include digital image representation, two- and three-dimensional shape

representations (e.g. parametric curves and surfaces, meshes, subdivision surfaces), geometrical transformations (e.g. rotations, scales, translations, and perspective projection), rigging and skinning, the rasterization pipeline, ray tracing, illumination and shading models, texturing, and light & visual perception. Coursework typically includes a mix of programming assignments, quizzes/hand-written work, assigned readings, and a final project. Knowledge of basic linear algebra and programming skills are assumed.

Prerequisite: COSC 50; COSC 70/70.01 (formerly COSC 11) or MATH 22/24; or instructor permission if the above two prereqs not fulfilled.

COSC 278 - Deep Learning

This course provides an introduction to deep learning, a methodology to train hierarchical machine learning models using large collections of examples. Deep learning is a special form of machine learning where rich data representations are simultaneously learned with the model, thus eliminating the need to engineer features by hand.

The course begins with a comprehensive study of feedforward neural networks, which are the model of choice for most hierarchical representation learning algorithms. Other models covered in this course include convolutional neural networks, restricted Boltzmann machines, autoencoders, sparse codes. Several lectures are devoted to discuss strategies to improve the bias-variance tradeoff, such as regularization, data augmentation, pre-training, dropout, and multi-task learning. The course also studies modern applications of deep learning, such as image categorization, speech recognition, and natural language processing.

Prerequisite: COSC 74/174

COSC 281 - Principles of Robot Design and Programming

This course is a hands-on introduction to robotics. Students will build robots, program robots, and learn to mathematically model and analyze manipulation and locomotion tasks. Topics include kinematics and dynamics of rigid-body motion, motion planning, control, mechanics of friction and contact, grasping, sensing, uncertainty in robotics, and applications of robots.

Prerequisite: COSC 70/70.01 (formerly COSC 11), or COSC 01 and Math 22/24. COSC 10 and COSC 50 are recommended.

COSC 287 - Rendering Algorithms

This class is intended for students interested in obtaining a deep technical understanding of the physically based rendering techniques used to produce photorealistic images in animated films, visual effects, or architectural and product visualizations.

Students will learn how light behaves and interacts with objects in the real world and how to translate the underlying math and physics into practical algorithms for creating photorealistic images. The course will provide a detailed treatment of the industry-standard Monte Carlo methods for light transport simulation, such as path tracing, bidirectional path tracing, and photon mapping.

Each major topic will also be accompanied by a programming assignment where students implement these algorithms within their own software framework to obtain practical experience. Additional coursework includes quizzes/handwritten exercises and assigned readings. At the end of the term, each student will work on a self-directed final project that extends their rendering software with additional features of their own choosing with the goal of creating a photorealistic image.

Prerequisite: COSC 70/70.01 (formerly COSC 11) and COSC 50; or Instructor's Permission.

COSC 289 - Topics in Applied Computer Science

This course studies an advanced topic in Applied Computer Science that is not covered in the regular curriculum. The subject material differs from course to course depending on the instructor. Please refer to individual course pages for detailed instruction. Suitable for PhD breadth requirement.

COSC 210 - Computer Science Colloquium

COSC 271 - Numerical Linear Algebra (Formerly COSC 240)

The course examines in the context of modern computational practice algorithms for solving linear systems $Ax = b$ and $Az = \lambda x$. Matrix decomposition algorithms, matrix inversion, and eigenvector expansions are studied. Algorithms for special matrix classes are featured, including symmetric positive definite matrices, banded matrices, and sparse matrices. Error analysis and complexity analysis of the algorithms are covered. The algorithms are implemented for selected examples chosen from elimination methods (linear systems), least squares (filters), linear programming, incidence matrixes (networks and graphics), diagonalization (convolution), sparse matrices (partial differential equations).

Prerequisite: COSC 71, MATH 26, or ENGS 91. Students are to be familiar with approximation theory, error analysis, direct and iterative techniques for solving linear systems, and discretization of continuous problems to the level normally encountered in an undergraduate course in numerical analysis.

Cross-Listed as: ENGS 106 and MATH 116

COSC 294 - Reading Course

COSC 295 - Experiential Learning in Graduate Computer Science

This course requires an internship which is designed to provide students with an opportunity to apply academic principles and skills in real situations outside the classroom. This course does not count toward the number of courses required for any degree. Students receive a pass/fail grade based on evaluation from on-site, internship supervisor. Permission of the student's degree program director is required. Students may take this more than once, and typically in the summer term (although other patterns are possible, if approved by the program director).

COSC 296 - Supervised Undergraduate Teaching

May be taken multiple times for credit. One course equivalent.

COSC 297 - Graduate Research

Student participates in research under the supervision of a faculty member. May be taken multiple times for credit. One course equivalent. Permission required.

COSC 298 - Thesis Research

Student participates in research under the supervision of a faculty member. May be taken multiple times for credit. Two course equivalents. Permission required.

COSC 299 - Full-Time Thesis Research

Student participates in research under the supervision of a faculty member. May be taken multiple times for credit. Three course equivalents. Permission required.

CSDA - Digital Arts - Graduate

CSDA 121 - Foundations of Digital Design

This projects-based course will familiarize students with the fundamentals of digital design, including layout, text, color theory, and UI design. Foundational concepts and the universal principles of design will be explored through extensive analyses and a series of design projects. No previous art or technical experience is required. Work is evaluated on a set of technical and aesthetic criteria and class participation.

CSDA 122 - 3D Digital Modeling

This projects-based lab course teaches the principles and practices of 3D modeling. Lectures focus on principles of modeling, materials, shading, and lighting. Students create a fully rigged character model while learning their way around a state-of-the-art 3D animation program. Assignments are given weekly. Students are graded on the successful completion of the projects, along with a

midterm examination. Work will be evaluated on a set of technical and aesthetic criteria.

CSDA 123 - Augmented and Virtual Reality Design

This hands-on projects-based course exposes students to the aesthetic, technical, and societal issues surrounding the emerging frontiers of digitally mediated realities. Students learn the fundamentals of augmented and virtual reality design and are introduced to interactive development for VR/AR. CSDA 23/123 and COSC 63.01 have class together and work together on teams. Designers in this course create assets and design the UI/UX while developers build interactive digital tools, games, and visualizations. This course is not open to students who have received credit for COSC 29.22 or COSC 89.22. Additional assignments will be given to graduate students.

CSDA 124 - Computer Animation: The State of the Art

This hands-on course focuses on state-of-the-art computer animation, presenting techniques for traditional animation and how they apply to 3D computer animation, motion capture, and dynamic simulations. Facial and full-body animation are covered through projects, readings, and presentations, including physical simulation, procedural methods, image-based rendering, and machine-learning techniques. Students will create short animations. This course focuses on methods, ideas, and practical applications, rather than on mathematics.

CSDA 127 - Projects in Digital Arts

This is the culminating course for the Digital Arts Minor. Students complete projects in digital arts, including: computer animations; games, VR/AR applications, interactive digital installations and media. Students work in small teams to complete work of a high production quality or work that incorporates innovations in technology. Grades are based on aesthetic and technical criteria along with teamwork and adherence to weekly milestones.

CSDA 128 - Advanced Projects in Digital Arts

This independent study course is for students who have completed all the courses in the Digital Arts minor and want to continue working on projects in digital arts or for students who want to stretch their skills in a new way. Projects may include computer animations, interactive digital arts, installations, or research projects. Students work alone or in teams. This course may be taken twice.

CSDA 129 - Topics in Digital Arts

This course studies an advanced topic in Digital Arts that is not covered in the regular curriculum. Students may take this course multiple times, subject to the restriction that the topics are distinct.

CSDA 125.01 - Intro to UI/UX Design I

CSDA 125.01 is a hands-on projects-based course that teaches the concepts, principles, and practice of User Interface (UI) and User Experience (UX) Design. It is designed for students with an interest in any form of design, although we focus on the UI/UX of digital tools (e.g. mobile, web, tablets). No previous experience or coding skills needed. Grading is based on weekly assignments, reflections, readings, and in-class exercises that build on each other and are intended to teach the foundational skills and thinking of UI/UX design. This team-based course requires a significant amount of time outside class. Students are encouraged (but not required) to take ENGS 12 prior to taking this course.

CSDA 125.02 - Intro to UI/UX Design II

This Independent Study course offers students who have taken CSDA 125.01 a chance to put what they learned in the classroom into practice. Students might work as a designer in the DALI Lab or on another project. In addition to completing a project as a designer, students design and build an online portfolio.

CSDA 129.04 - Impact Design

This innovative, team-based, project course is about impact--what it is, how you experience it, how you create it, how you measure it. We focus on designing products and experiences for community partners as part of the Social Impact Practicum program. Rather than looking at how we can solve a problem, we look at how we can create delight for users. Students will learn how to combine core principles from human psychology with the tools of design to create products and user experiences that promote engagement, adoption, and learning. Past community partners have included the Hartford Autism Regional Program (HARP) and the Aging Resource Center.

CSDA 129.05 - Digital Fabrication

Artists, designers, creators, and makers increasingly use digital fabrication methods in both two and three dimensions as a means of designing, rapid prototyping and manufacturing. This class uses digital fabrication tools in a studio setting. Students learn digital fabrication through a series of 2D and 3D design projects and through critical discussions of the aesthetic, sociological and practical implications of integrating digital tools and materiality into the design and build process.

Students will have hands-on training in the process of creating and converting computer generated drawings and models into physical objects through the use of 2D and 3D scanners, laser-cutters, wire benders, cnc routers and 3D printers. No previous experience needed.

CSDA 129.06 - Digital Tangible User Interfaces

As computation becomes ubiquitous, we find interactive digital devices scattered around our homes, as integral

parts of our living environments, including smart appliances, interactive architectural elements, toys, and interactive artworks. Digital Tangible User Interfaces (TUIs) are an approach to Human-Computer Interaction (HCI) where computation is embedded into objects we can interact with. One challenge of the TUIs is how to create a seamless interface between users and digital information so that the user can naturally interact with the daily product and their living environment. This course will focus on the theory, process, and practice of building intelligent objects and spaces. Students will be required to design and implement tangible user interface projects by using physical computing tools (Arduino) and computer languages such as Processing.

Earth Sciences - Graduate

Chair: Meredith A. Kelly

Graduate Program Coordinator: Marisa Palucis

Professors R. L. Hawley, M. A. Kelly, M. Morlighem, E. C. Osterberg, C. E. Renshaw, M. Sharma; Professors Emeriti J. L. Aronson, X. Feng, G. D. Johnson; Research Professors B. P. Jackson, W. C. McClelland; Associate Professors M.C. Palucis, L. J. Sonder; J. V. Strauss; Associate Professor Emeritus W. B. Dade; Research Associate Professor V. F. Taylor; Assistant Professors C. B. Keller, E. M., Lacroix, S. P. Slotznick; Senior Lecturers E. E. Meyer, M. A. Poage; Lecturers B. D. Barnes, T. Chaffee, A. Koepfel, S. B. Penprase, J. S. Stroup; Adjunct Professor K. J. Peterson; Adjunct Emeritus Professor F. J. Magilligan; Adjunct Associate Professors C. Hicks- Pries, J. Mankin, C. Meyer, H. E. Seroussi, J. M. Winter; Adjunct Assistant Professors E. Newton, Y. Nakayama; Adjunct Senior Lecturer J. W. Chipman

To view Earth Sciences Graduate courses, click here. (p. 930)

To view Earth Sciences Undergraduate requirements, click here. (p. 250)

To view Earth Sciences Undergraduate courses, click here. (p. 252)

Requirements for the Master's Degree

General requirements of the Master of Science (MS) degree at Dartmouth College include three terms of residence and seven courses of graduate level, not more than four of which may be replaced by research or special study approved and supervised by the department.

To be considered for admission to the MS program a prospective student must:

1. Complete the equivalent of the following Dartmouth Courses: MATH 3 and MATH 8.

2. Complete the equivalent (or higher) of any two of the following Dartmouth course sequences:

CHEM 5 and CHEM 6;

PHYS 3 and PHYS 4 (or PHYS 13 and PHYS 14);

Any two among BIOL 11 through BIOL 16.

In the case where a student is admitted into the MS program without having completed these prerequisites, the student must fulfill these prerequisites in addition to the specific degree requirements described below.

To fulfill the specific requirements of the Department of Earth Sciences for an MS degree, a student must:

1. Successfully complete six courses eligible for graduate credit (EARS 100 and above) at the discretion of the thesis committee. These courses must include EARS 201, EARS 202, and EARS 203 and either EARS 117 or EARS 118. Courses not eligible for course credit toward a graduate degree include thesis research (EARS 141-143), and teaching (EARS 149).
2. Complete the equivalent of three terms of thesis research for registered credit (EARS 141-143).
3. Complete a thesis of professional quality, with a view to scholarly publication, and pass a final oral examination on the topic of the thesis.

Requirements for the Ph.D. Degree

General requirements for the Ph.D. degree are given in the Regulations for Graduate Study section. In fulfillment of the specific requirements of the Department of Earth Sciences, the student must:

1. Satisfy all course requirements for the MS degree
2. Pass the following required courses or their equivalents, if not passed prior to entering the Ph.D. Program.

MATH 23. Differential Equations.

EARS 107. Mathematical Modeling in the Earth Sciences

EARS 118. Advanced Methods for Environmental Data Analysis

One upper-level science or engineering course outside the department carrying graduate credit. This may include CHEM 51, ENGG 24 or ENGG 34, or other courses approved by the Department.

3. Pass a minimum of nine courses carrying graduate credit, including those fulfilling the above requirements. Courses not eligible for course credit towards a graduate degree include departmental seminar (EARS 121), special project research (EARS 131), thesis research (EARS 141-143), and teaching (EARS 149).
4. Present and defend a summer research project before the faculty.
5. Pass a general qualifying exam.

6. Present and defend a thesis proposal before the faculty.
7. An essential element of graduate education at Dartmouth is the experience gained in teaching other students. Therefore, at least one term of undergraduate teaching is required of all graduate students. Students may participate in more than one term of teaching. Each student's program will be arranged, according to his/ her individual needs and interests, and the teaching needs of the Department.

A candidate who has satisfied the above requirements will receive a Ph.D. degree after he or she has:

1. Passed any additional graduate-level courses beyond those specified above, as prescribed by the Department.
2. Completed a thesis of professional quality. The thesis may be a series of publishable papers connected by appropriate text. The candidate must pass a final oral examination on the thesis.

Earth Sciences

EARS 700 - Responsible and Ethical Conduct of Research

Required course for all Earth Sciences students. Generally consists of five two hour sessions as well as additional reading and preparation.

\$name

EARS 107 - Mathematical Modeling of Earth Processes

Physics and mathematics of processes in the Earth, including chemical and thermal diffusion, mechanics of lithospheric deformation, and chemical fractionation. Sonder.

Prerequisite: MATH 13 or equivalent or permission of instructor

EARS 108 - Radiogenic Isotope Geochemistry

Prerequisite: EARS 62 or EARS 73 or equivalent

EARS 117 - Analysis of Environmental Data

Instructor: Morlighem

Topics such as acid deposition, watershed pollution, water quality, acid mine drainage and climatic change are used to introduce the fundamentals of environmental data analysis, including uncertainty and hypothesis testing, error propagation, regression, and experimental design. Students are required to analyze their own research data as part of their final project.

Offered: Fall.

EARS 118 - Advanced Methods for Environmental Data Analysis

Advanced methods of environmental data analysis are introduced with real world examples in environmental science. The course starts with a quick review of the fundamental statistical concepts, such as hypothesis testing, power of statistical tests and experimental design. The advanced methods include time series analysis, spatial data analysis (geostatistics), and multivariate analysis (such as multiple correlation, PCA, factor analysis, etc.).

Prerequisite: EARS 17 or EARS 117 and MATH 3 or the equivalents

EARS 119 - Stable Isotope Geochemistry

Prerequisite: EARS 62 or EARS 73 or equivalent

EARS 121 - Graduate Seminar

EARS 124 - Analytical Chemistry and Inorganic Instrumental Analysis (Identical to, and described under, Chemistry 124)

Prerequisite: CHEM 5 and CHEM 6 or equivalents or permission of instructor

Cross-Listed as: CHEM 124

EARS 128 - Introduction to Polar Systems (Identical to BIOL 138)

This course will examine current polar science that has relevance to critical environmental issues and policies for the high latitude regions. It will provide a foundation on topics such as ice core interpretation, declining sea ice and changes in ice sheet dynamics, alterations in the terrestrial and marine carbon cycles, and climate change impacts on polar biodiversity. The later portion of the course will focus on the development of a group interdisciplinary research project.

Cross-Listed as: BIOL 138

EARS 131 - Project Research

Research under the guidance of a staff member on a topic unrelated to the thesis.

EARS 135 - The Soil Resource (Described under Earth Sciences 35)

Instructor: Jackson

Soils are a critical natural resource; feeding our growing population depends fundamentally on soils; in fact, soils provide nutrients to all ecosystems. Agriculture and land management has increased soil erosion around the world, potentially influencing the history and fate of civilizations. In the modern era, this use is not sustainable; the physical and chemical degradation of soils far outpaces soil production. This course will explore the nature and properties of soils and examine how these processes occur

in natural and human-influenced soils, and identify reasonable limits on what can influence the sustainable utilization of soils as a resource. We will begin by developing an understanding of the geologic, biologic, and chemical processes that lead to soil formation and the development of specific soil properties. The second portion of the course will examine the relationship between soils and underlying bedrock and overlying vegetation and the role of soils in ecosystems. The final section of the course will examine the situations in which soils are used to reduce the impact of human activities and the way in which humans can reduce their impact on soils: the importance of soils in septic tanks and leach fields; the use of soils as solid waste landfill caps and liners; the use of soils in the storage of hazardous wastes; and the conservation and management of soils.

Offered: Fall.

EARS 136 - Astrobiology

This course will explore the nascent field of astrobiology—study of life in the universe. Students will be introduced to the various research aspects in the fields of biology, chemistry, geology, planetary science, and astronomy that contribute to our current understanding of astrobiology. Scientific hypothesis testing and evolution will be a course focus as technological innovation continues to shape the field. Together we will work to address the questions: How does life begin and evolve? Is there life beyond Earth and, if so, how can we detect it?

Offered: Spring.

EARS 141 - Level I - Thesis Research (one-course equivalent)

EARS 142 - Level II - Thesis Research (two-course equivalent)

EARS 143 - Level III - Thesis Research (three-course equivalent)

EARS 145 - Field Methods

Instructor: Kelly, Strauss

EARS OCP STRETCH Teaching Assistant Course

Offered: Fall.

EARS 149 - Supervised Teaching in Earth Sciences

Instructor: Kelly

Not open to undergraduates.

Offered: Fall, Spring, Summer, Winter.

EARS 151 - Mineralogy and Earth Processes

Instructor: Chaffee

Crystallography, mineral chemistry, and physical properties of the principal rock forming minerals, especially the silicates. In the laboratory, technique of hand identification, the petrographic microscope, and X-ray diffraction are mastered. The course culminates with three case studies that relate mineralogic change to the geologic cycle, such as in regional metamorphism during mountain building; the origin of petroleum; and soil formation.

Prerequisite: EARS 40 and CHEM 5 or equivalents

Cross-Listed as: Described under EARS 51

Offered: Winter.

EARS 152 - Structural Geology (described under Earth Sciences 52)

This course examines various aspects of regional-scale geologic processes and structures, or tectonics. Topics of study include the history of relevant geologic thought, rock deformation, the origin and evolution of mountain belts, the growth of continents and ocean basins, the causes of earthquakes and volcanic eruptions, and tectonic geomorphology. Students learn that tectonic analysis requires the synthesis of a wide range of information in an attempt to reconstruct the history and driving dynamics of the large-scale, geologic architecture of a particular region. Format: faculty- and student-led presentations, and discussion of selected articles from the peer-reviewed literature.

Prerequisite: EARS 40 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 52

EARS 158 - Sedimentary Petrology (described under Earth Sciences 58)

Prerequisite: EARS 40 or equivalent or permission of instructor

Cross-Listed as: Described under EARS 58

EARS 159 - Igneous and Metamorphic Petrology

Instructor: Keller

An overview of high-temperature geochemistry with particular emphasis on the processes that form igneous and metamorphic rocks. We will learn how a combination of rock fabric, texture, mineralogy, phase equilibria, and chemical composition are used to investigate the origin and evolution of rocks. We will also examine the relationship between rock forming and tectonic processes and the origin of the Earth's crust. The course consists of lectures and laboratory; the latter includes examination of a large

number of rocks in hand-samples and their corresponding thin-sections. Additionally, we will have a week-end field trip to the metamorphosed igneous rocks of the Adirondack Mountains.

Prerequisite: EARS 40 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 59

Offered: Fall.

EARS 160 - Earth System Modeling

What will Earth look like in 2100? Scientists use the world's most sophisticated computer programs—climate models—to answer such questions. This applications-based class introduces the theory and practicalities of process-based modeling for climate science. We will employ a range of models, from 0-dimensional to fully-coupled global-scale Earth System Models. Focusing on climate change, we will learn the potentials and pitfalls of modeling complex systems and how to evaluate models and their societal relevance.

EARS 161 - Hydroclimatology

Instructor: Winter

Held concurrently with GEOG 61.01 and EEES

161. Interactions between energy and water shape the natural environment and society. This course will examine the spatial and temporal dynamics of the hydrologic cycle, focusing on radiative and turbulent fluxes, precipitation, evapotranspiration, vegetation, soil moisture, runoff, and anthropogenic influences. Lectures will introduce key topics, followed by student-led discussions of relevant journal articles, and a separate graduate-level survey of methods in hydroclimatology. A research project will allow students to explore a topic of interest using concepts, analysis, and data central to hydroclimatology, as well as write a short-form scientific manuscript describing the project.

Offered: Winter.

EARS 162 - Geochemistry (described under Earth Sciences 62)

The intent of this course is to further our understanding of the Earth by utilizing the principles of chemistry. We will place particular emphasis on how to obtain quantitative information about the processes controlling the composition of Earth's mantle, crust, ocean and atmosphere. We will examine how abundances of elements and isotopes and chemical equilibria can provide such information.

Prerequisite: CHEM 6 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 62

EARS 164 - Geophysics (described under Earth Sciences 64)

Instructor: Sonder

Geological methods (mapping and analysis of samples collected at the earth's surface) tell us much about processes occurring near the earth's surface, but very little about deeper parts of the earth. Almost all surface rocks come from depths of no more than a few tens of kilometers, yet 99% of the Earth is deeper than that! How can we learn about parts of the Earth to which there is no hope of ever traveling and from which we have no samples? Geophysics gives us the tools. In this course we will use the principles of gravity, magnetism, seismology, and heat transfer to "journey to the center of the Earth." Laboratory sessions will be focused more locally; we will collect geophysical data from the Hanover area and interpret them to learn about the rocks hidden below the Earth's surface.

Prerequisite: MATH 3 or equivalent or permission of the instructor. MATH 8 or equivalent is advisable, but not required

Cross-Listed as: Described under EARS 64

Offered: Spring.

EARS 165 - Advanced Remote Sensing (described under Earth Sciences 65)

Instructor: Koepfel

Cross-Listed as: Described under EARS 65

Offered: Fall.

EARS 166 - Hydrogeology

Prerequisite: MATH 3 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 66

166.1 - Environmental Transport and Fate

Instructor: TBD

Taught concurrently with EARS 66.01. Introduction to movement and transformation of substances released into the natural environment. Fundamentals of advection, dispersion, and reaction. Aggregation and parameterization of various mixing processes leading to dispersion at larger spatial and temporal scales. Importance of inhomogeneity, anisotropy, and stratification in natural media. Basic principles are illustrated by application to atmospheric, ground water, river, estuarine, coastal, and oceanic pollution problems. Case studies include urban smog, acid rain, Chernobyl fall-out, and stratospheric ozone depletion.

Offered: Spring.

EARS 167 - Environmental Geomechanics (described under Earth Sciences 67)

Instructor: Palucis

The study of our Earth environment requires an understanding of the physical processes within and at the surface of the Earth. This course explores the physics of key Earth surface processes, including volcanic eruptions, landslides and debris flows, and turbulent flows in rivers and the sea. Advanced quantitative concepts are developed through applications in geomorphology, sedimentology, oceanography, and volcanology. Format: faculty lectures, challenging weekly problem sets, independent project, final exam.

Prerequisite: MATH 23 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 67

Offered: Winter.

EARS 170 - Glaciology (described under Earth Sciences 70)

Instructor: Hawley

This course explores the unique nature and scientific importance of glaciers, ice sheets, snow, and frozen ground in the Earth system, collectively referred to as the Cryosphere. We explore how glaciers work, and how they interact with the climate system. We investigate how ice behaves from the molecular scale to the continental scale and compare and contrast this behavior to that of snowpacks. The practical skills and techniques used by glaciologists to study glaciers and ice sheets are considered along with transferable skills in advanced quantitative data analysis, including time series analysis and computational modeling of physical processes, with emphasis on practical application to real data.

Prerequisite: PHYS 3 and MATH 3 or equivalents. EARS 33 or equivalent is recommended

Cross-Listed as: Described under EARS 70

EARS 171 - River Processes and Watershed Science (described under Earth Sciences 71)

Instructor: Magilligan

Role of surface water and fluvial processes on landscape formation; magnitude and frequency relationships of flood flows; soil erosion, sediment transport, and fluvial landforms. This course examines the links between watershed scale processes such as weathering, denudation, and mass wasting on the supply of water and sediment to stream channels on both contemporary and geologic timescales and further evaluates the role of climate change on the magnitude and direction of shifts in watershed and fluvial processes. Not open to students who have received credit for GEOG 035.

Prerequisite: EARS 16 or EARS 33 or BIOL 23 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 71

EARS 172 - Geobiology (described under Earth Sciences 72)

Instructor: Barnes

Prerequisite: CHEM 5 or equivalent or permission of the instructor. EARS 31 or BIOL 16 or equivalent recommended

Cross-Listed as: Described under EARS 72

Offered: Fall.

EARS 173 - Environmental Isotope Geochemistry

This course examines the use of stable, radiogenic and cosmogenic isotopes as tools to study Earth processes, particularly processes that are environmentally important. The theory of isotope principles are introduced followed by their applications in investigating Earth's systems. The main applications include studies of climate change, hydrological processes, biogeochemical cycles, Earth's early environment, origin of life, erosion and mountain building. Labs provide hands on opportunities for students to learn mass spectrometry and isotopic data collection and interpretation.

Prerequisite: CHEM 5 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 73

EARS 174 - Soils and Aqueous Geochemistry

Instructor: Lacroix

An overview of the basic principles that govern soil chemistry, with particular emphasis on the composition and mineralogy of soils, the chemical processes that function within soils, the reactions that describe the fate of elements (both nutrients and contaminants) within soils and soil solutions. The majority of the course will cover equilibrium soil processes. Occasional field trips will concentrate on the collection of soils and their characterization.

Prerequisite: CHEM 5 and EARS 62 or equivalents or permission of instructor

Cross-Listed as: EARS 74

Offered: Spring.

EARS 175 - Quaternary Paleoclimatology

Evidence for past (paleo) climate change provides essential information about Earth's climate system and the potential for future change. This course focuses on understanding paleoclimate changes during the Quaternary Period such as

glacial-interglacial variability, rapid climate changes, and the recent "stable" climatic conditions of the Holocene epoch. We will rely on published scientific data to examine these various topics and critically evaluate hypotheses for mechanisms of climate change.

Prerequisite: EARS 15 or ENGS 172 or equivalent or permission of the instructor

Cross-Listed as: Described under EARS 75

EARS 176 - Advanced Hydrology

Instructor: Palucis

A survey of advanced methods used to analyze the occurrence and movement of water in the natural environment. The watershed processes controlling the generation of runoff and streamflow are highlighted, and used to explore the transport and fate of sediment and contaminants in watersheds. Throughout the course the ideas and concepts are explored through the primary literature, with emphasis given to methods of observation, measurement, data analysis, and prediction.

Prerequisite: EARS 66 or equivalents or permission of instructor

Cross-Listed as: Described under EARS 76

Offered: Spring.

EARS 177 - Environmental Applications of GIS (Identical to, and described under, Geography 59)

Instructor: Chipman

Cross-Listed as: GEOG 59

Offered: Winter.

EARS 178 - Climate Dynamics

Instructor: Osterberg

This course focuses on the physics that govern the circulation of the atmosphere and ocean, and the dominant patterns of climate variability that we observe today. We explore global-scale atmospheric dynamics that explain why the atmosphere behaves as observed. We also use scientific literature to investigate the signature and causes of regional ocean-atmosphere variability including the El-Nino Southern Oscillation, monsoons, and North Atlantic Oscillation, and the influence of climate change on these patterns.

Prerequisite: Math 8 or equivalent and EARS 14 or EARS 15 or equivalent, or Instructor Permission

EARS 179 - Special Topics

The Timetable of Class Meetings contains the most up-to-date information about a course. It includes not only the meeting time and instructor, but also its official distributive

and/or world culture designation. This information supersedes any information you may see elsewhere, to include what may appear in this ORC/Catalog or on a department/program website. Note that course attributes may change term to term therefore those in effect are those (only) during the term in which you enroll in the course.

\$name

EARS 270 - Topics in Ice and Climate (Graduate Seminar)

This seminar uses primary literature to examine topics in ice and climate including glaciology, glacial geology, Quaternary geology as well as present and past climate systems. The course helps students develop skills in critical analysis and communication, along with an understanding of the general context underlying the fields. All students will both lead and participate in discussions.

EARS 276 - Topics in Earth Surface Processes (Graduate Seminar)

This seminar uses primary literature to examine the earth surface processes acting over a range of time scales. The course helps students develop skills in critical analysis and communication, along with an understanding of the general context underlying the field of earth surface processes. All students will both lead and participate in discussions.

EARS 201 - Fundamentals and Pedagogy in Earth Sciences

Instructor: Slotznick, Strauss

This course aims to develop some of the fundamental concepts and skills of geology as well as to provide teaching experience. We will use the rich geological history of New England as our training ground for learning and reviewing geologic concepts and practicing field skills. In order to provide ample background, we will read classic texts and recent, cutting-edge papers on the geology of New England. We will also conduct local and regional field trips to investigate exposures and hone field skills. In preparation for graduate teaching responsibilities, as well as for further careers in teaching, we will learn about and discuss pedagogy. Students will develop and present an introductory-level earth sciences lecture and provide critiques of other students' presentations. Finally, this course will help focus students' graduate research projects through class discussions and final presentations. Not open to undergraduates. Staff.

Offered: Fall.

EARS 202 - Critical Analysis in Earth Sciences

Instructor: Keller

EARS 202 – Critical analysis in Earth Sciences
A part of the core curriculum required of all graduate

students. Critical analysis of the primary literature is central to the advancement of Earth Science. This course focuses on the critical reading skills required to access the literature using foundational papers of students' choosing. Class sessions will center on student-led presentations and analyses of these papers. In addition to critical reading, students will learn oral presentation skills for communicating science, with an emphasis on the science behind effective presentations. Students will learn how to provide structured critiques of presentations as a means of providing feedback to one another. Not open to undergraduates.

Offered: Winter.

EARS EARS 272 - Topics in Historical Geobiology (Graduate Seminar)

This seminar uses primary literature to examine the interactions between Earth and life over geological timescales. The course helps students develop skills in critical analysis and communication, along with an understanding of the general context underlying the field of historical geobiology. All students will both lead and participate in discussions.

Ecology, Evolution, Environment & Society - Graduate

Co-Chairs: Richard B. Howarth and Kathryn L. Cottingham

Faculty: Professors M.P. Ayres, D.T. Bolger, R.G. Calsbeek, J.J. Casana, K.L. Cottingham, M.E. Cox, J.M. DeSilva, N.J. Dominy, S.E. Freidberg, R.B. Howarth, F.J. Magilligan, M.A. McPeck, L.A. Ogden, K.J. Peterson, C.S. Sneddon, R.A. Virginia; Associate Professors V.B. Chaudhary, C.E. Hicks Pries, A.H. Neely, Z.M. Thayer, J.M. Winter, O. Zhaxybayeva, J.S. Mankin; Assistant Professors E.L. Behrman, R.E. Fleskes, M.E. Greenleaf, L.L. Jennings, M. McLeester, J. Mutz, T.W. Ong, S.J. Tumber-Dávila, A.M. Varuolo-Clarke, J. Wang; Research Professor C.Y. Chen.

To view Ecology, Evolution, Environment and Society courses, [click here](#).

Requirements for Advanced Degrees

The general requirements for advanced degrees are given in the Regulations for Graduate Study section. Each graduate student must receive credit for a set of courses chosen in consultation with the advisory committee. All graduate students are expected to participate in departmental colloquia and weekly seminars.

To receive the Ph.D. degree in EEES a candidate must satisfactorily:

1. Complete the course requirement, as described above.
2. Complete the teaching requirement as specified by the advisory committee.
3. Demonstrate mastery of conceptual and factual material in the major area of specialization in an oral examination.
4. Present and satisfactorily defend a thesis proposal before the advisory committee.
5. Satisfy the two-year residence requirement of the College.
6. Complete a doctoral dissertation.
7. Defend the dissertation before a faculty committee appointed for this purpose.

Although the graduate program is designed for students pursuing the Ph.D. degree, a master's degree may be awarded under special circumstances. To receive an M.S. degree in EEES, a candidate 1) must satisfactorily complete course and teaching requirements, as specified by the advisory committee, 2) complete a thesis, 3) defend the thesis in an oral examination before a faculty committee, and 4) satisfy the one-year residence requirement of the College.

EEES

EEES 119 - Design and Development of Research

Instructor: Cottingham

This graduate seminar and practicum focuses on design and development of research proposals in Ecology, Evolution, Environment and Society. Emphasis is placed on the formulation and design of testable scientific ideas and the development of these ideas into feasible projects. Each student is responsible for the development and execution of a realistic research proposal (typically following NSF proposal format). Students provide critical evaluation of each other's ideas and written work throughout the course.

Prerequisite: Permission of instructor

Cross-Listed as: BIOL-119

Offered: Fall.

EEES 120 - Advanced Population Ecology

Instructor: McPeck

Held concurrently with BIOL 21/51. This course explores theory and data regarding properties of biological populations. Topics of lectures and analytical exercises include: descriptions of abundance, dispersion, and demographic schedules; applying life tables and matrix

models to understand population growth and age structure; life history theory; influence of endogenous feedbacks and exogenous forces on population dynamics; spatial patterns and processes; and contributions of population ecology to applied issues in conservation, pest management, human demography, and the management of harvested populations. Offered in alternate years.

Cross-Listed as: BIOL-120

Offered: Spring.

EEES 123 - Advanced Community Ecology

Instructor: McPeck

Held concurrently with BIOL 58. This course will examine the various mechanisms structuring ecological communities of plants and animals. The course will consist of regular lectures, readings from the primary literature, and individual projects. Topics to be covered include simple two-species interactions (e.g. predation, competition, parasitism, mutualisms), simultaneous multispecies interactions, food web structure, regulation of species diversity on ecological and evolutionary time scales, community succession, and biogeography. Emphasis will be placed on the development of mathematical models and their relationship to empirical studies. Offered in alternate years.

Cross-Listed as: BIOL-123

Offered: Spring.

EEES 125 - The Nature and Practice of Science

Instructor: Ayres

This course compares and contrasts the nature and practice of science across the range of contemporary biological disciplines. Topics include: What is science? What is the structure of scientific knowledge? What are the philosophical, logical, and practical aspects of hypothesis testing? What are intellectual strategies for successful research in biology? What is the role of ethics in science? Format includes readings, exercises, and discussion.

Cross-Listed as: BIOL-125

EEES 127 - Biostatistics

Instructor: McPeck

Held concurrently with BIOL 29. The course will cover basic descriptive statistics, simple probability theory, the fundamentals of statistical inference, regression and correlation, t-tests, one-way analysis of variance, basic analyses of frequency data and non-parametric statistics, and the general philosophy of experimental design. We will explore these topics from the perspective of biological applications. Examples will be drawn from all subdisciplines of biology (e.g. biochemical kinetics, development, physiology, ecology, and evolution).

Cross-Listed as: BIOL-127

Offered: Fall.

EEES 128 - Biostatistics II

Instructor: McPeck

Held concurrently with BIOL 59.01. This is an advanced course in statistics and experimental design, as applied to biological systems. There will be lectures and computer laboratories, regular homework assignments, and a major term project of statistical analysis. Topics covered include analysis of variance, generalized linear models and logistic regression, multivariate analysis methods, experimental design, and an introduction to Bayesian methods. Emphasis will be placed on the use of statistical programming for performing analyses.

Prerequisite: Graduate standing and at least one elementary course in statistics

Cross-Listed as: BIOL-128

Offered: Fall.

EEES 129 - Biostatistics III: Generalized Linear Mixed Models

Instructor: The staff

This course covers the modern techniques of building linear statistical models to analyze observational and experimental data that follows many different probabilistic distributions (e.g., normal, binomial, Poisson, exponential, geometric).

Prerequisite: BIOL-128 or EEES-128

Cross-Listed as: BIOL-129

EEES 131 - Advanced Topics in Statistics

Instructor: McPeck

Held concurrently with BIOL 59.02. Most data sets contain measurements on multiple variables on each observation/object in the data set. Special techniques are needed to deal with these multiple variables simultaneously, and take full effect of the covariances among the variables. We will explore the techniques that are available to analyze such issues in these data sets, such as multivariate regression and analyses of variance, principal components analysis and other ordination techniques, factor analysis, cluster analysis, and discriminate functions.

Cross-Listed as: BIOL-131

EEES 133 - Foundations in Ecology

Instructor: Ayres

In this graduate course, students will read and discuss a series of classic and contemporary papers taken from the primary literature on various topics in ecology and evolutionary biology. Each week a series of lectures will be given and a set of 2-4 papers will be discussed covering a different major topic. The papers will be chosen to expose students to the foundations of major ideas and theories in ecology and evolution and to contemporary tests of these major theories. This course covers topics in ecosystem and community ecology, natural selection and adaptation, and research approaches in ecology and evolution. Offered in alternate years.

Cross-Listed as: BIOL-133

Offered: Fall.

EEES 134 - Foundations in Evolutionary Biology

Instructor: Calsbeek

Held concurrently with BIOL 60.01 and BIOL 60.02. In this graduate course, students will read and discuss a series of classic and contemporary papers taken from the primary literature on various topics in ecology and evolutionary biology. Each week a series of lectures will be given and a set of 2-4 papers will be discussed covering a different major topic. The papers will be chosen to expose students to the foundations of major ideas and theories in ecology and evolution and to contemporary tests of these major theories. The course covers topics in population biology, population genetics, speciation, and macroevolution.

Cross-Listed as: BIOL-134

Offered: Winter.

EEES 135 - Foundations in Ecosystems & Society

Instructor: Freidberg

EEES 135 serves as one of two foundational courses for graduate students in the Ecology, Evolution, Environment & Society graduate program. The goal of the course is twofold: introduce all graduate students in the program to key debates within the environmental social sciences; and, develop an interdisciplinary community for each cohort of incoming students. The seminar is organized around key approaches to understanding human environmental relations and change at multiple temporal and spatial scales. Course materials draw from different interdisciplinary approaches including environmental economics, political ecology, community conservation, environmental justice, environmental governance, policy, and others. Offered in alternate years.

Offered: Fall.

EEES 136 - Ecology and Society Interdisciplinary Workshop

Instructor: TBD

The EEES Interdisciplinary Workshop on Ecology and Society brings together scholars from across Dartmouth College whose research focuses on the social and cultural processes influencing environmental outcomes. Bringing an interdisciplinary approach allows participants to engage with different theories, methods, and approaches of human environment scholarship and better understand the cross-cutting themes emerging across the environmental social sciences. From global climate change, habitat loss and species endangerment, desertification and deforestation, and the effects of rapid urbanization across the globe, this workshop provides an interdisciplinary space for graduate students to explore and understand these emerging themes and to better understand the emerging opportunities and challenges for interdisciplinary work.

EEES 137 - Ecology and Evolution Interdisciplinary Workshop

Instructor: TBD

The EEES Interdisciplinary Workshop on Ecology & Evolution brings together scholars from across Dartmouth College whose research focuses on the advancement of basic knowledge in ecology and evolutionary biology. Areas of inquiry include: the perception and responses of organisms to their environment; the dynamics of genomes, organisms, populations and communities in ecological evolutionary time; and the properties of communities and ecosystems that permit and constrain resilience in the presence of environmental change.

EEES 140 - Climate Extremes on a Warming Planet

Instructor: Mankin

Held concurrently with GEOG 18.01. Somalian drought and famine, Greenland wildfires, monsoonal floods and landslides in Southeast Asia, and the brutal hurricanes and post-storm neglect of Puerto Rico - climate related disasters such as these cost the U.S. alone a record of \$300B in 2017. With the world warming an order of magnitude faster than any time in the last 65 million years and with more people, material, and money occupying the same space than ever before, it's unclear whether such climate impacts are part of a geophysical trend or reflective of our social, political, and economic choices.

Offered: Fall.

EEES 141 - Economics of Ecological Resources

Instructor: Howarth

This course develops theories and methods that are used in primary research on the economics of ecological resources. Topics include welfare economics, nonmarket valuation, common pool resources, bioeconomic modeling, forest resource management, decision-making under uncertainty and the role of ecosystem services in supporting the macroeconomy. Students develop skill in applying optimization techniques and dynamic simulation

in the analysis and governance of ecological-economic systems. This course is aimed at students who have some prior knowledge of ecological economics plus grounding in first-year calculus.

EEES 145 - Practicum in Combining Theories, Models and Data in Research

Instructor: Ayres

In science, models are the link between theories and data. Models can be of infinitely variable form (verbal, graphical or mathematical; process-based or empirical; deterministic or stochastic, etc.) and can function in myriad different ways (describing a theory, deriving predictions to test a theory, predicting the empirical outcomes of alternative management scenarios, etc.). Effective scientists are continually absorbing, conceiving, sorting, discarding and refining models. All scientists are modelers, but many of us mainly do it unconsciously, and almost all of us would be better scientists if we were better modelers. This course will be a workshop in combining theories, models and data in research. The course structure will include a mix of short lectures, analytical exercises, small work groups, structured discussion and unstructured time for all of us to work on an interesting modeling problem from our own work. The course will culminate in the last meeting with presentations by each participant of their modeling projects. Offered in alternate years.

Cross-Listed as: BIOL-145

Offered: Fall.

EEES 147 - Genomics: From Data to Analysis

Instructor: Zhaxybayeva

Held concurrently with BIOL 47. Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

Cross-Listed as: BIOL-147

Offered: Fall.

EEES 148 - Arctic Environmental Change

Instructor: Culler

Held concurrently with ENVS 23. This course examines the connections between science and the human dimensions of rapid environmental change. First, ecosystem responses to emerging environmental issues (climate change, resource development) will be introduced from a scientific perspective. In the second part, we will explore how this science is framed in policy documents such as reports from the Intergovernmental Panel on Climate Change. The course will emphasize the importance of science communication in the policy process and will culminate with a collaborative case study that integrates climate change, resource development, and social issues.

Cross-Listed as: BIOL-148

Offered: Winter.

EEES 150 - Ecology of Infectious Disease

Instructor: Cottingham

Held concurrently with BIOL 50.02. The primary goal of this course is to apply the tools, concepts and approaches of ecological science to the vexing problem of infectious disease. We will begin with careful reading of published case studies to develop both content mastery and strategies for identifying important areas for further work. We will also meet with campus librarians and read materials about leading productive discussions, writing effective research proposals, and providing constructive peer reviews. Each student will then develop an NSF-style research proposal to better understand the ecological aspects of a particular disease or type of disease, practice the art of constructive peer review with others' proposals, and iteratively improve their own proposals. Throughout, we will work together to build communication skills as well as cultivate key academic virtues.

Prerequisite: A solid background in ecology (at least to the level of the Foundation Course in Ecology, BIOL/EEES 133) and experimental design is expected (BIOL/EEES 127 or equivalent). Additional coursework in ecology and biostatistics will be beneficial.

Cross-Listed as: BIOL-150

Offered: Spring.

EEES 152 - Student-Organized Seminar in Ecology and Evolution

Instructor: Staff

Graduate students who have advanced to candidacy may organize a seminar course on topics of their choosing. The course will be conceived, organized, and led by students with faculty involvement. Course proposals should contain: (1) title; (2) one-page exposition on the

intellectual motivation for the course; (3) syllabus, including reading list and example problem sets, if appropriate; (4) name(s) of faculty advisor(s); (5) names of students and postdoctoral researchers that will participate in the seminar; and if appropriate, (6) a listing of potential products of the seminar, such as joint papers or proposals. Proposals will be evaluated by a faculty committee. Students are encouraged to collaborate with faculty advisors during proposal development.

Cross-Listed as: BIOL-152

EEES 153 - Aquatic Ecology

Instructor: Ryan

Held concurrently with BIOL 53. The study of interactions between biological communities and their freshwater environment. Lecture and readings provide the scientific background necessary for understanding the physical, chemical and biological dynamics of freshwater habitats. Emphasis is placed on application of fundamental concepts to problems in conservation and management of aquatic ecosystems. The laboratory and fieldwork, including a weekend field trip during the first week of classes, will acquaint students with modern methodological approaches for studying aquatic ecosystems.

Cross-Listed as: BIOL-153

Offered: Spring.

EEES 156 - Political Economy of U.S. Environmental Policy

Instructor: Webster

Held concurrently with ENV5 56. This course explores how concepts from economics and political science can be integrated and applied to issues of environmental governance. Classroom activities and assignments are designed to foster critical thinking about 1) the tools used in environmental economics and 2) the interplay between economic and political forces in human-environment systems. Students will learn how concepts such as cost-benefit analysis, incentive-based regulation, and interest-based politics are applied to problems ranging from pollution reduction to international environmental negotiations.

Offered: Winter.

EEES 160 - Earth System Modeling

Instructor: Mankin

Held concurrently with GEOG 60. What will Earth look like in 2100? Scientists use the world's most sophisticated computer programs - climate models - to answer such questions. This applications-based class introduces the theory and practicalities of process-based modeling for climate science. We will employ a range of models, from 0-dimensional to fully-coupled global-scale Earth System

Models. Focusing on climate change, we will learn the potentials and pitfalls of modeling complex systems and how to evaluate models and their societal relevance.

EEES 161 - Hydroclimatology

Instructor: Winter

Held concurrently with GEOG 61.01. Interactions between energy and water shape the natural environment and society. This course will examine the spatial and temporal dynamics of the hydrologic cycle, focusing on radiative and turbulent fluxes, precipitation, evapotranspiration, vegetation, soil moisture, runoff, and anthropogenic influences. Lectures will introduce key topics, followed by student-led discussions of relevant journal articles, and a separate graduate-level survey of methods in hydroclimatology. A research project will allow students to explore a topic of interest using concepts, analysis, and data central to hydroclimatology, as well as write a short-form scientific manuscript describing the project.

Offered: Winter.

EEES 165 - Global Environmental Politics

Instructor: Webster

Held concurrently with ENV5 65. This course will examine the global politics associated with environmental issues such as desertification, wildlife management, biodiversity conservation, oceans and fisheries, shared water resources, and climate change. Specifically, we will engage these topics using theories from international relations and comparative politics. A major goal of the course is to give students a firm understanding of the linkages between the policy preferences of governments and the outcomes of international negotiations regarding the global environment.

EEES 167 - Political Ecology

Instructor: Sneddon

Held concurrently with ENV5 67/GEOG 47.01. Political ecology is an approach to human-environment relations that links a broad understanding of biophysical systems (e.g., tropical forests, coastal ecosystems, river basins) to knowledge regarding the political and economic forces that drive ecological change. Drawing on examples from North America, Southeast Asia, Africa and other regions, this course employs a political ecology framework to examine contemporary debates over urbanization, water resources, the role of science in environmental conflicts and the cultural landscape.

Offered: Fall.

EEES 169 - Supervised Teaching in EEES

Instructor: The staff

This course is required for all graduate students, based on the assertion that an essential element of graduate education is the experience gained in teaching other students. Such teaching experience is of particular relevance to students interested in academic careers. Students will conduct laboratory or discussion sessions in undergraduate courses under the supervision of the course faculty. The faculty and student teaching assistant work very closely to develop lab and discussion assignments. In some cases, the students are encouraged to present lectures for which they receive detailed feedback on their teaching style. In all cases students will receive instruction on effective teaching techniques through weekly preparation sessions. Topics for discussion include how to teach the material, how to run a discussion, how to evaluate student responses, and grading. Performance will be monitored throughout the term and appropriate evaluation, coupled with detailed suggestions for improvement, will be provided. This course is not open to undergraduates.

Cross-Listed as: BIOL-169

Offered: Fall, Spring, Summer, Winter.

EEES 171 - River Processes and Watershed Science

Instructor: TBD

Held concurrently with EARS 71/GEOG 62.01. Role of surface water and fluvial processes on landscape formation; magnitude and frequency relationships of flood flows; soil erosion, sediment transport, and fluvial landforms. This course examines the links between watershed scale processes such as weathering, denudation, and mass wasting on the supply of water and sediment to stream channels on both contemporary and geologic timescales and further evaluates the role of climate change on the magnitude and direction of shifts in watershed and fluvial processes.

EEES 173 - Advanced Topics in Political Ecology

Instructor: Freidberg

Held concurrently with GEOG 73. Born out of late 20th century research into the political drivers of resource degradation in the global South, the field of political ecology now examines environmental change, harms, and controversies in a wide range of social and spatial contexts. Political ecology is also home to ongoing interdisciplinary debates about how critical social scientists can most productively engage with the environmental knowledge of natural scientists and others who work with nature. This course offers students the opportunity to explore these debates – especially as they apply to students' own research interests – while also deepening their understanding of political ecology's core concepts and epistemological concerns. The course will meet weekly and will be run as a seminar.

Prerequisite: EEES 135 or instructor permission

Offered: Spring.

EEES 181 - Coupled Human-Natural Systems: Theory and Practice

Instructor: Ong

Held concurrently with ENVS 22. This course is an introduction to coupled human-natural systems, exploring how social, ecological, and environmental systems are linked and feedback to influence each other. Increasing human demand for Earth's limited resources has resulted in a plethora of hazards to the natural world; problems which are unlikely to be solved without understanding the links between human and natural systems. Here, we will explore some of the complex, sometimes non-intuitive behavior that results from coupling these systems. The primary objective is to introduce students to the tools and techniques of complex systems science used for researching coupled human-natural systems. In a series of lectures and computer laboratory modules, students will be introduced to significant areas of research in the field and learn how to analyze and leverage basic continuous and discrete time differential models and spatiotemporal statistics to address socio-ecological problems. The course will provide basic coding instruction, as necessary. No prior experience in coding is needed. In a final project, students will work in groups to develop or adapt an existing socio-ecological model, gather and analyze existing data, as well as interpret the implications of their results for human management.

Offered: Winter.

EEES 197 - Graduate Research I: Level I

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

Cross-Listed as: BIOL-197

Offered: Fall, Spring, Summer, Winter.

EEES 198 - Graduate Research I: Level II

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries two course credits and should be elected by

students electing only departmental colloquia in addition to research.

Cross-Listed as: BIOL-198

Offered: Fall, Spring, Summer, Winter.

EEES 199 - Graduate Research I: Level III

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, prior to passing their qualifying examination; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Cross-Listed as: BIOL-199

Offered: Fall, Spring, Summer, Winter.

EEES 200 - Foundational Papers in Ecology Research Colloquium

Instructor: Ridgeway

The goal of this discussion-based journal club is to bring together students, postdocs, and faculty from the EEES and allied graduate programs to discuss foundational papers in ecology and ecosystem science, and to make connections between this classic work and the current frontiers in these fields. Each enrolled graduate student participant will be required to lead a weekly discussion of 1-2 papers once during the term. Normally meets weekly. This course is not open to undergraduates.

Cross-Listed as: BIOL-200

Offered: Fall.

EEES 265 - Microbial Ecology and Environmental Biology Research Colloquium

Instructor: Nadell

The goal of this discussion-based journal club is to bring together students, postdocs, and faculty from the EEES, MCB, and EARS graduate programs to discuss recent papers on the ecology and environmental biology of microbes. Each enrolled graduate student participant will be required to lead a weekly discussion of 1-2 papers once during the term. Normally meets weekly. This course is not open to undergraduates.

Cross-Listed as: BIOL-265

Offered: Spring.

EEES 266 - Ecology and Evolution Research Colloquium

Instructor: Hicks Pries, Cottingham, Mutz

This course is required of all students during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audiovisual materials. All students will make oral presentations that describe work from their own research. Normally meets weekly. This course is not open to undergraduates.

Cross-Listed as: BIOL-266

Offered: Fall, Spring, Winter.

EEES 272 - Advanced Readings in Evolution

Instructor: Calsbeek

Asexual reproduction dominates the Earth's biology. Curiously, the vast majority of eukaryotes reproduce sexually even though the evolution of meiosis involves substantial costs. How meiosis evolved, and why it persists in sexual reproduction despite its many associated costs, are major unanswered questions in evolutionary biology. This course will survey the literature on the evolutionary origins of meiosis and the maintenance of sexual reproduction. We will explore the diversity of sexual and asexual modes of reproduction and related evolutionary phenomena with a focus on critically evaluating current research and theory in this area.

Cross-Listed as: BIOL-272

Offered: Winter.

EEES 297 - Graduate Research II: Level I

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, subsequent to passing their qualifying examination; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

Cross-Listed as: BIOL-297

Offered: Fall, Spring, Summer, Winter.

EEES 298 - Graduate Research II: Level II

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, subsequent to passing their qualifying

examination; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

Cross-Listed as: BIOL-298

Offered: Fall, Spring, Summer, Winter.

EEES 299 - Graduate Research II: Level III

Instructor: The staff

An original individual experimental or theoretical investigation beyond the undergraduate level in one of the fields of ecology, evolution, ecosystems or environmental social science. This course is open only to graduate students, subsequent to passing their qualifying examination; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Cross-Listed as: BIOL-299

Offered: Fall, Spring, Summer, Winter.

Graduate Studies Office Courses

Unspecified Graduate Studies Courses

Professional Development and Leadership

Each term the Graduate Studies Office offers a variety of training sessions on teaching, research, and career development that students from many different departments attend. The new program will formalize the process of giving students credit for coming to these workshops and will recognize students' efforts to develop their skills and prepare for their future careers.

Doctoral students participating in the professional development program will earn credit hours toward one course during the time they are working toward their PhD. The credit will appear on students' transcripts under the label *Professional Development*. Workshops will be divided into *core* sessions, such as sessions on ethics, writing, presenting, mentoring, leadership, and time management, and *elective* sessions, divided into sessions on research, teaching, and career exploration.

Sessions that would fall under the elective category of *research* include sessions on lab management, grants and funding opportunities, science proposals, and patents. Elective sessions that would be categorized as *teaching*, could include a teaching series led by the Dartmouth Center for the Advancement of Learning (DCAL), sessions on syllabus design, workshops on being a TA, and sessions on laboratory design. Sessions that focus on *career exploration* would include those on academic and non-academic job searches, sessions on writing CVs and

resumes, and sessions in which alumni discuss their career paths.

Communicating Science

Mark A. McPeck, Nancy Serrell, Christopher Kohn, Gifford Wong (Fall 2013)

Sure, you know how to present your research to the experts, but can you talk about it with other audiences - without your slides? The goal of this 10-week, interdisciplinary graduate course is to help current and future scientists speak about their work more spontaneously, and to connect more directly and responsively with their audiences and each other.

The course, which is eligible for credit through the Graduate Office, is based on a model developed by Alan Alda at Stony Brook University. Using improvisation exercises designed to enhance presence, charisma and confidence students will develop their observation and active listening skills and learn relaxation techniques. Peer feedback is an essential component of this course, and students will participate in exercises to develop their skills in story telling and two-way communication. Special focus will be placed on enhancing clarity and vividness, avoiding jargon and using emotion. The class will meet Monday late afternoon/early evening in the fall term from 4:30-7:00.

Health Administration

Faculty Director(s): **Katherine J. Milligan**, Associate Dean, Health Care Management Education; Adjunct Professor, Tuck School of Business; **Robert A. Shumsky**, Faculty Co-Director, MHCDS; Faculty Co-Director, MHA; Professor of Operations Management, Tuck School of Business; **Craig Westling**, Faculty Co-Director, MHA; Interim Faculty Co-Director, MHCDS; Associate Dean for Health Sciences Education, Geisel School of Medicine.

Faculty: **Alice Andrews**, Senior Research Scientist and Senior Lecturer of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine; **Carol Barsky**, Associate Professor of Emergency Medicine, Geisel School of Medicine; **Nicole DeHoratius**, Adjunct Professor of Operations Management, Tuck School of Business; **Aram Donigian**, Clinical Professor of Business Administration, Tuck School of Business; **Kathleen Fitzgerald**, Adjunct Professor, Tuck School of Business; **Amy Florentino**, Adjunct Professor, Tuck School of Business; **Michael Goldberg**, Adjunct Professor, Tuck School of Business; **Nianyi Hong**, Lecturer of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine; **Adam Kleinbaum**, Professor of Business Administration, Tuck School of Business; **Terri Lewinson**, Associate Professor of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine; **Meghan Longacre**, Senior Lecturer of The Dartmouth Institute for Health

Policy and Clinical Practice, Geisel School of Medicine; **Susan Reeves**, Clinical Professor of Community and Family Medicine, Geisel School of Medicine; **Peter Regan**, Adjunct Professor of Business Administration, Tuck School of Business; **Kristin Reiter**, Adjunct Professor, Tuck School of Business; **Samuel Shields**, Lecturer of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine; **Elizabeth Stedina**, Lecturer of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine; **Lauren Wallace**, Adjunct Professor, Tuck School of Business; **Thom Walsh**, Adjunct Instructor of The Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine.

MHA Program

Graduate students enrolled in the Master of Health Administration (MHA) program take a prescribed sequence of courses as a cohort; there are no electives.

The MHA program is administered by the faculties of the Tuck School of Business and the Geisel School of Medicine. The courses listed below are designed for graduate students and conform to the undergraduate course calendar.

Requirements for the Master's Degree

To qualify for award of the master of health administration degree, a student must fulfill the following requirements:

1. Satisfactory completion of an accelerated twelve-month or a standard twenty-four month, graduate-level core curriculum in health administration.
2. Attendance at residential periods at Dartmouth College in conjunction with the core curriculum. The accelerated track has two residential periods; the standard track has four residential periods.

HA Courses

MHA AHM - Accounting for Health Care Managers

Instructor: Kathleen Fitzgerald

This course equips students with the fundamentals of financial and managerial accounting. In part 1 of the course, students will learn how to interpret and analyze the financial statements (income statement, balance sheet, and statement of cash flows) of health care organizations, as well as how to forecast future value using pro forma financial statements. Part 2 of the course focuses on

analyses and procedures for planning, directing, and controlling decision-making activities.

Offered: Summer.

MHA CAP - Capstone

Instructor: Michael Goldberg, Meghan Longacre

This course provides an opportunity for students to synthesize their learning from throughout the program. Working individually and in groups, students will complete project work that draws on all aspects of the curriculum. The final deliverable for the course will be a presentation delivered to a panel of MHA faculty and health care executives.

Offered: Fall, Spring, Summer, Winter.

MHA COM - Communications

Instructor: Amy Florentino

In this course, students will learn applied skills for professional communication, including writing and presentation skills, persuasion, and team communication.

Offered: Winter.

MHA FHM - Finance for Health Care Managers

Instructor: Kristin Reiter, Lauren Wallace

In this course, students will learn the financial skills necessary to make effective budgeting and capital investment decisions for health care organizations. Concepts include the cost of capital, reimbursement methodologies, interpretation of financial reports, valuation, and methods for financing investments.

Offered: Winter.

MHA HEA - Health Analytics

Instructor: Elizabeth Stedina

Data analytics can improve decision-making in health care. This course will teach students topics including types of health care data, data collection and storage, health care

data privacy, key metrics in different health care domains, data visualization and communications of results, predictive analytics and emerging technologies in the data analytics space.

Offered: Fall.

MHA HOE - Health Care Organizational Ethics

Instructor: Susan Reeves

This course teaches students to align organizational mission and front-line actions by examining the principles and application of clinical, research, public health, and organizational ethics frameworks.

Offered: Summer, Winter.

MHA HEE - Health Economics

Instructor: Nianyi Hong

This course introduces economic concepts as applied to the current health care landscape and future policy changes. Students will establish an economic basis for sound managerial decision-making.

Offered: Summer.

MHA HES - Health Systems

Instructor: Thom Walsh

This course orients students to the organization of the United States health system and comparative health systems, including financing, organization, delivery, and oversight, all with an emphasis on systems thinking and payment systems.

Offered: Summer.

MHA LEA - Leadership

Instructor: Adam Kleinbaum

Through this course, students will build an understanding of their strengths and opportunities for improvement as leaders. Students will identify actions that advance their leadership potential, including the application of principles of power and influence.

Offered: Spring.

MHA MAP - Managing People

Instructor: Alice Andrews

Successfully managing people and teams requires competence with a variety of concepts and skills, including motivation, diversity, conformity, conflict, performance feedback, decision-making, negotiations, and fairness. This course links organizational design with team and individual performance, and with the management of change.

Offered: Spring.

MHA NEG - Negotiations

Instructor: Aram Donigian

In this applied course, students will learn concepts and practical techniques for securing an agreement between two or more interdependent parties, including technical and analytical as well as interpersonal and communication skills.

Offered: Spring.

MHA OPM - Operations Management

Instructor: Nicole DeHoratius

This practically oriented course teaches concepts and techniques for improving organizational performance; process flow, capacity analysis, queuing, inventory management and service design.

Offered: Fall.

MHA PHE - Population Health Equity

Instructor: Terri Lewinson

This course examines the definition of population health and how it is measured. Students will explore the biological, psychological, and social drivers of health; the causes and consequences of unwarranted variation and its impact on health disparities; and how addressing organizational and system performance can improve both individual lives and overall population health status.

Offered: Fall.

MHA QMI - Quality, Measurement and Improvement

Instructor: Carol Barsky

This course teaches the measurement of health care quality with the goal to improve patient safety, health outcomes, equity, and the patient experience. Students will learn evidence-based methods for continuous quality improvement and practical approaches for implementing these methods.

Offered: Winter.

MHA SPM - Spreadsheet Modeling

Instructor: Peter Regan

This course teaches an analytical approach to solving managerial problems and making decisions. It includes

hands-on experience using Excel and Excel plug-ins to create models for health care decision making.

Offered: Fall.

MHA STP - Strategic Planning

Instructor: Samuel Shields

This applied strategy course teaches a process toolkit: key ideas, concepts, and tools for identifying strategic goals, ensuring buy-in from key constituents, and laying the groundwork for successful implementation.

Offered: Summer, Winter.

Health Care Delivery Science

Faculty Director(s): **Katherine J. Milligan**, Associate Dean, Health Care Management Education; Adjunct Professor, Tuck School of Business; **Robert A. Shumsky**, Faculty Co-Director, MHCDS; Faculty Co-Director, MHA; Professor of Operations Management, Tuck School of Business; **Craig Westling**, Interim Faculty Co-Director, MHCDS; Faculty Co-Director, MHA; Associate Dean for Health Sciences Education, Geisel School of Medicine.

Faculty: **Ron Adner**, Nathaniel D'1906 and Martha E. Leverone Memorial Professor of Business Administration, Tuck School of Business; **Paul Argenti**, Professor of Corporate Communication, Tuck School of Business; **Pino Audia**, Professor of Management and Organizations, Tuck School of Business; **Carrie Colla**, Professor of The Dartmouth Institute for Health Policy and Clinical Practice and Susan J. and Richard M. Levy 1960 Distinguished Chair in Health Care Delivery, Geisel School of Medicine; **Glyn Elwyn**, Professor of The Dartmouth Institute for Health Policy and Clinical Practice and Professor of Community and Family Medicine, Geisel School of Medicine; **Elliott Fisher**, Professor of The Dartmouth Institute for Health Policy and Clinical Practice, Professor of Medicine, and Professor of Community and Family Medicine, Geisel School of Medicine; **Constance E. Helfat**, J. Brian Quinn Professor in Technology and Strategy, Tuck School of Business; **Adam Kleinbaum**, Professor of Business Administration, Tuck School of Business; **Lindsey Leininger**, Clinical Professor of Business Administration and Faculty Director for the Center of Health Care, Tuck School of Business; **Katherine J. Milligan**, Associate Dean, Health Care Management Education; Adjunct Professor, Tuck School of Business; **Susan Reeves**, Clinical Professor of Community and Family Medicine, Geisel School of Medicine; **Robert A. Shumsky**, Faculty Co-Director, MHCDS; Faculty Co-Director, MHA; Professor of Operations Management, Tuck School of Business; **Phillip Stocken**, Jack Byrne Professor of Accounting, Tuck School of Business; **Alva Taylor**, Associate Professor of Business Administration and Faculty Director, Glassmeyer/McNamee Center for Digital Strategies, Tuck

School of Business; **Eric B. Wadsworth**, Assistant Professor of The Dartmouth Institute for Health Policy and Clinical Practice; Adjunct Assistant Professor, Tuck School of Business; **Ruth Wageman**, Associate Faculty, Department of Psychology, Harvard University; **Steven Woloshin**, Professor of The Dartmouth Institute for Health Policy and Clinical Practice and Professor of Community and Family Medicine, Geisel School of Medicine.

MHCDS Program

Graduate students enrolled in the Master of Health Care Delivery Science (MHCDS) program take a prescribed sequence of courses as a cohort; there are no electives.

The MHCDS program is administered by the faculties of the Tuck School of Business and the Geisel School of Medicine. The courses listed below are designed for graduate students and do not conform to the undergraduate course calendar.

Requirements for the Master's Degree

To qualify for award of the master of health care delivery science degree, a student must fulfill the following requirements:

1. Satisfactory completion of a twelve-month, graduate-level core curriculum in health care delivery science.
2. Attendance at three residential periods at Dartmouth College in conjunction with the core curriculum.

HCDS Courses

HCDS AFE - Accounting and Finance Essentials

Instructor: Phillip Stocken

This course develops frameworks, tools, and models to enable participants to make value-enhancing financial decisions in the delivery of health care by developing the relevant ideas in two stages. The first stage (financial accounting) will build participants skills in interpreting, analyzing, and forecasting financial statements (the income statement, the balance sheet, and the statement of cash flows). The second stage (corporate finance) will advance and synthesize the ideas from the first by building skills to make investment and financing decisions, as well as to value businesses.

HCDS ALP - Action Learning Project

Instructor: Katherine Milligan, Mary Oseid

In this course, students work in teams to identify, define, plan and execute a strategic project that impact health and business outcomes. Projects have an external organizational client who provides motivation for the project and access to data and people in the client organization. Each team will work with a faculty advisor who approves the project and coaches the team on its planning and execution. Teams are also encouraged to consult with other Dartmouth faculty members in their respective areas of expertise. Teams formally present their findings and results to faculty, peers, and executives from sponsoring institutions (Required to complete Part 1 and 2)

HCDS FSL - Fundamental Skills for Health Care Delivery Leaders

Instructor: Various

This course, taught primarily during the on-campus sessions at Dartmouth, builds the basic toolkit necessary for leadership in health care delivery, including ethics, teamwork, communications, negotiations, and a practical introduction to policymaking. (Required to complete Part 1, 2 and 3)

HCDS GMT - General Management

Instructor: Paul Argenti

Participants take the vantage point of a high-level manager in a health care system and understand how divisions, departments, and microsystems currently interact, and how they might. This course will explore all aspects of a health care organization that are necessary for success, from human resources to credentialing, from finance to supply management, and from union management to physician management in a voluntary staff model. In anticipation of health care reform, students will learn how team leadership, performance measurement, and incentive structures will have an impact on care delivery. The course draws heavily on the general management literature and uses cases to apply those ideas to health care organizations.

HCDS HCI - Human Centered Innovation

Instructor: Alva Taylor

There is no area in which innovation would positively impact society more than improvements in health care. However, the health sector is a complex, constrained, and difficult setting for new ideas and new practices. In this

class we will examine the following themes:

1. What are the basic tents of innovation, and how do they apply to the healthcare sector?
2. How can we use human centered design techniques to guide innovation?
3. What are ways to gather clear observational information on the needs of the customers, systems, and procedures.
4. Learn techniques to frame and reframe problems that lead to more successful innovations in the operational and clinical environments of healthcare.

HCDS HCO - Health Care Operations Management

Instructor: Robert Shumsky

Two themes will run throughout this course: 1) aligning the design and management of processes with the goals of the health care system and 2) managing variability. In health care, the first theme is crucial but complex, for the system's goals may be multidimensional. The second theme is also particularly challenging, for health care systems are faced with variability generated by fluctuations in customer demands, treatment times, patient expectations and preferences, and patient willingness or ability to participate in treatment. Specific concepts and tools in the course include process flow analysis, the theory of constraints, queueing/congestion analysis, quality improvement, and capacity management.

HCDS HEP - Health Economics and Policy

Instructor: Carrie Colla

While the economics of the health care industry appear different from other industries, the behaviors and outcomes are to a great extent the result of incentives faced by individuals and organizations, in combination with some form of competition and, of course, a large degree of regulation. This course will equip students with a knowledge of health economics that enables them to understand the current state of affairs; to foresee likely effects of policy changes; and to incorporate sound economic analysis in their role as managers. Likely topics to be covered include: costs and pricing; industry consolidation both vertical and horizontal; economics of risk pooling and insurance markets, especially adverse selection and moral hazard; and incentive effects of different payor and financing systems.

HCDS HSM - Healthy Skepticism

Instructor: Steven Woloshin

The goal of this course is to help people become more critical consumers of information; learn how to see through exaggerated, incomplete and misleading messages; and make better choices. Topics include research basics, study design, risk communication, statistical uncertainty, special issues about observational studies and randomized trials, screening, and overdiagnosis.

HCDS INDY - Independent Study

This course will offer a student the opportunity to pursue other ventures in learning related to health care delivery. The topic must be approved and supervised by a faculty member and graded at its conclusion. The course is expected to be a high-quality, graduate level experience. It may be: 1) a subject studied independently that is unavailable at Dartmouth or not offered at a convenient time; or 2) a continuation of a course already taken, with new and original work.

HCDS LDI - Leveraging Data to Inform Decision-Making

Instructor: Lindsey Leininger

This course introduces quantitative reasoning toolkits reinforced with on-the-ground case studies. We will discuss the relative merits and limitations of common types of data sources in health care – such as electronic health records, claims databases, and surveys – and will introduce a framework through which managers can detect and diagnose data quality concerns. We will also explore descriptive, predictive, and evaluative statistical methods, demonstrating how each of these informs high-level strategic decisions. By the end of this course, students should be able to critique quantitative estimates supporting critical health care management decisions.

HCDS MOC - Managing People, Organizations and Change

Instructor: Adam Kleinbaum

Today, many organizations confront situations that require them to manage change on a continuous basis. This critical skill has become a core component of every manager's job and a substantial body of management knowledge has developed. In this course we will draw on the large body of relevant research and theory, and then complement and integrate this theory with experience from practice. We focus in particular on the process of change and on the sequencing of change activities. Recommended actions are matched with concrete, tested, and specific tools for their application. Proceeding from concepts to actions to tools provides a range and depth of practical understanding that is unusual in this important area of management activity. Our focus will be on the specifics of health care

organizations, but much can be learned from studying other firms and industries that have seen substantial change.

HCDS PHPC - Population Health and Preventive Care

Instructor: Elliott Fisher

In this course, students will learn about the multiple determinants of health, how to measure health status, and how health disparities and socioeconomic status influence population health status. Students will come to understand the social mission of health care organizations and how they might work through social and behavioral determinants of health to improve overall health status, particularly as health care organizations adopt medical home models and begin to work with bundled and capitated payment systems.

HCDS PLS - Personal Leadership

Instructor: Pino Audia

The focus of the course is concrete - building an understanding of one's strengths and opportunities for improvement as leaders and using that knowledge to identify actions that advance leadership potential. The centerpiece of this course is a comprehensive, 360-degree assessment of each participant's leadership skills, based on confidential evaluations completed by bosses, co-workers, peers, and clients. During the course participants will write their own Leadership Development Plan, a specific and measurable plan for strengthening their leadership skills. (Required to complete Part 1 and 2)

HCDS SPE - Special Topics in Health Care Delivery

Instructor: Various

Integrative Experiences in Health Care Delivery: Team-taught and interdisciplinary, the Integrative Experiences course anchors each of the program's three residential periods. A variety of active learning methodologies will be employed to draw together curricular themes. Each year the Integrative Experiences will be organized around three critical topics, such as Voice of the Patient, Leading Change, and Imagining the Future of Health Care Delivery. (Required to complete Part 1, 2, and 3)

HCDS STRAT - Strategy for Health Care Organizations

Instructor: Constance Helfat, Ron Adner, Eric Wadsworth

This course focuses on the effective formulation of strategy for healthcare organizations. The course introduces key concepts and analytical methods for formulating strategies that add value for patients as well as for providers and other organizations that affect health care delivery. In addition to core concepts and methods, the course covers the strategic management of partnerships, innovation, strategy for organizations that offer services in multiple areas, health care systems, and strategic choice in

uncertain situations. Through the application of course concepts to complex cases, the course develops skills in strategy formulation for senior leaders involved in health care delivery. (Required to complete Part 1 and 2)

Integrative Neuroscience at Dartmouth

Requirements for an IND PhD degree include:

- Satisfactory completion of the 10-week core course. The core course begins in the Fall of the first year and emphasizes all aspects of neuroscience (molecular, cellular, circuits, behavioral and systems). This consists of three lecture-style courses (neuroSCIENCE, IND 100, Molecular and Cellular Neuroscience, IND101, and Systems Neuroscience, IND 102), and one practical course that focuses on hands-on neuroscience, Advanced Techniques in Neuroscience, IND 103.

- A minimum of three research rotations (Winter through Spring of the first year).

- One ethics course IND100/IND124 (Fall and Winter of the first year)

- Two terms of a teaching assistantship; in the second year of the program, the student will serve as a Graduate Student Instructor for one 10-week undergraduate trimester. In the third year, the student will work in a module of the Advanced Neuroscience Techniques Course (IND 103), training the new cohort of IND Students.

- Three advanced elective courses from the approved elective list.

- An on-topic (thesis-related) qualifying examination consisting of a written proposal and an oral defense (IND 300).

- Attendance at and participation in Journal Club meetings in 3 out of 4 terms each year.

- Yearly and formal presentation of a research in progress (RIP) to IND faculty and students

- Attendance at IND program functions.

- Preparation, presentation (seminar and defense with an internal examination committee and one external faculty member), and submission of a thesis.

Course Enrollment Guide For 1st Year IND Students:

FALL TERM:

- IND 100 Ethics Course (1 Credit)
- IND 101 Molecular and Cellular Neuroscience (1 credit)
- IND 102 Systems Neuroscience (1 credit)
- IND 103 Advanced Techniques (1 credit)
- IND 601 Neuroscience Colloquium (.1 credit)

WINTER TERM:

- IND 600 Neuroscience Colloquium (1 credit)
- IND 298 Research Rotation (2 credits)

Description: Rotation for research of an experimental or theoretical nature in Integrative Neuroscience under mentorship of Faculty and Lab members. This course is open only to first year IND graduate students; it may be elected for credit more than once. This course carries two course credits and also requires electing one additional course for full-term IND research credit.

- IND 124 Ethics Course (.1 credit)

SPRING TERM:

- IND 600 Neuroscience Colloquium (1 credit)
- IND 298 Research Rotation (2 credits)

Description: Rotation for research of an experimental or theoretical nature in Integrative Neuroscience under mentorship of Faculty and Lab members. This course is open only to first year IND graduate students; it may be elected for credit more than once. This course carries two course credits and also requires electing one additional course for full-term IND research credit.

SUMMER TERM:

- IND 299 Graduate Research if mentored lab chosen (3 credits)

Integrative Neuroscience Courses

IND 101 - Molecular and Cellular Neuroscience

This course focuses on cellular and molecular mechanisms that underlie the development and function of the nervous system in health and disease. This includes aspects of gene expression, cell biology and physiology as they pertain to neurons and glia. Lectures supplemented by in-class discussion of primary research articles will also serve as an introduction to microscopic, electrophysiological, molecular and genetic approaches as well as animal models used to study the nervous system and neurological disorders. This course is open to all IND students. Graduate students from other program must have previously taken courses in genetics and cell biology.

IND 102 - Systems Neuroscience

The IND 102 course provides graduate students with a rigorous exploration of fundamental systems neuroscience. We will focus on sensory and motor systems and their accompanying brain structures, but we will also cover hypothalamic, autonomic, limbic, and cortical systems. For each system we will discuss anatomical and physiological relationships and relate them to neurological disorders. This is a lecture-based course with the goal to provide a broad understanding of core brain structures and their underlying physiological functions.

IND 103 - Advanced Techniques in Neuroscience

This course will provide students access and training to a number of advanced approaches for studying questions in neuroscience. Emphasis will be placed on discussion of the experimental basis for understanding the brain. Class is comprised of some lecture, reading, and many hands on approaches working as a group. Open to all first year IND students.

IND 124 - Ethical Conduct of Research

This course is required for all IND and MCB graduate students. The course consists of four 1-hour lectures conducted in January. Topics include: ethical use of human subjects and laboratory animals, sponsored research, intellectual property and conflicts of interest.

IND 210 - Supervised Teaching in Neuroscience (Undergraduate)

This course is required for all graduate students, based on the assertion that an essential element of graduate education is the experience gained in teaching other students. Such teaching experience is of particular relevance to students interested in academic careers. Students will conduct laboratory or discussion sessions in undergraduate courses under the supervision of the course faculty. The faculty and student teaching assistant work very closely to develop lab and discussion assignments. In some cases, the students are encouraged to present lectures

for which they receive detailed feedback on their teaching style. In all cases students will receive instruction on effective teaching techniques through weekly preparation sessions. Topics for discussion include how to teach the material, how to run a discussion, how to evaluate student responses, and grading. Performance will be monitored throughout the term and appropriate evaluation, coupled with detailed suggestions for improvement, will be provided. This course is not open to undergraduates.

IND 211 - Neurobiology of Disease

This course covers the clinical, cellular and molecular perspectives of neurologic disorders. Different disease topics will be used to compare and contrast commonalities and differences across diseases covering a range of neurobiological processes. The course will be team taught by clinicians and experts from the neuroscience faculty who will give a one hour didactic lecture in the first session of the week, followed by a 1.5 hour student-led presentation, critique and discussion on the topic chosen by the faculty for that week. Students will be evaluated based on performance on written assignments, presentations, and participation in discussion.

IND 220 - Supervised Teaching in Advanced Neuroscience Techniques

This course is required for all graduate students, based on the assertion that an essential element of graduate education is the experience gained in teaching other students. Such teaching experience is of particular relevance to students interested in academic careers. Students will conduct laboratory or discussion sessions in undergraduate courses under the supervision of the course faculty. The faculty and student teaching assistant work very closely to develop lab and discussion assignments. In some cases, the students are encouraged to present lectures for which they receive detailed feedback on their teaching style. In all cases students will receive instruction on effective teaching techniques through weekly preparation sessions. Topics for discussion include how to teach the material, how to run a discussion, how to evaluate student responses, and grading. Performance will be monitored throughout the term and appropriate evaluation, coupled with detailed suggestions for improvement, will be provided. This course is not open to undergraduates.

IND 270 - Enterprise Experience Internship

This course provides credit for a full-time internship at an outside institution during a PhD program. The goal of this course is to provide students with real-world, hands-on experience with existing enterprises through internship during graduate school. Such experience will expose students to diverse career opportunities during graduate school, providing students with lead-time to focus and

network in a field of interest prior to completion of their PhD.

Students will be eligible to enroll after passing the qualifier exam (third year). For this course, the student will propose and arrange a paid or unpaid internship in an existing enterprise (industry, government, or other) in consultation with their Faculty Advisor (primary mentor) prior to enrollment. Course enrollment is concurrent with the internship and should be for a period of 1 or 2 consecutive terms. At the end of the internship, the student will make an oral presentation (approx. 20 minutes) to the IND community that addresses the nature of the enterprise they were engaged in, the problem they were assigned, and the results and impact of their project. The purpose of the presentation is to share lessons learned from the internship experience with the IND community. The presentation will be accompanied by a short but complete written report. Neither the presentation nor report should contain confidential information of the enterprise.

International students with F-1 status must request Curricular Practical Training (CPT) authorization with OVIS in order to participate in the course and the internship.

IND 295 - Research Rotation

Rotation for research of an experimental or theoretical nature in Integrative Neuroscience under mentorship of Faculty and Lab members. This course is open only to first year IND graduate students; it may be elected for credit more than once. This course carries two course credits and also requires electing one additional course for full-term IND research credit.

IND 297 - Graduate Research

An original individual experimental or theoretical investigation in Integrative Neuroscience. This course is open only to graduate students; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more courses.

IND 298 - Graduate Research

An original individual experimental or theoretical investigation in Integrative Neuroscience. This course is open only to graduate students; it may be elected for credit more than once. This course carries two course credits and also electing one additional course.

IND 299 - Graduate Research

An original individual experimental or theoretical investigation in Integrative Neuroscience. This course is open only to graduate students; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

IND 600 - Advances in Integrative Neuroscience

Instructor: Mike Hoppa

Colloquium with reading and discussion of primary literature focusing on neuronal cell biology, circuit function, behavior, and neuronal pathologies. External Speakers present on papers discussed. Major questions in the field of neuroscience will be introduced through recent high-impact papers, scientific reviews and scientific commentary. The overriding goal will be to improve your ability to critically analyze and evaluate original research data presented in the form of papers published in the scientific literature.

IND 100 - Responsible and Ethical Conduct of Research

Required course for all first-year Integrative Neuroscience graduate students. Generally consists of five two hour sessions as well as additional reading and preparation. This course seeks to coordinate basic training in professional ethics required of all Dartmouth graduate students with ethical training in the biomedical sciences required for NIH-sponsored research. A basic training program that addresses ethical issues related to professionalism, authorship, mentoring, and data collection has been developed by the Guarini School of Graduate and Advanced Studies in collaboration with the Ethics Institute at Dartmouth.

Master of Arts in Liberal Studies

Chair: Donald E. Pease

Dartmouth College offers a graduate program leading to the degree of Master of Arts in Liberal Studies (M.A.L.S.). This program places special emphasis on a multidisciplinary approach to advanced study in the liberal arts. The program offers an advanced liberal studies education through both directed and independent study. The M.A.L.S. program is described briefly in the Graduate Study section of this catalog. The program offers courses in General Liberal Studies, Cultural Studies, Globalization Studies and Creative Writing. M.A.L.S. courses are open only to graduate students. See the M.A.L.S. Website for more detail.

To view Master of Arts in Liberal Studies courses, click [here](#) (p. 951).

Master of Arts in Liberal Studies**MALS 120 - Summer Symposium**

Instructor: Donald Pease

Credit/No Credit Degree Requirement for all Concentrations - See more at:
<http://mals.dartmouth.edu/academics/course-information/course-descriptions#sthash.MzbmADKv.dpuf>

Credit/No Credit Degree Requirement for all Concentrations - See more at:
<http://mals.dartmouth.edu/academics/course-information/course-descriptions#sthash.MzbmADKv.dpuf>
 Credit/No Credit Degree Requirement for all MALS Concentrations

Offered: Summer.

MALS 130 - Cultural Studies Research Methods

Instructor: Klaus Milich

Writing a research paper requires the knowledge of the scope, the genesis, and the methods of the discipline one is engaged in. The goal of this workshop is to make students aware of their own approaches to help them develop their own research projects. It will cover methods of practical implementation, skills and strategies to obtain better results in research and class performance. Apart from learning how to apply and integrate different genre such as excerpts, protocols, reports, summaries, or charts that help preparing a presentation, writing a paper, or finishing a thesis, discussions will address the following questions:

- What distinguishes scholarship from other forms of knowledge production (media, encyclopedias)
- What research means in the sciences and in the humanities, and how individual disciplines produce knowledge
- What it means to read and write "critically"
- How to distinguish "scientific facts" from "producing meaning"
- How to turn individual observations and experiences into viable scholarly projects and why framing the right question might be more important than the answer
- How research strategies and different forms of systematic thinking might be helpful at working places outside the university and beyond scholarly projects

In order to practice how to plan or carry out research and how to build an argument, students will be asked to bring in their own work in progress, be it an initial idea for a final paper, a proposal for an independent study, or a chapter of their thesis.

MALS 131 - Social Science Research Methods

Instructor: Eric Ramsey

Research Methods

Instructor: Ted Stratton, Undergraduate Dean's Office

Qualitative and quantitative data provide different kinds of information to the researcher. Quantitative research measures the reactions of large numbers of people and provides generalizable data. Qualitative research produces detailed data on a small number of cases for an increased depth of understanding. Conducting research in the social sciences requires knowledge of both quantitative and qualitative methods.

Numerous qualitative methods exist with a great diversity of theoretical models. This workshop will focus on ethnographic research, often used by sociologists, anthropologists, and educators to look at the culture of groups and settings. The primary focus of this workshop will be on qualitative methods with discussion on survey methods.

Students will design their own research projects based on their scholarly interests (generated by previous classes) that they would like to further pursue for the basis of their thesis research.

Goals

Students will investigate a social phenomenon that interests them. They will create their own projects and actively engage in the necessary components of conducting research in the social sciences. This requires students to develop fieldwork plans, identify interviewees, write interview questions, conduct numerous interviews, take observation notes, and learn survey skills.

Materials

Students will need to purchase a tape recorder for interviews or plan on borrowing one from the Jones Media Library. In addition, students should come to class with a three ring binder with page dividers.

MALS 132 - Writing Methodologies: Strategies for Creative Writers

Instructor: Anna Minardi

Research Methods

Instructor: Anna Minardi, MALS

This is a discussion based course focused on the preparation and discipline writers need to develop as they progress in their chosen genres. The text selected as the basis for class conversations offers a discussion of various writing concerns that all writers face as they consider such questions as audience, goal, use of language, placement of oneself. The text will be supplemented by short student

pieces that may reflect the issues raised by Todd and Kidder in the book.

The course goal is create a sense of familiarity with the writing process for students who are starting to write. For students with more experience, the goal is to articulate the questions related to the areas they want to develop. The exchange between beginning and more advanced writers will be valuable in creating an awareness of the questions that propel writers at all levels and in all genres.

The class will be enhanced by visits from MALS writing professors and creative writing thesis students.

MALS 137 - Thesis Research

MALS students with an approved Thesis Proposal on file may elect to enroll in Thesis Research. Students enrolling in MALS 137 must be "in residence" (within commuting distance of the college), meet regularly with their principal reader and make significant progress each term, toward the completion of the thesis.

MALS 140 - Fiction Workshop: Short Story

Instructor: Saul Lelchuk

Creative Writing

Instructor: Saul Lelchuk, MALS

This writing course uses a discussion-based, workshop-centered approach to allow both novice and experienced writers to develop their abilities in fiction and particularly the form of the short story. Weekly reading assignments will draw from both past and contemporary writers across numerous genres, with an effort being made to expose students to a wide variety of voices and styles. We will approach these stories with an eye towards not only their literary weight but also will examine the internal elements that make them succeed. Students are expected to both read and actively critique peer work that will be selected in advance of each class by the instructor. Weekly writing assignments will involve both new work and revision of this work, and students will complete several stories of varying length throughout the term. The course's reading will include authors such as: Borges, Carver, Egan, Gogol, Greene, Hammett, Kundera, Lardner, Le Guin, Maupassant, O'Connor, Oates, Salter.

A formal background in writing is not required but students should have a strong interest in creative writing and a willingness to share, and accept critique on, their work.

MALS 141 - WRITING CRIME FICTION

Instructor: Saul Lelchuk

This creative writing course uses a workshop-centered approach to allow students to develop their abilities in

fiction and particularly the genre of mystery/suspense. Weekly reading assignments will draw from both past and contemporary authors in order to expose students to the wide variety of voices and styles that the genre of crime fiction has birthed in the last hundred-plus years. The course will approach these books primarily with the purpose of examining the internal elements that make them succeed and, crucially, the intentions and decisions of their authors. Writing assignments will focus primarily on producing new work but also include revision; a formal background in writing is not required or expected but students should have a strong interest in creative writing and a willingness to share, and accept critique on, their work. Students will have the choice of producing either several short stories or a novella throughout the term.

As a secondary objective, this course will offer a look at the fiction publishing process, including pitches, agent queries, magazine / lit journal submissions, and an overview of the publishing landscape. Past guest speakers have included literary agents, film/TV agents, editors, and authors.

MALS 191 - Oral Histories and Digital Storytelling

Instructor: Harriette Yahr

Oral Histories and Digital Storytelling introduces students to the field of oral history and explores how digital tools are invigorating its practice. The course will combine critical analysis with project-based learning. We will explore the fundamentals of oral history practice—including the impacts of technology on the gathering, preservation, and distribution of oral histories—and key questions about memory, the hybridization of the field, and more.

Central to the course is the creation of oral history projects that integrate digital storytelling techniques. Students will create oral histories while digging into the digital toolbox. Digital storytellers "write" with a larger toolbox than words, adding power and dimension to the stories they tell by combining media, such as text, images, narration, animation, or interactive elements. Digital storytelling projects can include audio stories, podcasts, films and videos, visual journalism, StoryMaps and other place-based projects, social media, websites, and more.

In this course, students will sharpen their critical understanding of the digital medium's immediacy and global reach and examine how voices can be amplified in our hyper-connected world. How do we harness digital tools to best preserve and disseminate oral histories? What storytelling choices can we make to best engage audiences? No previous media experience is required.

Bring your curiosity and willingness to explore.

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MALS 202 - Reading & Viewing the Holocaust

Instructor: Alan Lelchuk

Cultural Studies or Single-taught Interdisciplinary
Instructor: Alan Lelchuk, MALS

How has the Holocaust been seen and viewed in literary works and in films? How well can works of art represent the nightmare of 20th century history? Can books and films, the world of the aesthetic, dramatize the history of the Holocaust, and sustain the memory adequately?

This course will consider those questions, by means of analyzing some of the major writings and movies trying to come to terms with the unimaginable history.

In literature, we will read the fiction of Ida Fink, Teodor Borowski, Ilona Karmel, Elie Wiesel, Aharon Appelfeld, among others. In cinema, we will look at films such as

Orson Welles ("The Stranger"), Sidney Lumet ("The Pawnbroker"), Vittoria de Sica ("The Garden of the Finzi-Continis"), Marcel Ophuls ("The Sorrow and the Pity"), Roman Polanski ("The Pianist").

MALS 205 - Narrative Non-Fiction

Instructor: Barbara Kreiger

This course is aimed at those with a special interest in non-fiction creative writing. We'll address aspects of the narrative including the story itself, style, voice, and the use of reflection as we consider the ambiguous nature of experience.

Writing background is preferred but is not a prerequisite. What is required is a commitment to the imaginative exploration of experience and a serious desire to devote oneself to the writing process.

MALS 206 - Environmental Issues in the Global Media

Instructor: David Van Wie

Single-taught Interdisciplinary, Creative Writing, Cultural Studies, Globalization Studies

Instructor: David Van Wie

This course will look at environmental issues around the globe through the eyes of journalists to critically examine how the scientific, cultural and political dimensions of environmental sustainability are portrayed in the media. We will explore not only the issues themselves--impacts of climate change, biodiversity, clean air and water, energy, toxic chemicals, agriculture and more—but how media coverage affects public perception in different countries, and how policies are formulated to address these critical problems.

Environmental issues encompass a wide range of topics at different scales around the globe. Global issues, like climate change, affect disparate parts of the world differently. There are regional and local effects of drought, sea-level rise, or threats to endangered species. Media coverage of these issues and solutions involves a complex mix of science, ecology, politics, business, human health, sociology and culture.

The very definition of journalism is evolving rapidly, as are the norms, ethics, and roles of the journalist in different countries. Traditional print media, television news, and documentaries must compete with digital media, computer-generated graphics, and citizen reporting on social networks. How does this evolution and competition play out in the global media with respect to environmental topics?

We will examine how the tools and methods of environmental journalism are used, including factual or descriptive reporting, expert analysis, background science, or narratives that portray human interest stories and reveal insightful profiles of key people and affected communities. Beyond the written and spoken word, we will examine how photos, video, and multi-media animation are used to tell a compelling story.

We will explore the importance of environmental journalism in global society, tracing topics, trends, and key voices from the past to the present. We will consider how journalists are able to cover issues in different global cultures, and how their reporting is shaped by political forces and economic interests. We will also look at how inherent or hidden biases are manifested in the media. Are there biases in how the same issue is covered in different regions or countries? Are these biases racial, economic, cultural, or political?

Through readings, class discussion and assigned projects, students will together define the principles and practices that produce effective environmental journalism, regardless of media, and consider how those principles will carry into the future.

MALS 207 - JOURNALISM

Instructor: Tom Zoellner

This course is aimed at those who want to develop their skills in the practice of writing longform stories for magazines or literary journals. Crafting these narratives for magazines involves elements of storytelling similar to that used by a novelist or cinematographer: characters, setting, plot development and mood. The writer continually asks tough questions and tests artistic approaches as she pursues a story to its end.

Classroom instruction will include the fundamentals of longform journalism, including the mechanics of pitching an idea and working with an editor. A third of the class time will be devoted to the examination of previously published works. The balance of the time will be spent in an instructor-led workshop in which each student's work is critiqued by the group in a constructive fashion, with the goal of rewriting and improvement.

Each student will write a substantial magazine piece of cover-story length demonstrating the basics of story-finding, reporting, interviewing, narrative architecture and revision. The finished project should be considered "ready for publication" by a quality outlet.

MALS 209 - WRITING THE OTHER: NARRATIVE AND INTERSECTIONS

Instructor: Barbara Kreiger

In the last years we've seen that constructing a personal narrative has become an essential part of locating oneself on a confusing map. Narrative is about giving form to what had been invisible, and personal narrative places one on the inside. Rather than looking in, one is in, and looks out. Writing the "other" is a way of avoiding self-absorption; at the same time, one could say that it's eventually about writing oneself, perhaps the ultimate "other."

In this nonfiction creative writing course, students will be asked to avoid any "others" that the culture imposes and ask who really are the ones we don't know and maybe can never know. There's no end to the list we could make, and what we think we know may be vastly different from what we really do. Attentiveness is central to the process, and students will begin an investigation that may yield unexpected insights. As we engage in this process, our understanding is enlarged, and this, we could say, is the essence of empathy: we read, we listen, we write, and we come away more educated. The window we create is also a mirror, and the images we see are larger than the frames.

MALS 210 - INTERNATIONAL POLITICS IN CONTEMPORARY ASIA

Instructor: David Rezvani

This course will focus on the dynamics of international politics in modern Asia. The course will include research, writing, and debates on the relations between Asian powers and the status of sub-state zones of conflict. It will critically examine the interplay of Asian powers, including China, the US, India, Japan, and North and South Korea. It will also evaluate a number of key zones of sub-state conflict in territories such as Kashmir, Hong Kong, Myanmar, Taiwan, the South China Sea, and Mindanao.

MALS 215 - POWER AND POLITICS IN GREATER CHINA

Instructor: David Rezvani

This course will examine the structure, patterns, and practices of politics in greater China. It will examine explanations for China's economic ascent as well as the resiliency of its authoritarian institutions. It will critically examine issues such as leadership selection, decentralized governance, economic development, mainland institutions, and fiscal control. The course will also examine the mainland's relations with Hong Kong and Taiwan on issues such as economic dependency, corruption, identity politics, and regional peace. The course will include independent research, writing, and debates on the conditions within greater China.

MALS 216 - Debates in International Politics: Catastrophe, Confrontation, Compromise

Instructor: David Rezvani

This course critically examines arguments, analytical frameworks, and potential solutions for major controversies in international politics. What are the sources of state failure? How is the global system of states evolving? What should countries do to solve global warming? Should economic distributive justice only exist within nation states, or should it apply globally? Students confront these and a wide range of other key economic, security, and global controversies. The first part of the course critically examines the structure and actors of the international system. It also explores the challenges of nationalism, state evolution, partially independent territories, and global governance. The course then investigates questions of international cooperation regarding nuclear weapons, international injustice, environmental degradation, and military intervention.

MALS 226 - Screenwriting

Instructor: Bill Phillips

Creative Writing

Instructor: Bill Phillips, Film and Media Studies

One should emerge from this course with:

1. the first draft of a professional-quality feature length screenplay and
2. the knowledge of how to do subsequent revisions.

No previous creative writing experience is necessary.

Whether your idea is "commercial," "artistic," or "personal" will not matter in terms of the focus of this course, but we will be concerned with your producing something that will hold up to professional scrutiny. We will emphasize the following:

1. a comprehensible story with a beginning, middle and end
2. a sympathetic protagonist
3. a worthy antagonist
4. an appropriate "love-interest" (if any),
5. how to keep your story a "page turner," so the reader will want to keep going;
6. proper format and length (100-120 pages) and absence of typos, and
7. originality of premise and dialogue.

Since you will be expected to write an entire first draft of a feature script within this course, it behooves you to be somewhat prepared. It would help if you have a story in mind, a protagonist, a worthy antagonist, a love-interest (if appropriate), and at least an idea of your beginning, middle

and end. It also really helps to have at least 30-40 situations (scenes) to string together to support a feature-length film. We will go over all of this in class, but if you get a head start on your thinking, it will be a tremendous help to you. I can also make available some handouts ahead of time that might assist you in this work.

MALS 236 - Playwriting

Instructor: Eugenie Carabatsos

This workshop course introduces students to the art and craft of playwriting. Throughout the course, each student will workshop and develop two plays—a ten minute and a one act—as well as read and analyze contemporary and classic plays.

MALS 239 - Poetry Workshop

Instructor: Rena Mosteirin

In this workshop course we will read and revise our own poetry and the poetry of our peers. We will discuss potential revision strategies and read recently published books of poetry to help situate ourselves in the present literary moment. The primary goal of this course is to develop our own distinctive poetic voice by experimenting with metaphor, lyricism, and other poetic tools. The secondary goal of this course is to explore the larger conversations going on in the poetry community right now by editors, critics, writers and readers. Toward this end, we will read recently published award-winning poetry collections and discuss them during class time.

Craft essays and writing prompts will be available as part of the materials for the course. All of the assignments for this class are creative. Student poems will be submitted to the class each week and revised three times for the final portfolio. We will discuss revision strategies as the class goes forward, working toward three successive revisions of each poem for the final portfolio. This portfolio of revised poems will be in place of a final paper or exam. Writers at all levels are welcome.

MALS 246 - Fiction Writing - Novella

Instructor: Alan Lelchuk

Creative Writing

Instructor: Alan Lelchuk, MALS

This writing workshop focuses primarily on the longer fictional forms (the novella and the long story). Writing experience is preferred but is not a prerequisite. Emphasis is placed on student work, but a good number of published stories and novellas are looked at as well. Classes consist of discussions, analyses, and readings. The aims of the course are to help the young writer understand and practice the longer forms of fiction, to read those forms more judiciously and from a writer's point of view, and to raise his or her own levels of prose to a high literary standard.

MALS 277 - Coloring Gender

Instructor: Regine Rosenthal

Taking its point of departure from the different waves of the women's movement, this course will trace multiple feminisms and a wide range of gender issues that have been largely sidelined or ignored by mainstream feminism. It will add "color" to gender by focusing on minority groups in the US, such as African American, Latina, Native American women, and their take on feminism and gender, especially in relation to race, ethnicity, and nation. Conversely, it will also include feminism's work on racism by addressing the issue of women's collaboration in white supremacy discourse, both in the US and racist Nazi Germany. Furthermore, the course will explore other trans/national contemporary debates within feminism, amongst them ecofeminism as well as women and postcolonialism, indigeneity, and religion (e.g. Islam).

MALS 290 - Borders & Boundaries: Race, Gender, and the Human

Instructor: Regine Rosenthal

This course will focus on the question of erecting, crossing, and/or transcending borders and boundaries in relation to race, gender, and the human. Thus, it will critically address and theorize the more recent tendency to shift and cross normative borders in a way that runs counter to the constraints implied in traditional models of gender and race. In terms of gender, it will emphasize the contemporary fluidity of concepts of masculinity and femininity, deconstruction of hierarchical gender models, as well as the growing debate around transgender issues in texts, among others, by Judith Butler. In terms of race, it will address the paradigm's contested definitions and boundaries, and the current debate on its social implications. It will discuss the issues of exclusion and inclusion, the third space, post-colonialism and the ideology and policy of race/racism by focusing, among others, on creative non-fictional narratives as well as theoretical texts by Frantz Fanon and W.E. DuBois. As a third angle on questioning borders, it will explore the aspect of the human - both in and beyond its relation to race, gender, and the concurrent effect of dehumanization - in texts by Hannah Arendt, Giorgio Agamben and Jacques Derrida on human and civil rights, crimes against humanity, sovereign power vs. bare life, and man in relation to animal.

MALS 294 - POST-COLD WAR GLOBALIZATION

Instructor: Peter DeShazo

The course will provide students with the opportunity to think critically about the variables that propelled the United States to unipolar power status as a result of the Cold War, the nature of how U.S. foreign policy is formulated, and the challenges to the power status of the United States in an increasingly globalized world. Students

will examine in greater detail the history of the Cold War, the transformation of the global power dynamic following the collapse of the Soviet Union, growing expectations for the spread of capitalism and democracy in the post-Cold War, the key challenges to liberal democracy and security today, the rise of China, and prospects for the future global leadership of the United States. The course will underscore the value of historical analysis to the interpretation of current events and demonstrate the confluence of forces that influence the making of foreign policy. The course will also encourage students to think like policy-makers, in part by drafting a series of short "policy memos" on specific recommended policy decisions and to advocate for these decisions in oral presentations.

Following an introductory class discussing prospects for future U.S. global leadership, the course will examine the conduct of the Cold War, the transition from a bipolar power dynamic to a unipolar world led by the United States following the end of the Soviet Union, and then trace key themes and developments in U.S. foreign policy from the administrations of George H.W. Bush through Obama. Subsequent classes will examine the spread of market-based capitalist development and liberal democracy in the post Cold War, the ideology and driving forces of these movements, and the reactions to them. Global issues challenging both security and development, such as international terrorism and crime will be examined in detail. One class will be specifically dedicated to China's potential as a power rival to the United States. The final two classes will look ahead to future prospects for democracy, capitalist-led growth and the growing transition away from uni-polarity to a new multi-polar global order. Readings for the course will cover a variety of currents and viewpoints, with special focus on materials prepared for the consideration of policy-makers rather than academicians.

- MALS 295

Instructor: Judith Hertog, Visiting Scholar

MALS 299 - Versions: Telling Stories in Text and Image

Instructor: Kristin O'Rourke

What are the differences between telling a story in written form vs. in visual? This course would examine translations between the visual and the literary, using the concept of translation and reinvention to look at written texts and their visual versions, particularly in film, and think about how stories are told and what gets lost or changed through translation and over time. We will examine theories of the sister arts (*ut pictura poesis*) and the *paragone* controversy in the early modern period. Additionally, we will utilize film theory, literary theory, theories of translation and adaptation, and narrative.

MALS 303 - Latin America and the Caribbean: Race, Discourse and the Origin of the Americas

Instructor: Raul Bueno; Keith Walker

The Martinican writer Edouard Glissant asserts that the West is not in the west, rather the West is a project. Starting with a consideration of Columbus's "Letter to Santangel" and the reporter Caminha's letter from the Brazilian coast to the Portuguese King Manuel, through the European Enlightenment, the concept of Manifest Destiny and the Monroe Doctrine, one aim of this course is to delineate the vision, project and worldview at the origins of social, political and race discourse and tensions in the Americas today.

From Christopher Columbus' journey accounts to Aime Cesaire's "Discourse on Colonialism", from early indigenous accounts of the Conquest to 1994 Guatemalan Nobel Prize winner Rigoberta Menchu's testimony on modern colonization writings have justified or condemned the colonization of the Americas. The course will focus on the Caribbean and Latin America and the challenges that beset attempts at definitions of these dynamic socio-political economic cultural realities. Our primary activity will be a close reading of representative letters, testimonies, novels, histories, poetry, films and essays from and about the Caribbean and Latin America.

MALS 318 - Cultural Studies

Instructor: Donald Pease; Patricia McKee

Perhaps because of its capacity to cut across social and political interests and transgress disciplinary boundaries, Cultural Studies has provoked highly contradictory descriptions of its politics and academic location. Cultural Studies has been described as the academic location where the politics of difference -- racial, sexual, economic, transnational -- can combine and be articulated in all of their theoretical complexity. It has also been depicted as an academic containment strategy designed to tame cultural otherness through the universalization of the "idea" of culture and the resistance to theory. In this course we shall analyze the work of scholars -- bell hooks, Douglas Crimp, Janice Radway, Paul Gilroy, Stuart Hall, Homi Bhabha, Andrew Ross, Meaghan Morris, Elsbeth Probyn, Michael Warner, Rey Chow, Cornel west, Kobena Mercer, Judith Butler, among others -- who explicitly reflect upon the importance of conceptualizing and defining this diverse and often contentious enterprise. In addition to examining the social and institutional geneology of the field, we shall deploy disparate methodological practices developed within the field of Cultural Studies to analyze a range of cultural artifices including: film noir, television soap operas, rap music, Hollywood blockbusters, borderlands discourse, whiteness studies and postcolonial theory.

MALS 337 - The New Global Order: Development, Democracy and Revolution

Instructor: Evelyn Lechner; Peter DeShazo

Globalization and the pursuit of market-led development have become two crucial concepts that re-emerged full-blown in the wake of the Cold War, as the West triumphed over the Soviet Union and the Marxist model. With the United States as the sole remaining super power, liberal democracy and market-led economies were widely considered by policy makers in the West to be the inevitable cornerstone of a new global order. Yet, the process of globalization since the early 1990s has produced unpredicted results. The end of the Cold War has not generated a prolonged "Pax Americana" marked by an end to intra-state warfare, insurgencies, or violence, nor has economic development resulted in the consolidation of democracy. The strongest economic performer in the post Cold War period has been China, still an authoritarian Marxist regime, and the Russian Federation that emerged from the former USSR is evolving in a decidedly anti-democratic direction.

The end of the Cold War in the Americas appeared to usher in the potential for greater hemispheric unity, the strengthening of representative democracy and sustained economic growth. While economic development has been historically strong, it remains uneven and the fruits of economic success often distributed in a skewed pattern favoring elite groups. In several countries in the region, a strong reaction to liberal democracy and market-led economic growth gave rise to the consolidation of proto-authoritarian regimes such as that of Hugo Chávez in Venezuela promoting a 21st century brand of revolution and a revival of anti-U.S. sentiment. Countries in the region still contend with problems such as insurgency, organized crime, and high levels of violence.

This course will examine the links between democracy, market-led development, and globalization in greater theoretical depth as well as in practice since the end of the Cold War. It will use Latin America as a particular point of focus in highlighting macro trends in politics and economic policy-making since the 1990s as well as case studies digging deeper into these variables.

The first part of the course focuses on globalization in general, its impact on the world economy and the economies of specific countries and on international business. The tension between globalization and moral questions will be elaborated on. Intellectual/ideological responses to globalization will also be discussed.

The second part of the course will trace trends in Latin America's links to the global economy and the relationship between paths of economic development and political structures. Specific attention will be paid to the transition from military dictatorships to civilian democracies, the challenge of illegally armed groups and criminal

organizations to stability in the region, and the current bifurcated development path between countries pursuing market-oriented growth policies and those engaged in inward-led growth and resource nationalism.

MALS 346 - Diasporas and Migrations

Instructor: Regine Rosenthal; Klaus Milich

Over the past two decades, the term diaspora has gained wide currency and intense scrutiny in scholarly work. Originating in the Hebrew Bible as prophesy of the Jewish “dispersion in all kingdoms of the earth,” contemporary uses of the term have accrued meaning in a variety of contexts and disciplines to designate “the movement, migration, or scattering of people away from an established or ancestral homeland.” Considering mass-migration, exile, and expulsion in all sectors of the world, this seminar will focus on a variety of concepts and theories related to diaspora. Studying a range of ethnographic, historical, theoretical, and literary texts, we will compare Jewish, African, and Asian diasporas in the context of historical, cultural and territorial characteristics. We will also discuss questions such as “the power of diaspora” vs. homeland, the role of the nation state vs. transnational or post-national aspects of culture, cultural identity, and hybridity.

MALS 369 - WRITING NATURE: STORIES AND REFLECTION, INSIDE AND OUT

Instructor: Barbara Kreiger, Anna Minardi

This course is aimed at those with a special interest in exploring their relationship with the natural world through short pieces or longer narratives. Why do we say we “go into” nature when we’re leaving our urban, suburban, or interior spaces? How far do we have to go before we’ve “arrived”? Can we stay where we are, gaze out the window, remember, imagine, wonder? What happens when we look down at stones or up at stars? What is the difference between grand vistas and commonplace ones? Or those that are new and those that are familiar? In other words, what does our relationship rely on, how does it shift, and what does it tell us. And because this is a creative writing course, the question of how we make our experience accessible to others is crucial, so we’ll address the story itself, style, voice, and the use of reflection as we consider what is probably an evolving or shifting relationship with previously unarticulated aspects of experience. The course is called “Writing Nature,” not “Nature Writing,” to remove the implicit hyphen that suggests a genre and emphasizes the inquiry that writing offers us. A broad selection of readings will include works of well known writers and others less well known but no less intuitively linked to the world we inhabit.

MALS 370 - Practical Wisdom: Learning the moral skills to make tough decisions in uncertain times

Instructor: Ken Sharpe

The subject of this course is practical wisdom, the capacity to make difficult ethical choices. Aristotle called this human capacity *phronesis* and saw it as essential for doing the right thing in the right way at the right time. Throughout the course, we will be investigating five questions:

1. What is practical wisdom?
2. When and why do we need it?
3. How do we learn practical wisdom?
4. What institutional forces threaten practical wisdom?
5. How can institutions be designed to encourage and nurture practical wisdom?

We will investigate these questions in several important domains in life - friendship, education, work, medicine, and family. Because practical wisdom is learned by reflecting on our own practices and experiences, we will rely heavily on stories about your own experiences that you will write and present in light of the theory and cases we read. Improving our own skills in reflective practice will also be encouraged by the format of the class which will rely on well-informed and thoughtful discussion in a seminar format.

We will also investigate these questions more theoretically in an effort to develop a solid understanding of what makes wisdom or judgment a crucial component of our lives. Throughout the course, we will be contrasting decision-making that depends on practical wisdom with decision making that depends on following various kind of rules or responding to external rewards and punishments.

This will be an interdisciplinary course with readings drawn from philosophy, ethics, literature, psychology, education, and sociology. Prior knowledge of these fields is not a prerequisite. We will frequently be joined by guests from other departments and from the Medical School.

MALS 373 - EPIDEMICS: VORTEX OF FEAR AND WISDOM

Instructor: Daniel Lucey

Globalization Studies, Cultural Studies or Single-taught Interdisciplinary

Instructor: Daniel R. Lucey '77, MED '81

What can epidemics teach us about different forms of fear and wisdom? Books (e.g., Camus' The Plague, Quammen's Spillover), documentaries (e.g., AIDS Ward 5B in San Francisco 1983, Ebola in W. Africa 2014, COVID 2019-2023), medical literature, and social media will help address this question for past, present, and future epidemics.

In addition, the Washington DC Smithsonian Museum of Natural History Exhibition on Epidemics 2018-2022 will

be discussed by the originator (DL) and a Do-It-Yourself version will be displayed in class. Photos and reflections from working overseas since 2003 with international colleagues during SARS, MERS, Flu, Ebola (with Doctors-Without-Borders), Zika, Plague (with WHO), will be discussed. Each class includes updates on COVID-19 and other ongoing epidemics e.g., monkeypox.

Maximum enrollment is 15 persons. Undergraduates can request enrollment via the MALS Office.

MALS 700 - Responsible and Ethical Conduct of Research

Instructor: Jill Baron

Required course for all MALS graduate students. Generally, consists of four two-hour sessions, as well as additional reading and preparation.

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Psychological and Brain Sciences - Graduate

Chair: P. Tse, Professor

Professor Emeritus G. Wolford; Professors S. Beilock, A. Clark, D. Coch, B. Duchaine, R. Granger, J. Haxby, J. Taube, P. Tse, T. Wager, T. Wheatley; Associate Professors L. Chang, D. Kraemer, J. Manning, J. Murray, K. Nautiyal, C. Robertson, K. Smith, A. Soltani, V. Störmer, M. van der Meer; Assistant Professors E. Finn, P. O'Neill, K. Sanchez, A. Stolk, M. Thornton, S. Warlow; Senior Lecturer M. Herman; Lecturers J. Bharucha, K. R. Clark, L. Dziel, G. Greenough, L. Veillette, S. Winter, S. Wray; Adjunct Professor J. Sargent; Adjunct Associate Professor M. Funnell; Adjunct Assistant Professor M. Detzer; Research Professors P. Cavanagh, Y. Halchenko; Research Assistant Professor W. Hudenko. Affiliated Faculty: S. Frankland, Assistant Professor, Program in Cognitive Science, J. Phillips, Assistant Professor, Program in Cognitive Science.

To view Psychological and Brain Sciences Graduate courses, click here.

To view Psychological and Brain Sciences Undergraduate requirements, click here.

To view Psychological and Brain Sciences Undergraduate courses, click here.

Requirements for the Doctor's Degree (Ph.D.)

The Department offers graduate training leading to the Ph.D. in Psychological and Brain Sciences or Cognitive Neuroscience. The program emphasizes acquaintance with the basic psychological and neural processes that form the core of contemporary psychological science. Students are encouraged in their research to address problems of broad significance and to be knowledgeable about the theory that makes breadth coherent.

The course requirements for the Ph.D. in Psychological and Brain Sciences are as follows:

1. Proseminar (PSYC 100)
2. Graduate Student Ethics (PSYC 700)
3. Measurement and Statistics I and II (PSYC 110 and PSYC 111)
4. Five additional graduate courses, including at least two Core Courses (PSYC 120-129, PSYC 126/IND 102) and at least one Content Seminar (PSYC 170-179). The remaining two courses may be Methods Seminars (PSYC 160-169), Core Courses, or Content Seminars.

The course requirements for the Ph.D. in Cognitive Neuroscience are as follows:

1. Proseminar (PSYC 100)
2. Graduate Student Ethics (PSYC 700)
3. Measurement and Statistics I and II (PSYC 110 and PSYC 111)
4. Two core courses: Systems Neuroscience (PSYC 126/IND 102) and Cognitive Neuroscience (PSYC 128)
5. Three electives from the following list (non-exhaustive)
 - a. Programming: Computer Programming for Brain Scientists (PSYC 161), Machine Learning & Statistical Analysis (COSC 174)
 - b. Neuroimaging and Data Analysis: Principles of Human Brain Mapping (PSYC 60), Imaging Methods (PSYC 160), Computational Methods/Analysis of Neural Data (PSYC 164)
 - c. The Neural Code: Seminar in Special Topics (PSYC 179) for topics relevant to cognitive neuroscience

Both programs require the following:

1. Completion of the teaching apprenticeship program.
2. A passing grade in a Specialist Examination, typically by the end of the winter term during the second year.

3. Completion of a written MS thesis, and defense with a thesis committee typically in the spring term during the second year.
4. Fulfillment of the two-year-residence requirement.
5. Completion of independent research and a dissertation; a defense of the dissertation; and presentation of the dissertation research in a public oral colloquium.
6. For more specific details regarding the program see the 'Guide to PBS Graduate Program.'

Psychological and Brain Sciences Department Website

Please check the department website at <http://pbs.dartmouth.edu/graduate-program-psychological-and-brain-sciences> for further information.

Graduate Courses

PSYC 100 - Proseminar

Instructor: PBS Faculty

An introduction to the research programs of PBS Faculty. Taken by students in their first year.

Offered: Fall.

PSYC 103.5 - Neuroanatomy Module

Instructor: J. Taube

This 2-3 week module will involve a hands-on experience with neuroanatomy and some clinical aspects of neurology. The class will meet every weekday in the morning from 9-12 OR, alternatively, in the afternoon (1-4) for two of the days during the first week. The first week will cover a detailed dissection of a sheep's brain, where each student will get their own sheep's brain to dissect. During the second week, we will dissect a human brain in small groups, as well as cover neurological imaging, the neurologic exam, and some interviews with patients who have various neurological disorders. On the last day of the module there will be a short practical exam that will test the material covered. Students will receive 0.33 credits for this course on their transcripts. The course is intended for students who have taken the IND 102/PSYC 126 Systems Neuroscience course, but may be open to other students by permission.

Offered: Fall.

PSYC 110 - Measurement and Statistics I

Instructor: Wolford

First section of Graduate level statistics. Typically taken by students in their first or second year.

Offered: Winter.

PSYC 111 - Measurement and Statistics II

Instructor: Wolford

Second term of Graduate level statistics. Typically taken by PBS students in their first or second year.

Offered: Spring.

PSYC 115 - Supervised Undergraduate Teaching

Register for this course when you TA an undergraduate course.

Offered: Fall, Spring, Summer, Winter.

PSYC 117 - Specialist Requirement

Taken while doing specialist reading and written exam, usually not awarded a grade until completed ('ON' appears in the grade column until exam is completed). The Specialist Requirement is designed to ensure that students have basic knowledge in their chosen sub-discipline that prepares them for their pre-dissertation and dissertation research. It consists of a reading list tailored to the student's sub-discipline and a take-home exam based on the readings. This take-home exam must be turned in by the first day of the spring term of their second year.

Offered: Fall, Spring, Summer, Winter.

PSYC 118 - Research Presentation

Taken in the spring term of the second year while completing the MS thesis.

Offered: Spring.

PSYC 121 - Perception

Instructor: TBD

This course will review recent scientific findings concerning the neural basis perception, i.e. how our sensory organs transduce sensory information to form integrated percepts of our environment. We will present the central pathways underlying each of the sensory systems, along with a look at multisensory integration. Participants will be expected to make classroom presentations on selected topics.

PSYC 123 - Social Neuroscience

Instructor: Wheatley

PSYC 126 - Systems Neuroscience

Instructor: van der Meer

The PSYC 126/IND 102 course provides graduate students with a rigorous exploration of fundamental systems neuroscience. We will focus on sensory and motor systems and their accompanying brain structures, but we will also cover hypothalamic, autonomic, limbic, and cortical systems. For each system we will discuss anatomical and physiological relationships and relate them to neurological

disorders. This is a lecture-based course with the goal to provide a broad understanding of core brain structures and their underlying physiological functions.

Cross-Listed as: IND 102

Offered: Fall.

PSYC 127 - Functional Neuroanatomy

This course covers the structure of the brain from a functional perspective. We will trace key structural components of the brain at the levels of the system, circuit, and cell, with an emphasis on how these components combine to accomplish a specific functional goal. Course materials will focus on the human brain. Several lab activities throughout the quarter will include brain dissections and examinations of traditional and interactive atlases.

PSYC 128 - Cognitive Neuroscience

Instructor: Soltani

See department website for description.

Offered: Winter.

PSYC 132 - Introduction to Programming for Psychological Scientists

Instructor: Manning

PSYC 133 - Models of Memory

Instructor: Manning

PSYC 160 - Imaging Methods

Instructor: Chang

How can we understand how the brain works? This course provides an introduction to in vivo neuroimaging in humans using functional magnetic resonance imaging (fMRI). The goal of the class is to introduce: (1) how the scanner generates data, (2) how psychological states can be probed in the scanner, and (3) how this data can be processed and analyzed. Students will be expected to analyze brain imaging data using the opensource Python programming language. We will be using several packages such as numpy, matplotlib, nibabel, nilearn, fmriprep, pybids, and nlttools. We will cover the basics of signal processing, and how we can make inferences using the general linear model. We will also introduce more advanced analysis techniques such as prediction/classification, representational similarity analysis, and intersubject correlations.

Offered: Fall.

PSYC 162 - Human Electrophysiology Lab

Instructor: Störmer

The goal of this course is to provide an introduction to the methodology of human electroencephalogram (EEG),

including event-related potentials (ERPs), oscillatory activity, and steady-state visual evoked potentials (SSVEPs). The course will provide theoretical background on these methods, as well as hands-on experience: we will design our own EEG experiment, record EEG data in the lab, and analyze it together; including data preprocessing (artifact rejection, filtering), computing ERPs, and oscillatory activity. Finally, the class will also cover how to present EEG/ERP data and interpret ERP components, oscillations, and SSVEPs.

PSYC 164 - Computational Methods

Instructor: Haxby

This course will review current computational methods for understanding how information is coded in neural activity and how to decode patterns of neural activity to reveal the information that is being represented and processed. The course will cover topics such as multivariate pattern classification, representational similarity analysis, forward encoding models, and using hyperalignment to build common models of representational and connectivity spaces. The course will concentrate on applications to human functional neuroimaging data, but application to other methods of measuring neural activity in humans and animals will also be covered.

PSYC 165 - Best Practices for Eye Tracking

Instructor: Rolfs

Students will learn about the state of the art in eye tracking in experimental psychology and gain hands-on experience in experimental control, data collection, data analysis, and interpretation.

PSYC 166 - Pedagogy with Purpose

Instructor: A. Clark

This class will highlight course design. Some of the topics we'll discuss include complementary approaches to course design (design thinking, backwards design, universal design for learning), development of measurable student learning outcomes, teaching strategies that actively involve students in their learning, and formative and summative methods for assessing student learning. Open to students who have completed their first year of graduate school.

PSYC 167 - Professional Development

Instructor: Störmer

Content varies depending on instructor.

Offered: Fall.

PSYC 168 - Experiential Learning

The goal of this course is to provide students with practical training through a full-time internship outside of Dartmouth College. This real-world, hands-on experience will expose students to diverse career opportunities during

graduate school and give students a chance to engage with a field of interest, related to their doctoral research, prior to completion of their PhD.

For this course, the student will propose and arrange a paid or unpaid internship in an existing enterprise (industry, government, or other) in consultation with their Thesis Advisor (primary mentor) and the PBS Graduate Committee. This process should happen in advance of the term of enrollment. Course enrollment is concurrent with the internship and should be for a period of one term. At the end of the internship, the student will make an oral presentation to the PBS community (faculty, post-doctoral fellows, graduate students, and others who may be interested) that addresses the nature of the enterprise they were engaged in, the problem they were assigned, and the results and impact of their project. The purpose of the presentation is to share lessons learned from the internship experience with the PBS community. The presentation will be accompanied by a short but complete written report. Neither the presentation nor report should contain confidential information of the enterprise.

This course is considered a methods course, carries two credits, and can fulfill one of the elective course requirements for the PhD degree. Students may enroll in the course no more than once. Students holding F-1 sponsorship should consult with the Office of Visa and Immigration Services (OVIS). Students engaged in paid internships will not receive a graduate student stipend during the term of the internship.

Prerequisite: This course is generally open to students in their second-fourth year in the program (i.e. after completion of their first three terms and prior to proposing their dissertation). Instructor permission is required and will be granted once the PBS Graduate Committee approves of the student's internship proposal.

Offered: Fall, Spring, Summer, Winter.

PSYC 171 - Brain Evolution

Instructor: Granger

For the first 200 million years of mammalian evolution, animals' brain sizes were relatively predictable from their body size via a straightforward allometric relation. In the past four million years, an evolutionary blink of the eye, primates rapidly evolved brains that are four times larger than previously would have been predicted for their body size. What are the contents of our brains? How do they differ from the brains of other mammals (and non-mammals)? How did they acquire their enormous size? Evolution acts on genes, not on organisms; what are the genetic factors that have been identified in recent primate brain growth? What mechanisms are at play, including extrinsic factors and evolutionary "pressures"? What criteria must theories of brain evolution conform to, and what data are to be accounted for? What differential predictions arise from various theories and how are they

tested? What relationships obtain between anatomical and functional brain characteristics? The class will cover a set of related topics including brain structure, anthropology, evolution, genetics, development, cognition, race, and intelligence.

PSYC 172 - Cognitive Neurodevelopment

Instructor: Robertson

PSYC 174 - Computational Neuroscience: Brain Engineering

Instructor: Granger

Brain circuits are circuits. Just as we can write down what an iPhone or a computer does, so we can derive candidate operations and algorithms that brain circuits may be carrying out. Evidence suggests that brains are non-standard engineering devices: they have unusually low-precision synaptic connections, operating at speeds that are ridiculously slower than electronic circuits; yet brains are so good at some tasks, from face and voice recognition to language understanding, that the field of computer science now often imitates brains in order to rival their performance. We will read papers relevant to disparate approaches to brain modeling, and discuss predominantly brain circuit approaches. The aim of the course will be to enhance understanding of the current literature and enable critical readings of it. Qualified undergraduates may take the course by permission of instructor.

PSYC 175 - Current Topics in Behavioral Neuroscience

Instructor: Smith

This course will explore historical and modern accounts of reward and motivation. We will also address what role these processes could play in addictions and what aspects of addiction might involve other processes. Equal focus will be paid to behavioral and neural components. The course will emphasize research using small animal models to understand them. Students will become familiar with broadly applicable concepts and research methods used in the behavioral neuroscience of reward and motivation.

Offered: Spring.

PSYC 177 - Interacting Minds

Instructor: Stolk

Insight into how human brains work in their most ubiquitous and biologically meaningful context, social interaction, has remained largely elusive. This course ventures into this "dark matter" of social neuroscience, pursuing the question of what constitutes a meeting of minds. Conceptual and methodological challenges of studying human interaction are dealt with in-class discussions, laboratories, and small group research projects on selected topics. Students will be expected to design, run, analyze, and write up an interaction study answering a question of their choosing. Example research projects

include but are not limited to studies of human interactive behavior in the real world, the lab, simulated scenarios, or on social media.

PSYC 178 - Computational Foundations for Human and Systems Neuroscience

Instructor: Wager

Computational and statistical techniques are foundational to cognitive, affective, social, and systems neuroscience. Several types of models that are increasingly used in cutting-edge research are not typically covered in traditional statistics courses, but they have wide application across disciplines. These include (1) pattern recognition and machine learning, (2) reinforcement learning, state-space models, and other dynamic models, (3) Bayesian models, and (4) artificial neural networks and deep learning. This course covers the foundational mathematical principles and practical applications underlying modern techniques in this space. Topical lectures from experts on specific techniques will be accompanied by hands-on tutorials and code applying the techniques to real datasets

PSYC 179 - Seminar in Special Topics

Content varies depending on instructor.

PSYC 188 - Graduate Research (1 credit)

One credit of graduate research.

Offered: Fall, Spring, Summer, Winter.

PSYC 288 - Graduate Research (2 credits)

Two credits of graduate research.

Offered: Fall, Spring, Summer, Winter.

PSYC 388 - Graduate Research (3 credits)

Three credits of graduate research.

Offered: Fall, Spring, Summer, Winter.

PSYC 700 - Responsible and Ethical Conduct of Research

Instructor: Nautiyal

Required course for all Cognitive Neuroscience and Psychological Brain Sciences graduate students. Generally consists of five two hour sessions as well as additional reading and preparation.

Offered: Fall.

Mathematics - Graduate

Chair: Dimitris Giannakis

Vice Chair: Dana Williams

Professors V. Chernov, S. Elizalde, A. Gelb, D. Giannakis, P. J. Hanlon, P. Mucha, R. C. Orellana, S. D. Pauls, D. Rockmore, C. J. Sutton, E. van Erp, D. P. Williams, P. Winkler; Associate Professors A. Auel, F. Fu, Y. Lee, I. Petkova, J. D. Trout; Assistant Professor J. Bruce, P. Ju, E. Levien, A. Mallick, S. Tayou; Research Instructors H. Deng, R. Dougherty-Bliss, A.R. Haj Saeedi Sadegh, G. Park, T. Zdyrski; Research Associates, Lectures, and Fellows K. Eikenberry, G. Hofer, L. Huynh, M. Latifi Jebelli, L. Liu, J. MacDonald, M. Montgomery, T. Phillips, C. Vales, J. Welborn, Y. Xiao; Research Professors J. Slawinska; Adjunct Professor H. Chang, E. Demidenko.

To view Mathematics Graduate courses, click here.

To view Mathematics Undergraduate requirements, click here. (p. 560)

To view Mathematics Undergraduate courses, click here. (p. 566)

See the Department website for projected terms for future course offerings.

Please note that course meeting times and instructors are subject to change until the Timetable of Class Meetings for the specific term is published by the Registrar's Office.

Introductory Courses

The Graduate Program in Mathematics

Dartmouth College offers programs of graduate study leading to the Ph.D. and A.M. degrees in mathematics. Normally, the A.M. program is the first step in the Ph.D. program. The Ph.D. program is designed to meet the need for mathematicians who are highly qualified in both teaching and scholarship. The College provides an environment in which a doctoral candidate can pursue professional study in mathematics and prepare to be an effective teacher.

Requirements for the Master's Degree (A.M.)

In addition to the general College requirements for the master's degree, the math department requirements for the A.M. in mathematics are as follows:

1. Satisfactory completion of four courses from among: 101, 103, 104, 106, 111, 113, 114, 116, 126, 136.[1]
2. Successful completion of the Advancement Examination at a Master's level.

3. Non-course requirements which parallel those of those continuing in the Ph.D. program. In particular, students must receive credit for Mathematics 107 once during each year while enrolled.
4. Completion of at least five terms in good standing. [2]

Note (1): Normally this requirement for the A.M. is completed in the first year. Study may be extended into the second year, only if approved. Syllabi for these ten courses are available from the Department of Mathematics.

Note (2): In addition to five terms in residence, students must obtain credit in fifteen courses of graduate quality with a limit of at most five replaced by approved research or special study.

Requirements for the Doctor's Degree (Ph.D.)

The requirements for the Ph.D. degree in mathematics are as follows:

1. Successful completion of the A.M. degree (described above).
2. Successful completion of the Advancement Examination at the Ph.D. level.
3. Admission to Ph.D. candidacy by the departmental Graduate Program Committee as a result of its review, which takes place at the end of the spring term of the second year of graduate study. This review will take account of all the relevant information that the Graduate Program Committee can gather, such as the student's record in courses and seminars, the student's performance during the advancement process, and an estimate of the student's ability to write an acceptable thesis.
4. Completion of a doctoral thesis of acceptable quality, and its defense in an oral examination.
5. Successful completion of the teaching seminar and teaching two courses in the three years after passing to candidacy. Preparation for the teaching seminar includes such activities as tutoring in the years before admission to candidacy. This requirement is met by receiving credit for Mathematics 107 once during each year preceding admission to candidacy, credit for Mathematics 147, and credit for Mathematics 149 twice during the three years following admission to candidacy.

MATH - Mathematics

MATH 297 - Graduate Training

This course requires a full-time internship or research program that helps to prepare the student for a graduate degree and/or future employment in the student's field of study. Permission of the student's advisor and the Mathematics Department's Graduate Program Committee is required, following submission of the program's dates

and description. This course can be taken more than once (but not more than twice in consecutive terms.)

MATH 700 - Responsible and Ethical Conduct of Research

Required course for all Mathematics graduate students. Generally consists of five two hour sessions as well as additional reading and preparation.

Offered: Fall.

MATH 100 - Topics in Probability Theory

Instructor: Winkler

Offered: Spring.

MATH 101 - Linear and Multilinear Algebra

Instructor: Auel

This course treats the subject of linear and multilinear algebra from an abstract point of view. Topics include bilinear forms, tensor products, algebras over a field, symmetric and exterior powers, and universal properties. Applications include the representation and character theory of finite groups.

Offered: Fall.

MATH 102 - Topics in Geometry

MATH 103 - Metric spaces and measure theory

Instructor: Trout

This course reviews the basic theory of metric spaces and their topology including continuity, completeness, connectedness, and compactness. An introduction to abstract measure theory follows, with topics including measurability, measures, integration, the construction of Lebesgue measure, as well as additional topics as time allows.

Cross-Listed as: MATH 073

Offered: Fall.

MATH 104 - Differential Topology

Instructor: Petkova

This course is an introduction to differential topology. Topics include smooth manifolds, tangent and cotangent bundles, vector fields, Lie groups, differential forms, and integration, with additional topics covered at the instructor's discretion.

Offered: Winter.

MATH 105 - Topics in Number Theory

Cross-Listed as: MATH 081

Offered: Winter.

MATH 112 - Geometry**MATH 106 - Stochastic Processes & Uncertainty Quantification**

Instructor: Levien

Annually, Winter term. Stochastic modeling and uncertainty quantification are central to the study of many problems in physics, engineering, finance, evolutionary biology and medicine. This course introduces theoretical concepts in probability theory and key methods for stochastic processes and uncertainty quantification. MATH 106 is an approved elective for the QBS Masters of Science degree in Health Data Science.

The topics of this course will alternate between odd and even years. In even years, topics will include basic concepts of probability, generating functions, Markov chains, random walks, Markov and Non-Markov processes, and diffusion theory. Applications to the natural sciences will be made. In odd years, the course will focus on data-driven methods, with applications in data science, machine learning, and numerical weather prediction. Topics will include statistical inference, random sampling, stochastic processes, polynomial chaos, and data assimilation. The course will also introduce standard computation libraries in MATLAB and Python.

Offered: Winter.

MATH 107 - Supervised Tutoring

Tutoring or assisting with teaching under the supervision of a faculty member.

Offered: Fall, Spring, Summer, Winter.

MATH 108 - Topics in Combinatorics**MATH 109 - Topics in Mathematical Logic****MATH 110 - Probability Theory****MATH 111 - Abstract Algebra**

Instructor: Auel

This course provides a foundation in core areas in the theory of rings and fields. Specifically, it provides an introduction to commutative ring theory with a particular emphasis on polynomial rings and their applications to unique factorization and to finite and algebraic extensions of fields. The study of fields continues with an introduction to Galois Theory, including the fundamental theorem of Galois Theory and numerous applications.

MATH 113 - Analysis

Instructor: Williams

The topic of this course alternates between year. In odd years, it provides an introduction to functional analysis covering the basics of Banach spaces, Hilbert spaces, and Banach algebras, with additional topics covered at the instructor's discretion. In even years, it will cover specialized topics such as complex analysis, abelian harmonic analysis, or unbounded operators.

Offered: Spring.

MATH 114 - Algebraic Topology

Instructor: Mallick

This course provides a foundation in algebraic topology, including both homotopy theory and homology theory. Topics may include: the fundamental group, covering spaces, calculation of the fundamental group, singular homology theory, Eilenberg-Steenrod axioms, Mayer-Vietoris sequence, computations, applications to fixed points and vector fields.

Cross-Listed as: MATH 074

Offered: Spring.

MATH 115 - Number Theory**MATH 116 - Numerical Analysis**

Instructor: Gelb

Annually, winter term. Many mathematical models arising in various applications cannot be solved analytically. This course teaches fundamentals of numerical analysis, and focuses on how numerical algorithms are constructed and analyzed in terms of their accuracy, efficiency, stability, conditioning, and convergence properties. Students will use MATLAB to demonstrate the validity and/or failure of various approaches in different situations. MATH 116 is an approved elective for the QBS Masters of Science degree in Health Data Science.

The topics of the course will alternate between odd and even years. In odd years, the main focus will be on numerical linear algebra, and include the study of least squares methods, iterative methods for linear systems, eigenvalue problems. Other topics will include root finding methods and optimization. In even years, the focus will be

on numerical ordinary and partial differential equations, including both linear and non-linear problems. Numerical interpolation, differentiation, integration, and approximation techniques will also be discussed as they pertain to solving differential equations.

Offered: Spring.

MATH 117 - First Year Graduate Seminar

Instructor: Various

For all graduate students but specifically for 1st year graduate students. This course will provide a springboard for graduate students between 1st and 2nd year. Also available for undergraduates wanting to explore a variety of topics in mathematics.

This course will have 3-6 modules on multiple topics taught by various faculty members sharing work related to their research. The intention is to give 1st year graduate students an overview of areas on math available to them in the department to assist in choosing their future track and faculty advisor. Topics and Faculty to be determined.

Offered: Summer.

MATH 118 - Combinatorics

MATH 119 - Mathematical Logic

MATH 120 - Current problems in Probability Theory

MATH 121 - Current problems in Algebra

Instructor: Bruce

Offered: Spring.

MATH 122 - Topics in Analysis

MATH 123 - Current problems in Analysis

Offered: Winter.

MATH 124 - Current problems in Topology

Instructor: Mallick

Offered: Winter.

MATH 125 - Current problems in Number Theory

Instructor: Bruce

Offered: Spring.

MATH 126 - Partial Differential Equations

Instructor: Giannakis

Partial differential equations play critical roles in wide areas of mathematics, science, and engineering. This is an introductory course, accessible to undergraduate and graduate students in mathematics and other scientific disciplines who have completed the prerequisites. Examples will come from both linear and non-linear partial differential equations, including the wave equation, diffusion, boundary value problems, conservation laws, and the Monge-Ampere equations.

Prerequisite: Math 22 or 24 and Math 23

Cross-Listed as: Math 53

Offered: Fall.

MATH 127 - Reading Course

Advanced graduate students may elect a program of supervised reading continuing the topics of their course work.

MATH 128 - Current problems in Combinatorics

MATH 129 - Current problems in Mathematical Logic

MATH 136 - Introduction to applied mathematics

Develops tools to analyze phenomena in the physical and life sciences, from cell aggregation to vibrating drums to traffic jams. Focus is on applied linear and nonlinear partial differential equations: methods for Laplace, heat and wave equations (Fourier transform, Green's functions, eigenfunction expansions), Burger's and reaction-diffusion equation.

Further topics may include linear and integral operators, nonlinear optimization, linear programming, asymptotics, boundary layers, or inverse problems. Students will develop numerical skills with a package like MATLAB/Octave.

Prerequisite: Math 22 or 24 and Math 23, or permission of the instructor

MATH 137 - Independent Reading

Advanced graduate students may, with the approval of the advisor to graduate students, engage in an independent reading program.

MATH 146 - Current Problems in Applied Mathematics

Instructor: Ju, The Staff

Offered: Spring.

MATH 147 - Teaching Seminar

Instructor: TBD

A seminar to help prepare graduate students for teaching. (This course does not count toward the general College requirements for the master's degree.)

Offered: Spring.

MATH 148 - Independent Project

A graduate student may, with the approval of the advisor to graduate students, engage in an independent study project. Groups of graduate students may, for example, prepare joint work including reading and informal seminars aimed at mastering a certain topic.

Offered: Spring.

MATH 149 - Supervised Teaching

Teaching under the supervision of a faculty member.

MATH 150 - Graduate Subject Seminar**MATH 156 - Graduate Research**

Research under the guidance of a staff member.

MATH 157 - Thesis Research

Research under the guidance of the student's thesis advisor. Open to candidates for the Ph.D. degree.

MATH 158 - Independent Research

Advanced graduate students may, with the approval of the advisor to graduate students, engage in an independent research project.

MATH 177 - Methods of Statistical Learning for Big Data

This course provides an introduction to algorithms used in data science with applications to biomedical and health data science. The goal of this course is to present an overview of many of the approaches used for big data focusing on analytical methods and algorithms. The course assumes that students have some knowledge of R. Students will be provided with 2 large data sets. Lectures on data reduction, classification, and optimization will request students complete homework for these datasets. Special attention will be given to students' active learning by programming in a statistical software package R.

Prerequisite: QBS 149, QBS 120 and QBS 121 or instructor permission. Basic proficiency in R

Cross-Listed as: QBS 177

Microbiology and Immunology

Chair: David Leib

Professors M. E. Ackerman (Engineering Sciences, and Microbiology and Immunology), J. Bliska (Microbiology and Immunology), J. M. Bomberger (Microbiology and Immunology), D. J. Bzik (Microbiology and Immunology), R. A. Cramer (Microbiology and Immunology), T. J. Curiel (Medicine, and Microbiology and Immunology), R. I. Enelow (Medicine, and Microbiology and Immunology), S. N. Fiering (Microbiology and Immunology), F. Goodrum (Microbiology and Immunology), D. A. Hogan (Microbiology and Immunology), A. Howell (Medicine, and Microbiology and Immunology), Y. H. Huang (Microbiology and Immunology, and Pathology and Laboratory Medicine), C. V. Jakubzick (Microbiology and Immunology), D. A. Leib (Microbiology and Immunology), J. Obar (Microbiology and Immunology), G. A. O'Toole (Microbiology and Immunology), R. Sarpeshkar (Engineering, and Microbiology and Immunology, and Molecular and Systems Biology), C. L. Sentman (Microbiology and Immunology), B. A. Stanton (Microbiology and Immunology), M. Sundrud (Medicine, and Microbiology and Immunology), M. J. Turk (Microbiology and Immunology), E. J. Usherwood (Microbiology and Immunology), M. E. Zegans (Surgery, and Microbiology and Immunology); Professor Emeritus N. J. Jacobs (Microbiology and Immunology); Associate Professors A. Ashare (Medicine, and Microbiology and Immunology), F. Gilli (Neurology, and Microbiology and Immunology), A. Hoen (Epidemiology, Biomedical Data Science, and Microbiology and Immunology), C. Nadell (Biological Sciences, and Microbiology and Immunology, and Orthopaedics), P. A. Pioli (Microbiology and Immunology), B. Ross (Microbiology and Immunology, and Orthopaedics), D. Schultz (Microbiology and Immunology); Assistant Professors C. Liao (Microbiology and Immunology), P. Rosato (Microbiology and Immunology), S. Skopelja-Gardner (Microbiology and Immunology, and Medicine), L. Song (Biomedical Data Science, and Microbiology and Immunology).

To view Microbiology and Immunology courses, click here.

The Ph.D. in Microbiology and Immunology is administered by the Microbiology and Immunology Department of Geisel School of Medicine at Dartmouth.

To qualify for award of the Ph.D. degree, a student must fulfill the following requirements:

1. Satisfactory completion of a year-long graduate-level sequence in biochemistry, cellular and molecular biology; a one-term teaching assignment; and a three-term course in laboratory biochemistry. The last will consist of three small research projects, conducted in rotation with different faculty members for periods of about three months each.
2. Satisfactory completion of three other graduate-level courses in microbiology and immunology or related disciplines.
3. Satisfactory completion of an approved ethics course.
4. Attendance at the weekly seminar series of the Program.
5. Participation in a journal club during fall, winter and spring terms every year and in the weekly Research in Progress series.
6. Satisfactory completion of a written and oral qualifying examination.
7. Satisfactory completion of a significant research project and preparation of a thesis acceptable to the thesis advisory committee.
8. Successful defense of the thesis in an oral examination and presentation of the work in a lecture.

The courses listed below are primarily designed for graduate students. The student should decide, in consultation with his/her committee and course instructors, whether his/her background is appropriate for the content of the course.

FIRST-YEAR CORE COURSES

First-Year students must take the following courses:

Microbiology and Immunology

MICR 700 - Responsible and Ethical Conduct of Research

Required course for all first-year Molecular and Cellular Biology graduate students. Generally consists of five two hour sessions as well as additional reading and preparation. This course seeks to coordinate basic training in professional ethics required of all Dartmouth graduate students with ethical training in the biomedical sciences required for NIH-sponsored research. A basic training program that addresses ethical issues related to professionalism, authorship, mentoring, and data collection has been developed by the Guarini School of Graduate and Advanced Studies in collaboration with the Ethics Institute at Dartmouth. In these sessions, graduate training faculty chosen from each of the foundational science departments on a rotating basis will meet with small groups of first-year graduate students and postdoctoral fellows to facilitate discussions on ethical dilemmas they may encounter in their scientific careers. During each two hour session, students will have the opportunity to become actively engaged in discussions about responsibilities to their

profession and society at large as they embark on their training in research and discovery. Case studies will be used to provide a framework for discussions on ethical issues occurring in scientific research. The course sessions will cover topics related to NIH-sponsored research including ethical use of research subjects, intellectual property and scientific rigor.

\$name

MICR 105 - Spring MCB Core Course Modules

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

MICR 107 - Spring MCB Core Course Modules

Instructor: Daniel Schultz

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

This course provides an introduction to key concepts in quantitative and systems biology, with an emphasis on the modeling of genetic networks and evolutionary processes. We will describe our current understanding on how the vast network of biochemical interactions in a cell works together to perform cellular functions. The aim of the mathematical models studied in this class is not to precisely reproduce experimental data, but rather to allow intuitive understanding of general principles.

We will start by studying the organization of gene networks, and how transcription regulation is used to implement simple recurring network motifs. We will show how these network motifs can be used to build different synthetic circuits. We will then study the evolution of optimized network designs. We will see how cells tune their gene expression levels in response to new selective pressures; we will analyze how beneficial mutations are fixed in a cell population; and we will determine the possible paths of adaptation of an organism towards a new optimum when colonizing new environments.

Prerequisite: We aim to introduce the students to the mathematical formulation necessary to understand the biological problems we will discuss. Some background is

helpful, but not required. Part of our goal is to expose those with little quantitative background to some of the interesting theories that have shaped the field of systems biology. Given the wide range of backgrounds among students in this class we will avoid unnecessary jargon.

109 - Spring MCB Core Course Modules

Instructor: Benjamin Ross

Course description

This course provides an overview of the bacterial communities that associate with the human body, with a focus on the intestinal microbiome. We will discuss common methods and experimental approaches used to interrogate human microbiomes, exploring how these approaches have evolved from the pre to post genomic era and dive into common pitfalls. We will also discuss functional properties of human associated microbiomes as well as current thinking as to the mechanisms that underlie microbiome assembly and stability. Finally, we will cover cutting-edge efforts to alter or manipulate microbiomes as therapies to treat human disease.

Prerequisites

None although a familiarity with microbiological or immunological background material would be beneficial

Reading material

The source material for this course will be primary research literature and review articles.

Grading

The course grade will be based on two short answer quizzes (one after each of the first two weeks), and a 1-page mock proposal (due the week after the last class). Proposal topic: propose a probiotic-based therapeutic for a microbiome-relevant disease. What are some challenges and considerations? What bacterium would you use? What would it do? Be creative! Required: cite appropriate literature.

Prerequisite: None although a familiarity with microbiological or immunological background material would be beneficial

MICR 108 - Spring MCB Core Course Modules

Instructor: David Leib

The final term of a year-long graduate-level course in biochemistry, cell and molecular biology, a continuation of BIOC 101 and BIOL 103. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

Overview

This three-week class will cover basic aspects of virology in a largely didactic fashion for 2/3 sessions per week. The final session of each week will feature a student-driven presentation and discussion of an important current topic in virology with an emphasis on the developments in the field of virology and beyond that stemmed from the work.

Proposed topics

Week 1: Basic virus structure and replication strategies, how to assay and culture viruses, how to genetically manipulate them, how they may be used in research and therapeutics. Cellular responses to virus infection will be covered, to include innate antiviral responses, apoptosis, and transformation. Current topic presentation on Friday.

Week 2: RNA viruses, with special emphasis on medically and historically important viruses (e.g. SARS-CoV-2, polio, influenza, retroviruses), their history, epidemiology, replication cycle, pathogenesis and genetics. Current topic presentation on Friday.

Week 3: DNA viruses, with special emphasis on medically important viruses which have importance as incurable pathogens (e.g. herpes viruses), importance historically (smallpox), or for our understanding cancer (DNA tumor viruses). Emphasis will be placed on their history, epidemiology, replication cycle, pathogenesis, and genetics. Current topic presentation on Friday.

MICR 128 - Enterprise Experience Internship

This course provides practical training experience through a full-time internship at an institution outside of the Dartmouth College campuses (Lebanon and Hanover). The goal of this course is to provide students with real-world, hands-on experience with existing enterprises through internship during graduate school. Such experience will expose students to diverse career opportunities during graduate school, providing students with lead-time to focus and network in a field of interest prior to completion of their PhD. Multiple types of training (e.g., project management and business entrepreneurship skills needed in the pharmaceutical and biotechnology industries, teaching experience needed for a successful faculty position in liberal arts colleges) will be particularly valuable for students who go on to conduct NIH-funded research as well as benefit those students who do not follow the academic research career track. Approximately 30% of biomedical PhDs work in the biotech and pharmaceutical industries in research and non-research positions.

Examples of potential internship opportunities are:

- Researcher in a biotechnology or pharmaceutical company

- Business and marketing associate in a biotechnology or pharmaceutical company
- Teacher/lecturer at an institution of higher education/college
- Assistant at a patent law firm
- Position in office of government policy and legislation
- Position in office of public health policy

The Internship Proposal Form must be completed prior to committing to an internship, and must be signed by the student's Thesis Advisor and the Course Director. A letter from the Internship Supervisor at the proposed host enterprise must be sent to the Thesis Advisor and Course Director detailing the start/end dates of the internship, and the job function and roles of the intern.

Prerequisite: Must have completed all MCB Program and course requirements prior to enrolling. Senior students in their fourth year or beyond who are still conducting their research and are at least 6 months away from thesis defense will be eligible. Must have prior approval of Thesis Advisor, Advisory Committee and MCB Graduate Committee for internship.

This course is graded on a HP/P/LP basis by the Course Director after completion of the written report and oral presentation. International students with visa sponsorship should consult with the Office of Visa and Immigration Services (OVIS) regarding eligibility, and review the appended information on F-1 Curricular Practical Training.

Dartmouth-based health insurance benefits will be paid by the student's Thesis Advisor for the term.

Prerequisite: Permission of the instructor

MICR 142 - Cellular and Molecular Mechanisms in Immune Defense

Instructor: Turk and associates

This course consists of a series of lectures that cover the field of Immunology including both normal and disease related aspects. Focus will be on the basic cellular and molecular components involved in antigen specific and non-specific immune responses. We will cover the mechanisms associated with cellular and humoral immunity, the development of allergies, autoimmunity, immunodeficiency diseases, graft rejection, the role of the immune system in preventing and treating cancer, and the immune response to pathogens. The course is divided into four parts, each ending with a written, in-class

examination. Graded assignments will be given weekly. During the second half of the class, graduate students will be required to present assigned literature dealing with research in a disease-related aspects of immunology.

Exams and Assignments: Grades are based on three in-class examinations, eight homework assignments, a final exam, and one literature presentation. Exams consist of 100 points each, broken up into multiple choice (50 points) and short answer (50 points) sections. Eight homework assignments (12.5 points each), will be administered throughout the term for a total of 100 points. The Final Exam is worth 200 points, with one half on material from the last part of the course, and the other half being cumulative.

Literature Presentations: Each Micro142 student will be required to give an in-class presentation on literature related to an immunological topic in Autoimmunity and Hypersensitivity, Infections and Vaccines, or Tumor Immunology or Transplantation Tolerance. Presentation topics, associated literature, and dates will be assigned at the beginning of the term. A grade will be assigned for the presentation out of 100 points.

Prerequisite: A prior immunology course: BIOC 102, BIOL 046, or permission of the instructor

MICR 144 - Advanced Cellular and Molecular Immunology

Instructor: Jakubzick and associates

The aim of this course is to provide students with a comprehensive understanding of the immune system in human health and disease. We will cover the following topics in depth: Allergy and Hypersensitivities, Chronic Inflammation and Tolerance, Autoimmunity, Transplantation, Infectious Diseases, Vaccines, Immunodeficiency Diseases, Cancer Immunology, Neuroimmunology, and Basic Immunology Techniques. In addition to attending lectures, students will review a recent research article related to each week's topic. This approach will enhance practical learning and offer a valuable opportunity for students to engage with current research in the field. Overall, this course will serve as a foundation for anyone seeking to develop a robust understanding of the immune system and its implications in both health and disease.

Prerequisite: BIOC 102 or an equivalent, or permission of the instructor.

MICR 145 - Microbial Pathogenesis II

Instructor: Jennifer Bomberger and Associates

This course examines microbial pathogenesis in human disease. We focus on central concepts of microbial virulence. We will also explore infecting pathogens and pathogenic mechanisms employed by microbes in specific organ systems, based on the physiology of the host. The

goal is for students to integrate microbial pathogenesis with the organ systems the pathogens are exploiting.

Class format.

Each week will begin with a lecture overview that will include host physiology, when relevant and focus on pathogenic mechanisms of microorganisms infecting that organ system. The second half of each class will be a journal club on a contemporary journal article on the topic for that lecture, chosen in collaboration between student and faculty lecturer. Student-presented lectures will provide an introduction to the paper (10-15 min talk, slides or whiteboard) and then the assigned student will lead the paper discussion with the rest of the class.

Evaluation.

This course relies on class participation, so participation in class discussions will be evaluated. Students will also present the introductory material for journal article discussions and lead class discussion of journal articles. Last class meeting will be a class activity (participation required) to challenge students to synthesize the materials covered during the semester. Equal weight is given to class participation, presentations and class activity in grading.

Prerequisite: Permission of the instructor

Cross-Listed as: GENE 145

MICR 146 - Immunotherapy and the development of contemporary biologics for the treatment of human disease.

This course will consider both basic scientific and therapeutic aspects of three important areas of immunology: immune tolerance, tumor immunology, and autoimmunity. The tolerance module will consider current tolerance strategies and new advances in the field. The tumor immunology module will consider contemporary approaches to eliciting host responses to tumor. Autoimmunity will be discussed to describe basic mechanisms behind the disease and what can be done to modulate the immune response to prevent or treat such diseases. Finally, technical, practical and commercial development of novel biologics for human clinical trials will also be considered. Sessions will consist of a faculty-lead discussion of the primary literature relating to each topic, interspersed with student lead presentations on selected areas. The students will write a 10 page dissertation on a theme related to one of the modules. Students should inform Dr. Noelle and/or Dr. Rothstein of their first and second choices before the start of the course. The dissertations will be due two weeks after the end of the ovule on which the dissertation is based.

Prerequisite: A previous immunology course and/or permission of an instructor

MICR 148 - Advanced Molecular Pathogenesis

Instructor: Robert Cramer

An advanced course in molecular microbial pathogenesis with emphasis on genetic aspects of host-microbe interactions and modern model genetic systems for the study of important human pathogens. Each session will begin with a 30- to 60-minute lecture pertaining to the topic area and will be followed by a 1- to 1.5-hour discussion of current papers (assigned reading) pertaining to the topic area. Discussion of the assigned reading for a particular session centers around a set of questions developed by the student presenter in collaboration with the instructor and based upon a short written report that the student has prepared on the topic. Attendance at the weekly department of microbiology and immunology is required and students will host and work with each faculty speaker in the series to lead the class.

Prerequisite: permission of the instructor

MICR 149 - Microbiology Across Environments

Instructor: O'Toole and Hogan

This course focuses on central concepts of bacterial physiology and metabolism in the context of diverse microbial interactions. We focus on a range of strategies that bacteria use to make energy, and general concepts related to nutrient acquisition and utilization, motility, and survival. This course will consist of lecture overviews of metabolism and bacterial phylogeny combined with student-presented lectures on an assigned topic. One paper is discussed each class period on the same topic.

Prerequisite: permission of the instructor

MICR 167 - The Biology of Fungi that Cause Disease

This course will focus on the molecular features of fungi that form the basis of strategies for pathogenesis and virulence. The increasing use of immune modulating therapies coupled with global climate changes has increased the incidence of both human, plant and other animal fungal infections. The difficulties associated with development of drugs that neutralize fungi but do not harm host cells, heighten the importance of research on fungi and emphasize the unique aspects of eukaryotic pathogens compared to bacteria. The course format will include didactic lectures and active learning exercises to define fundamental and emerging concepts around fungal pathogenesis and virulence.

Prerequisite: Senior undergraduate with permission of the instructor

MICR 197 - Graduate Research in Microbiology & Immunology: Pre-Qual I

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only

to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses. Staff of the Program.

MICR 198 - Graduate Research in Microbiology & Immunology: Pre-Qual II

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research. Staff of the Program.

MICR 199 - Graduate Research in Microbiology & Immunology: Pre-Qual III

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term. Staff of the Program.

\$name

MICR 295 - Independent Study Course

This is an independent study course for a student who has an opportunity for relevant training via a short-term internship or other learning outside of Dartmouth's curricular offerings. A student completing a full-time internship for the majority of a term should instead enroll in MICR 128. This outside experience must be deemed beneficial to the student's research work and be pre-approved by the research advisor, advisory committee, program chair, MCB chair, and Guarini School of Graduate and Advanced Studies.

Prerequisite: Permission of Research Advisor, Advisory Committee, Program Chair, MCB Chair, and Guarini School of Graduate and Advanced Studies.

MICR 297 - Graduate Research in Microbiology & Immunology: Post-Qual I

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more

other graduate or undergraduate courses. Mentor from the Program.

MICR 298 - Graduate Research in Microbiology & Immunology: Post-Qual II

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research. Mentor from the Program.

MICR 299 - Graduate Research in Microbiology & Immunology: Post-Qual III

An original individual experimental or theoretical investigation beyond the undergraduate level in Microbiology and Immunology. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term. Mentor from the Program.

MICR 263, 264, and 265 - Microbiology and Immunology - Graduate Research Colloquium

All students must take a journal club/RIP course during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. All students will be required to participate in at least one Journal Club/Research in Progress series. Although minor variations in format exist among the several series, all students will make oral presentations that describe work from the current literature. Normally these series meet every other week for two hours. This course is not open to undergraduates.

Journal Club topics available for students to select and enroll in are:

MICR 263 Innate Immunity to Infectious Diseases

MICR 264 Immunology

MICR 265 Molecular Pathogenesis

Molecular and Systems Biology - Graduate

Chair: Marnie E. Halpern

Professors Y. Ahmed (Molecular and Systems Biology), G. Bosco (Molecular and Systems Biology), M. D. Cole (Molecular and Systems Biology), J.C. Dunlap (Molecular

and Systems Biology and Biochemistry and Cell Biology), S. Gerber (Molecular and Systems Biology and Biochemistry and Cell Biology), A. Gullledge (Molecular and Systems Biology) Marnie E. Halpern (Molecular and Systems Biology), M.L. Whitfield (Biomedical Data Science and Molecular and Systems Biology), H. Yeh (Molecular and Systems Biology and Neurobiology); Assistant Professors D. Kasper (Molecular and Systems Biology), A. McKenna (Molecular and Systems Biology), E. Orellana (Molecular and Systems Biology), L. Walker (Molecular and Systems Biology), X. Wang (Molecular and Systems Biology).

The Ph.D. in Molecular and Systems Biology is administered by the Molecular and Systems Biology Department of Geisel School of Medicine. The courses listed below are primarily designed for graduate students. The student should decide, in consultation with his/her committee and course instructors, whether his/her background is appropriate for the content of the course.

To view *Molecular and Systems Biology* courses, [click here](#) (p. 973).

Requirements for the Doctor's Degree (Ph.D.)

To qualify for award of the Ph.D. degree, a student must fulfill the following requirements:

1. Satisfactory completion of a year-long graduate-level sequence in biochemistry, cellular and molecular biology; a one-term teaching assignment; and a three-term course in laboratory genetics. The last will consist of three small research projects, conducted in rotation with different faculty members for periods of about three months each.
2. Satisfactory completion of three other graduate-level courses in genetics or related disciplines.
3. Satisfactory completion of an approved ethics course.
4. Attendance at the seminar series of the Program.
5. Participation in a journal club during fall, winter and spring terms every year and in the weekly Research in Progress series.
6. Satisfactory completion of a written and oral qualifying examination.
7. Satisfactory completion of a significant research project and preparation of a thesis acceptable to the thesis advisory committee.
8. Successful defense of the thesis in an oral examination and presentation of the work in a lecture.

For further information, see the *Graduate Study Catalog*.

Molecular and Systems Biology

GENE 100 - Molecular and Cellular Biology PhD Qualifying Examination Course

Instructor: K. Salmon

MCB PHD QUALIFYING EXAMINATION COURSE

Each student enrolled in the MCB Graduate Program must pass a qualifying examination (QE) to be formally admitted to candidacy for the Ph.D. degree. This exam has two components: a dissertation proposal and an oral exam that uses the written proposal as its focus. The evaluation of the qualifying exam components is conducted by the Qualifying Examination (QE) Committee established by the student and thesis advisor. Students are required to enroll in the QE Course for Fall term to receive a grade for successfully completing the QE. Students will be required to meet three deadlines in order to receive a "P" grade. This course is mandatory for all MCB students in the process of completing their qualifying exam.

Offered: Fall, Spring, Summer, Winter.

GENE 102 - Molecular Information in Biological Systems

Together with Biochemistry 101, this course constitutes the first term of a year-long graduate-level sequence in biochemistry, cell and molecular biology. The central theme of the course is the storage, retrieval, modification, and inheritance of biological information, as encoded in the molecular organization of proteins and nucleic acids. Topics include the principles of macromolecular interactions; the structure and function of proteins and nucleic acids; the machineries of transcription, translation, and replication; principles of genetics, genomics, and proteomics; and the control and evolution of biological systems. Note that this course must be taken concurrently with Biochemistry 101 and that students will need to enroll in both courses to complete the Molecular and Cellular Biology Graduate Program requirements for fall term. Not open to undergraduate students.

Prerequisite: BIOC 101 or permission of the instructor. Not open to undergraduate students. Three lectures per week

Corequisite: BIOC 101 or permission of the instructor. Not open to undergraduate students. Three lectures per week

GENE 108 - Genetic Manipulation and Application to Neurobiology

The final term of a year-long graduate level course in biochemistry, cell and molecular biology, a continuation of BIOC 101, BIOL 103 and MICRO 104. These special-topics mini-courses provide more in-depth information

about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

GENE 109 - Spring MCB Course Module

The final term of a year-long graduate level course in biochemistry, cell and molecular biology, a continuation of BIOC 101, GENE 102, BIOL 103 and MICRO 104. These special-topics mini-courses provide more in-depth information about specific areas in biochemistry, cell and molecular biology. Each first-year MCB student must enroll in three sequential modules. Module topics offered each year will vary. Students should contact Janet Cheney for current list of spring-term modules and descriptions.

Prerequisite: Biochemistry 101, Biology 103 and Microbiology 104.

GENE 145 - Genomics of Human Disease

Instructor: M. Whitfield

This course will consider the structure, organization and function of the human genome, with an emphasis on how human genetics will develop now that the genome of humans and many other organisms have been sequenced. The mouse and other model organisms will also be discussed in regard to how they may genetically differ or be similar to humans. The course will meet for two 90 minutes sessions per week. Each session will cover a specific topic and for most sessions the topic will be presented by one of the students enrolled in the course.

Prerequisite: permission of the instructor

Cross-Listed as: MICR 145

GENE 146 - Molecular and Computational Genomics

Instructor: Whitfield

The sequencing of the complete genomes of many organisms is transforming biology into an information science. This means the modern biologist must possess both molecular and computational skills to adequately mine this data for biological insights. Taught mainly from the primary literature, topics will include genome sequencing and annotation, genome variation, gene mapping, gene expression and functional genomics, proteomics and systems biology. The course will meet for 3 hours per week.

Prerequisite: permission of an instructor

Cross-Listed as: QBS-146

- GENE-110

Instructor: Wang

GENE 148 - Biological Mass Spectrometry and Proteomics

Instructor: Gerber

Mass spectrometry (MS) has become a cornerstone technology for scientists engaged in a wide array of modern biomedical research, from addressing hypotheses in cell biology and biochemistry to the broadscale analysis of proteins and proteomes. Proteomics itself, driven largely by the qualitative and quantitative power of mass spectrometry, represents an exciting new field of research with great potential in answering basic and translational questions that challenge the modern scientist today, and for the foreseeable future. This class will be taught through a combination of interactive lectures, journal paper discussion sessions, and a lab in which students get hands-on experience identifying proteins from gel bands by LC-MS/MS.

Prerequisite: permission of the instructor

GENE 197 - Graduate Research in Genetics A

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

GENE 198 - Graduate Research in Genetics B

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

GENE 199 - Graduate Research in Genetics C

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, prior to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

\$name

GENE 260 - Biological Rhythms

Instructor: Dunlap

All graduate students are required to enroll in Graduate Research Colloquium during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of

experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. All students will be required to participate in at least one Journal Club/Research in Progress series. All students will make oral presentations that describe work from the current literature. This course will meet for a 1-hour discussion once per week. Not open to undergraduates.

GENE 261 - Cancer Biology

Instructor: Wang

All graduate students are required to enroll in Graduate Research Colloquium during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. All students will be required to participate in at least one Journal Club/Research in Progress series. All students will make oral presentations that describe work from the current literature. This course will meet for a 1-hour discussion once per week. Not open to undergraduates.

GENE 271 - Graduate Research Colloquium: Chromatin Structure

All graduate students are required to enroll in Graduate Research Colloquium during each term of residence, except summer. An essential element of scientific training is in the critical analysis and communication of experimental research in an oral format. Evaluation will be based on quality of the work described, quality of critical analysis, and on presentation style, including effective use of audio-visual materials. All students will be required to participate in at least one Journal Club/Research in Progress series. All students will make oral presentations that describe work from the current literature. This course will meet for a 1-hour discussion once per week. Not open to undergraduates.

GENE 297 - Graduate Research in Genetics A

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries one course credit and should be elected by students conducting research and also electing two or more other graduate or undergraduate courses.

GENE 298 - Graduate Research in Genetics B

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, subsequent

to passing their qualifying exam; it may be elected for credit more than once. This course carries two course credits and should be elected by students electing only departmental colloquia in addition to research.

GENE 299 - Graduate Research in Genetics C

An original individual, experimental, or theoretical investigation beyond the undergraduate level in genetics. This course is open only to graduate students, subsequent to passing their qualifying exam; it may be elected for credit more than once. This course carries three course credits and should be elected by students conducting research exclusively in any one term.

Physics and Astronomy - Graduate

Chair: Ryan C. Hickox

Professors M. P. Blencowe, R. R. Caldwell, B. C. Chaboyer, M. Gleiser, R. C. Hickox, J. W. LaBelle, K. A. Lynch, R. M. Millan, R. Onofrio, C. Ramanathan, A. J. Rumberg, B. N. Rogers, R. Sarpeshkar, L. Viola; Associate Professors Y-H Liu, J. D. Whitfield, K. C. Wright; Assistant Professors R. Boyack, J. F. Mahlmann, B. Mutlu-Pakdil, E. Newton, D. G. E. Walker, M. Zhou; Research Professors R. E. Denton, R. Fesen, M. K. Hudson, J. G. Lyon, H-R Mueller, P. Padoan, J. R. Thorstensen; Research Associate Professor A. Dotter; Research Scientists T. C. Li, M. Patel; Visiting Assistant Professor A. R. H. Smith; Visiting Associate Professor E. Cobanera; Adjunct Professors D. Giannakis, J. Liu; Adjunct Associate Professors G. T. F. Hautier, T. P. Smith; Adjunct Assistant Professor M. Fitzpatrick.

To view Astronomy Graduate courses, click here. (p. 977)

To view Physics Graduate courses, click here. (p. 977)

To view Physics and Astronomy Undergraduate requirements, click here. (p. 657)

To view Astronomy Undergraduate courses, click here. (p. 661)

To view Physics Undergraduate courses, click here. (p. 663)

Courses for Graduate Credit

Physics and astronomy courses offered for graduate credit are those numbered 061 or higher. The Department of Physics and Astronomy will allow graduate credit for any course offered by the Departments of Biochemistry, Biological Sciences, Chemistry, Earth Sciences, Engineering Sciences, or Mathematics that receives graduate credit from that department.

Requirements for the Master's Degree (MS)

The general requirements for the master's degree are given in the Graduate Study section of this catalog. These requirements, together with the specific requirements of the Department of Physics and Astronomy indicated below, normally allow completion of the degree in two years. It is expected that graduate students who have not completed the equivalent of the Dartmouth physics major program will do so in their first year of graduate study.

Physics students:

1. Degree credit for eight graduate courses, exclusive of teaching courses. Two of the eight courses may be Graduate Research. At least six of the eight courses should be in physics and astronomy.
2. Credit for at least one term of Supervised Undergraduate Teaching (PHYS 257 (p. 980)).
3. Completion of a culminating experience chosen from the following options:
 - a. Completion of a satisfactory thesis, which must be defended before the MS Thesis Committee in a public forum.
 - b. Significant co-authorship of a publication submitted to a refereed journal or refereed conference proceedings, defended publicly.
 - c. Passing the core competency requirement.

Astronomy students:

1. Degree credit for eight graduate courses, exclusive of teaching courses. Two of the eight courses may be Graduate Research. At least six of the eight courses should be in physics and astronomy.
2. Credit for at least one term of Supervised Undergraduate Teaching (PHYS 257 (p. 980)).
3. Completion of a culminating experience chosen from the following options:
 - a. Completion of a satisfactory thesis, which must be defended before the MS Thesis Committee in a public forum.
 - b. Significant co-authorship of a publication submitted to a refereed journal or refereed conference proceedings, defended publicly.
 - c. Obtaining a Pass on the first year research exam.

Requirements for the Doctor's Degree (PhD)

A student will be admitted to PhD candidacy upon:

Physics students:

1. Receiving credit for six out of the following nine core courses: PHYS 76 (p. 667), PHYS 90 (p. 668) [formerly 91], PHYS 100 (p. 977), PHYS 101 (p.

978), PHYS 103 (p. 978), PHYS 104 (p. 978), PHYS 105 (p. 978), PHYS 106 (p. 978), PHYS 109 (p. 978).

2. Passing the core competency requirement.
3. Presenting a thesis proposal and successfully defending it before an appointed PhD thesis committee, for certification.
4. Passing a departmental review of the student's course record and preliminary research progress.
5. Receiving credit for at least two terms of Supervised Undergraduate Teaching (PHYS 257 (p. 980)) and PHYS 256 (p. 980).

Students must achieve thesis proposal certification by the end of the fall term of their fourth year, in order to remain in good standing. Students who successfully complete these requirements will be admitted to PhD candidacy by the Department.

Astronomy students:

1. Receiving credit for ASTR 115 (p. 977), ASTR 116 (p. 977), ASTR 117 (p. 977), ASTR 118 (p. 977), ASTR 174 (p. 977) and any one physics course numbered 61 or above, and any other courses required by the student's advisory committee. Receiving credit for at least six terms of graduate research.
2. Passing a research exam at the end of their first and second years.
3. Presenting a thesis proposal and successfully defending it before an appointed PhD thesis committee, for certification.
4. Passing a departmental review of the student's course record and preliminary research progress.
5. Receiving credit for at least two terms of Supervised Undergraduate Teaching (PHYS 257 (p. 980)) and PHYS 256 (p. 980).

Students must achieve thesis proposal certification by the end of the fall term of their fourth year, in order to remain in good standing. Students who successfully complete these requirements will be admitted to PhD candidacy by the Department.

The candidate will receive the PhD degree upon

1. Receiving degree credit for at least twelve graduate courses, exclusive of teaching courses. Physics students: Two of the twelve courses may be Graduate Research, and at least two terms of Graduate Research must be completed no later than the second summer in residence. Astronomy students: Six of the twelve courses may be Graduate Research, and at least six terms of Graduate Research must be completed no later than the second summer in residence.

2. Receiving credit for at least two terms of Supervised Undergraduate Teaching (PHYS 257 (p. 980)) and PHYS 256 (p. 980).
3. Completing a dissertation of substantial significance and publishable quality.
4. Successfully defending the dissertation before the PhD Thesis Committee in a public forum.

It is expected that most students will receive the PhD degree by the end of the fifth year of graduate study.

ASTR - Astronomy Graduate Courses

ASTR 115 - Advanced Stellar Astrophysics

Instructor: Astro Visitor

A study of the physical processes in stellar interiors, stellar evolution, and nucleosynthesis. Topics to be covered include big bang nucleosynthesis, the equations of stellar structure, equations of state, opacities, nuclear reactions, energy transport in stars, polytrope models, stellar models, the evolution of stars, and supernovae, white dwarfs and neutron stars.

Prerequisite: Permission of the instructor.

Offered: Winter.

ASTR 116 - Galactic Systems

Instructor: Mutlu-Pakdil

The structure of galaxies and the dynamics of stellar systems. Topics include application of the Boltzmann transport equation to stellar systems, star cluster models, spiral structure, stellar populations, and the classification of galaxies. Active galaxies and their physical processes.

Prerequisite: Permission of the instructor.

ASTR 117 - Observational Galactic Astrophysics

Instructor: Astro Visitor

A survey of the astrophysics of different phenomena in the Milky Way. Topics may include exoplanets, galactic structure and dynamics, galactic chemical populations, stellar remnants, and the formation of stars and planets.

Prerequisite: ASTR 074, or permission of the instructor

Offered: Spring.

ASTR 118 - Observational Cosmology

Instructor: Astro Visitor

The observational determination of the structure of the universe. Determination of the astronomical distance scale, Hubble's law, and measurements of the space distribution

and peculiar motions of galaxies. Statistical treatment of the data. Quasars and gravitational lenses, nucleosynthesis and the cosmic microwave background. Comparison with cosmological models and theories of galaxy formation.

Prerequisite: ASTR 074, or permission of the instructor

Offered: Spring.

ASTR 122 - Special Topics

Instructor: Astro Visitor

Advanced treatment of topics in astronomy.

Offered: Fall.

ASTR 174 - Astrophysics

Instructor: Newton

A survey of the processes which generate radiation detected by astronomers, and how astronomers interpret observations to understand the Universe. Topics include radiative transfer, blackbody radiation, bremsstrahlung, synchrotron radiation, inverse Compton scattering, atomic and molecular spectra. Applications will include emission from neutron stars, accretion disks surrounding black holes, stellar atmospheres, intergalactic gas and the cosmic microwave background.

Prerequisite: PHYS 14 or PHYS 16; and PHYS 19 or PHYS 24 or PHYS 40; and ASTR 2 or ASTR 3 or ASTR 15, or permission of instructor.

Offered: Fall.

PHYS - Physics - Graduate Courses

PHYS 100 - Mathematical Methods for Physicists

Instructor: Boyack

A survey of basic mathematical concepts and tools as relevant to physics applications, with emphasis on finite- and infinite-dimensional linear vector spaces as a unifying framework. Representative topics include: analytic function theory, complex integration and series expansion; basic concepts in linear algebra, linear operators, eigenvalue problems, diagonalization, spectral theorem; systems of ordinary differential equations, operator-valued differential equations; functional spaces and convergence notions, complete orthonormal basis sets; Weierstrass theorem, Fourier series and transforms, Sturm-Liouville systems and orthogonal polynomials, special functions; partial differential equations of mathematical physics, solution by separation of variables, integral transforms, eigenfunction expansions; introduction to Green's function techniques.

Prerequisite: One of ENGS 092, MATH 043, MATH 046 or equivalent with permission of instructor.

Offered: Fall.

PHYS 101 - Classical Mechanics

Instructor: Wright

Lagrangian and Hamiltonian formulation of mechanics, canonical transformations, relativistic mechanics, and continuum mechanics.

Prerequisite: PHYS 044

Offered: Fall.

PHYS 103 - Advanced Quantum Mechanics

Instructor: Viola

Physics 103 is a graduate-level core course that continues the exploration of fundamental concepts and methods of non-relativistic quantum mechanics, as undertaken in earlier courses, while also addressing a number of advanced topics not covered elsewhere. These include continuous and discrete symmetries; permutation symmetry and basics of second quantization; perturbative techniques for time-dependent quantum phenomena, including Dyson, Magnus, and Floquet formalism; adiabatic quantum dynamics and geometric phases — along with subjects relevant to current areas of research, such as quantum measurement theory and open quantum system dynamics.

Prerequisite: PHYS 090 or equivalent.

Offered: Spring.

PHYS 104 - Statistical Mechanics I

Instructor: Ramanathan

Fundamentals of equilibrium statistical mechanics, with emphasis on non-interacting classical and quantum many-body systems. Statistical interpretation of thermodynamics from ensemble theory, with selected applications.

Prerequisite: PHYS 043, PHYS 044, PHYS 90, or equivalent. PHYS 100 recommended.

Offered: Spring.

PHYS 105 - Electromagnetic Theory I

Instructor: Liu

Potential theory of electrostatics, magnetostatics, and steady currents. Maxwell's equations, gauge transformations, and conservation laws.

Prerequisite: PHYS 041

Offered: Winter.

PHYS 106 - Electromagnetic Theory II

Instructor: Onofrio

Solutions of the homogeneous and inhomogeneous wave equations, retarded potentials, covariant formulation.

Radiation, radiation reaction, and dynamics of charged particles. Scattering and dispersion.

Prerequisite: PHYS 066 and PHYS 105.

Offered: Spring.

PHYS 107 - Relativistic Quantum Field Theory

Instructor: Walker

Spontaneous symmetry breaking and the Higgs mechanism. The Weinberg-Salam model. Path integral quantization of scalar fields and functional formalism. The effective action and the effective potential. Divergences and renormalization of field theories. Finite temperature field theory. Symmetry restoration at high temperatures.

Prerequisite: PHYS 101 and PHYS 103

Offered: Winter.

PHYS 108 - Fluid Mechanics

Theory of fluid motion. Kinematics of flow fields. Viscous and ideal flows. Shear flows, hydrodynamic stability, transition, and turbulence. Gas dynamics and shocks. Boundary layers. Rotating fluids, geophysical flows. Thermal convection and conduction. Waves.

Prerequisite: PHYS 101, or permission of the instructor.

PHYS 109 - Statistical Mechanics II

Instructor: Viola

Statistical mechanics of interacting classical and quantum many-body systems, collective phenomena and phase transitions. Fundamentals of non-equilibrium statistical mechanics, the approach to equilibrium, transport processes, classical and quantum open systems.

Prerequisite: PHYS 104, PHYS 103 recommended

Offered: Fall.

PHYS 110 - Methods in Applied Mathematics II

Continuation of Physics 100 with emphasis on variational calculus, integral equations, and asymptotic and perturbation methods for integrals and differential equations. Selected topics include functional differentiation, Hamilton's principle, Rayleigh-Ritz method, Fredholm and Volterra equations, integral transforms, Schmidt-Hilbert theory, asymptotic series, methods of steepest descent and stationary phase, boundary layer theory, WKB methods, and multiple-scale theory.

Prerequisite: PHYS 100, or equivalent

Cross-Listed as: ENGS 200

PHYS 111 - Plasma Kinetic Theory

Statistical mechanics and kinetic theory of plasmas. Transport and thermal relaxation phenomena. Microscopic

foundations of a fluid description. Waves and instabilities, linear and nonlinear. Emission, absorption, and scattering of electromagnetic radiation.

Prerequisite: PHYS 068, and preferably PHYS 106, or permission of the instructor

PHYS 113 - Microscopic Theory of Solids

Instructor: Boyack

Microscopic theory of electron energy bands in solids; vibrational magnetic and electronic elementary excitations. Applications to classical and quantum transport, magnetism, and superconductivity.

Prerequisite: PHYS 073 and PHYS 090, or permission of the instructor. PHYS 103 recommended

Offered: Winter.

PHYS 114 - General Relativity and Cosmology

Prerequisite: Permission of the instructor.

PHYS 115 - Magnetohydrodynamics

Instructor: Mahlmann

The fluid description of plasmas and electrically conducting fluids including magnetohydrodynamics and two-fluid fluid theory. Applications to laboratory and space plasmas including magnetostatics, stationary flows, waves, instabilities, and shocks.

Prerequisite: PHYS 068 or equivalent, or permission of the instructor

Cross-Listed as: ENGS 152

Offered: Spring.

PHYS 116 - Quantum Information Science

Instructor: Whitfield

An introduction to some of the active research areas on quantum information science, from a physics perspective. While the final choice and balance will be adjusted to actual demand and interest, special emphasis will be devoted to: Quantum algorithms for efficient search, factoring, and quantum simulation; theory and applications of entanglement; methods for quantum control and error correction; physical implementations of quantum information processing.

Prerequisite: PHYS 042 and PHYS 075, or PHYS 090, or permission of the instructor.

Offered: Spring.

PHYS 118 - Computational Plasma Dynamics

Instructor: Mahlmann

Theory and computational techniques used in contemporary plasma physics, especially nonlinear plasma

dynamics, including fluid, particle and hybrid simulation approaches, also linear dispersion codes and data analysis. This is a "hands-on" numerical course; students will run plasma simulation codes and do a significant amount of new programming (using Matlab).

Prerequisite: PHYS 068 or equivalent with ENGS 091 or equivalent recommended, or permission of the instructor.

Cross-Listed as: ENGS 153

Offered: Winter.

PHYS 120 - Nonlinear Systems

Prerequisite: ENGS 100 or equivalent.

PHYS 121 - Seminar

Study and discussion in a current area of physics or astronomy.

PHYS 122 - Special Topics

Advanced treatment of topics in physics and in astronomy.

PHYS 123 - Optics

The physical principles and engineering applications of optics, with an emphasis on optical systems. Geometric optics: ray tracing, first-order analysis, imaging, radiometry. Wave optics: polarization, interference, diffraction, Fourier optics. Sources and detectors. Fiber optic systems.

Identical to ENGS 123.

Prerequisite: ENGS 023 or PHYS 041, and ENGS 092 or equivalent

Cross-Listed as: ENGS 123

PHYS 124 - Optical Devices and Systems

Identical to, and described under, ENGS 124

Prerequisite: ENGS 023 or PHYS 041

Cross-Listed as: ENGS 124

PHYS 126 - Semiconductor Theory and Devices

Identical to, and described under, ENGS 122.

Prerequisite: ENGS 024 and ENGS 032 or equivalents

Cross-Listed as: ENGS 122

PHYS 127 - Reading Course

Instructor: Staff

Advanced graduate students may elect a program of independent reading.

Offered: Fall, Spring, Summer, Winter.

PHYS 128 - Methods of Materials Characterization

Identical to, and described under, ENGS 133.

Prerequisite: ENGS 24 or permission

Cross-Listed as: ENGS 133 and CHEM 137

PHYS 129 - Enterprise Experience Internship

Practical training experience through a full-time internship at an institution outside of the Dartmouth College campuses (Lebanon and Hanover). The goal of this course is to provide students with real-world, hands-on experience in a field directly related to their PhD research, by engaging with existing enterprises through internship during graduate school. Such experience will expose students to diverse career opportunities and enhance their research during graduate school, by providing them with lead-time to focus and network in a field of interest prior to completion of their PhD. In order to obtain credit, at the end of the internship, students must submit a written report to their PhD committee and the Physics and Astronomy department's graduate curriculum and policy committee. At the discretion of their committee, they may also be requested to make an oral presentation on the internship project open to members of the Physics and Astronomy department.

This course may be taken one time, though under special circumstances, a student can petition to take a second internship. This course is counted as a graduate research course.

Prerequisite: Approval of their Thesis Advisor (primary mentor), Thesis Advisory Committee (if in place at the time), and Graduate Curriculum Committee prior to term of enrollment.

Offered: Fall, Spring, Summer, Winter.

PHYS 137 - Graduate Research I: Level I

Part time (one credit) thesis research under the guidance of a staff member. Open to candidates for the M.S. degree and Ph.D. students before admission to candidacy.

Offered: Fall, Spring, Summer, Winter.

PHYS 138 - Graduate Research I: Level II

Part time (two credits) thesis research under the guidance of a staff member. Open to candidates for the M.S. degree and Ph.D. students before admission to candidacy.

Offered: Fall, Spring, Summer, Winter.

PHYS 139 - Graduate Research I: Level III

Full time (three credits) thesis research under the guidance of a staff member. Open to candidates for the M.S. degree and Ph.D. students before admission to candidacy.

Offered: Fall, Spring, Summer, Winter.

PHYS 256 - Instruction in Teaching for Graduate Students

Instructor: Walker

Two-term, one credit course designed for incoming graduate students who will serve as graduate teaching assistants in the department. The course will provide students with resources and experiences directly relevant to typical teaching assistant duties, including public speaking, lab supervision, teacher/student relations and grading. This course also provides training in professional research conduct, including topics in professionalism, authorship, mentoring, data collection, and rigor and reproducibility in the practice of science. Required of entering Ph.D. students. This course is not open for credit to undergraduates.

Offered: Fall, Winter.

PHYS 257 - Supervised Undergraduate Teaching

Tutoring, laboratory teaching, student evaluation, and leading recitation classes, under the supervision of a faculty member.

Prerequisite: PHYS 256

Offered: Fall, Spring, Summer, Winter.

PHYS 297 - Graduate Research II: Level I

Part time (one credit) thesis research under the guidance of a staff member. Open to candidates for the Ph.D. degree.

Offered: Fall, Spring, Summer, Winter.

PHYS 298 - Graduate Research II: Level II

Part time (two credits) thesis research under the guidance of a staff member. Open to candidates for the Ph.D. degree.

Offered: Fall, Spring, Summer, Winter.

PHYS 299 - Graduate Research II: Level III

Full time (three credits) thesis research under the guidance of a staff member. Open to candidates for the Ph.D. degree.

Offered: Fall, Spring, Summer, Winter.

Quantitative Biomedical Sciences

Quantitative Biomedical Sciences Doctoral Degree Program

Director: Rob Frost, PhD

Associate Director: Anne Hoen, PhD

Director of Academic & Student Affairs: Kristine A. Giffin, PhD

Program Coordinator: Amanda Helali, MA

The Doctoral Degree (Ph.D.) Program in Quantitative Biomedical Sciences (QBS)

Modern biomedical research increasingly depends on both **multidisciplinary** and **interdisciplinary** approaches. While multidisciplinary work draws from distinct scientific disciplines to address research questions, interdisciplinary research integrates methods and concepts across these disciplines to tackle complex biomedical challenges in innovative ways.

A data explosion resulting from advances in technologies such as next-generation sequencing, mass spectrometry, single-cell genomics, and electronic health records has generated a significant demand for researchers trained in **quantitative disciplines such as bioinformatics, biostatistics and epidemiology**. Those best positioned to lead this work are cross-trained in multiple quantitative disciplines allowing them to take a truly interdisciplinary approach to solving complex biomedical problems.

Through rigorous training and interdisciplinary collaboration, the QBS doctoral program prepares students for impactful careers at the intersection of biomedical research and quantitative science.

Learning Outcomes

QBS PhD graduates will be able to:

1. Demonstrate comprehensive and foundational knowledge of the core concepts and principles within the field of study
 2. Critically analyze and interpret relevant, scholarly literature relevant to the field
 3. Integrate and synthesize theoretical and empirical ideas across the field of study
 4. Apply the research methods, analytical tools, and techniques essential to scholarly inquiry in the field
 5. Assess and critique empirical data and research findings using appropriate methodological framework
 6. Develop and effectively communicate a research proposal through clear, well-structured written and oral presentation
- Required Coursework
- QBS 700 Responsible and Ethical Conduct of Research (p. 993)
 - QBS 110 Integrative Biomedical Sciences Seminar (0.5 unit) (p. 984)
 - QBS 196: Supervised Teaching In QBS (p. 991)
 - QBS 270: QBS First Year Journal Club (p. 992)(Fall, Winter, & Spring)

- QBS 700 Responsible and Ethical Conduct of Research (p. 993)
- 5 additional approved journal clubs
- 3.5 units of approved electives

Core Courses

6 units from the following core courses with at least 1 unit in each area

Bioinformatics

Students without bioinformatics backgrounds are encouraged to enroll in QBS 146, which looks broadly at computational tools and bioinformatic applications. Those with advanced bioinformatics experience can alternatively enroll in Introduction to Statistical Genetics, QBS 148.

- QBS 145 Computational Immunology (p. 988)
- (p. 988)QBS 146 Foundations of Bioinformatics I (p. 988)
- (p. 988)QBS 148 Introduction to Statistical Genetics (p. 989)

Biostatistics

The QBS biostatistics curriculum is designed to start with either 119 or 120 in the Fall term followed by 121 in Winter. After 121, students will have sufficient background for the later QBS biostatistics and machine learning courses (108, 122, 124, 126, 177). However, students are encouraged to take 120 vs. 119 if they want to enroll in QBS 122 or 124, given the more mathematical/theoretical nature of these classes. Students who have recently taken a graduate-level equivalent to 119/120 or 121 may opt to skip these classes and directly enroll in more advanced courses (permission of the advanced course instructor is required).

- QBS 108 Machine Learning (p. 982)
- QBS 119 Foundations of Biostatistics I: Applied Biostatistics (p. 984)
- QBS 120 Foundations of Biostatistics I: Statistical Theory for the Quantitative Biomedical Sciences (p. 984)
- QBS 121 Foundations of Biostatistics II: Regression Modeling (p. 985)
- QBS 122 Foundations of Biostatistics III: Modeling Complex Data (p. 985)
- QBS 124 Advanced Biomedical Data Analysis (p. 986)
- QBS 126 Analysis of Densely Collected Longitudinal Data (p. 986)
- QBS 177 Methods of Statistical Learning for Big Data (p. 989)

Epidemiology

Students who have never taken a graduate-level course in epidemiology should first take QBS 130. Students who have taken 130 or equivalent may take 131, 132, 133, 136 and/or 137. 136 and 137 should not be the only epidemiology coursework taken to meet core course requirements.

- QBS 130 Foundations of Epidemiology I: Theory and Methods (p. 986)
- QBS 131 Foundations of Epidemiology II: Theory and Methods (p. 986)
- QBS 132 Molecular Biologic Markers in Human Health Studies (p. 987)
- QBS 133 Clinical Epidemiology (p. 987)
- QBS 136 Applied Epidemiological Methods I (0.5 unit) (p. 987)
- QBS 137 Applied Epidemiological Methods II (0.5 unit) (p. 988)

Quantitative Biomedical Sciences

QBS PhD Courses

QBS 101 - Foundations of Programming for Data Scientists

Instructor: Dr. Christian Darabos

This course is designed for graduate students with little to no prior programming experience who are eager to understand computational approaches to solving problems. This course will equip you with the foundational skills needed to excel in computational data science.

Course Highlights:

- **Foundations of Programming:** Learn the essential concepts of programming, including variables, expressions, flow control, basic algorithms, and data frames.
 - **Computational Data Science:** Get comfortable with Python, Bash scripting, and High-Performance Computing (HPC) environments.
 - **Hands-On Learning:** Engage in live code examples and in-class exercises that bring ideas to life without getting bogged down by computer idiosyncrasies.
- Practical Learning:**

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll gain practical experience with:

- **Python:** Basics of programming, using notebook environments (Jupyter Notebooks).
- **Bash Scripting:** Command line input, file input/output, and mixing languages with Python.
- **High-Performance Computing (HPC):** Introduction to Dartmouth's HPC environments like Andes, Polaris, and Discovery.

Course Experience:

Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week includes:

- Live coding sessions.
- In-class exercises that reinforce your learning.
- Mock Tech Interviews (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(1 unit)

Prerequisite: None

Cross-Listed as: HSE 101

Offered: Fall, Summer.

QBS 108 - Machine Learning

Instructor: Dr. Saeed Hassanpour & Dr. Indrani Bhattacharya

This course provides a comprehensive introduction to machine learning methods and techniques. Various machine learning concepts and methods, such as computer vision, natural language processing, and deep learning, will be described and discussed. The emphasis of this course will be providing the required background and working knowledge of the machine learning methodology to apply these techniques on new or existing research or data science problems. Through multiple project assignments,

this course will provide students with the experience on the application of machine learning techniques to solve real-world complex problems, such as those in the biomedical domain.

(1 unit)

Prerequisite: Coursework: Calculus, Linear Algebra, Basic knowledge of Probability and Statistics. Programming: Intermediate proficiency in Python.

Offered: Spring.

QBS 101.1 - Intermediate Programming for Data Scientists

Instructor: Dr. Christian Darabos

Elevate your programming skills and make your research more reproducible, reusable, and maintainable. This course designed for graduate students who already have foundational programming knowledge and are eager to advance their expertise.

Course Highlights:

- **Object-Oriented Programming (OOP):** Dive deeper into OOP concepts, enhancing your ability to design robust, scalable software.

- **Reproducible Research:** Apply OOP and other best practices for ensuring your research can be easily replicated and built upon by others.

- **Code Reusability and Maintainability:** Master techniques that will make your code cleaner, more efficient, and sustainable, particularly in cloud environments

Practical Learning:

This course emphasizes hands-on learning through live coding examples and interactive in-class exercises. You'll get practical experience with:

- **Python:** Advanced programming techniques and libraries.

- **Containerization (Docker):** Streamline your development process and ensure consistency across different computing environments.

- **Bash Scripting:** Automate tasks and enhance your productivity.

- **High-Performance Computing (HPC):** Leverage powerful computing resources to handle complex data science tasks.

- Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

Course	Experience:
Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:	Engage with the material in a dynamic classroom setting where theoretical concepts are brought to life through practical application. Each week, you will:

- Participate in live coding sessions.

- Complete in-class exercises that reinforce your learning.

- Take part in a Mock Tech Interview (MTI) designed to prepare you for industry and academic job and internship processes, focusing on coding and data science challenges.

Requirements:

To fully benefit from this course, it is recommended that you bring a laptop or tablet with a full keyboard to each lecture. This will allow you to follow along with the coding exercises and actively participate in the hands-on components of the class.

(0.5 unit)

Prerequisite: QBS 101

Cross-Listed as: HSE 101-1

Offered: Winter.

QBS 102 - Scientific Writing

Instructor: Dr. Erika Moen

Successful scientists are effective and compelling writers. This holds true for careers within and outside of academia, including but not limited to industry, non-profits, think tanks, and consulting firms. Effective scientific writing is

important to distill complex analyses, and the series of decisions that guided those analyses, into a compelling story that the reader can clearly understand. Often that audience includes smart people that may not be experts in your field. Thus, writing must be clear and comprehensive, yet focused on the main topic so that the audience remains engaged.

This course is to provide students with a skill set for effective scientific writing. Students will have multiple opportunities to practice their skills during in-class activities and out-of-class assignments. The students will apply these skills to a qualifying exam proposal or external grant proposal they are actively working on.

The course will include minimal structured lectures, and most content will be delivered via in-class active learning activities. Peer-review will be a major component of the course. Throughout the course, students will have multiple opportunities to learn and practice the skills needed to verbally communicate scientific findings.

(0.5 unit)

Prerequisite: Instructor permissions required. Preference given to 2nd and then 1st year QBS PhD students.

Offered: Winter.

QBS 110 - Integrative Biomedical Sciences Seminar

Instructor: Dr. Kristine Giffin & QBS Faculty

This required pre-term course for first-year QBS PhD students offers an overview of the diverse landscape of biomedical research within the Quantitative Biomedical Sciences program. Designed to provide a broad perspective on how quantitative methods are applied across various disciplines, the course introduces students to the wide range of research questions being explored by QBS faculty. Each session features brief presentations from faculty members highlighting their current research and potential lab rotation opportunities. This exposure is intended to help students make informed decisions about their first-year lab rotations. Students will have the opportunity to engage more deeply with faculty research during the fall term in **QBS 270: First-Year QBS PhD Journal Club**.

(0.5 unit)

Prerequisite: This course is open only to first-year QBS PhD students

Offered: Fall.

QBS 119 - Foundations of Biostatistics I: Applied Biostatistics

Instructor: Dr. Jennifer Emond

In this course, students will learn foundational topics of biostatistics including random variables and probability distributions, sampling distributions, the central limit theorem, statistical estimation and hypothesis testing, and power and sample size calculations. The course will include bivariate parametric and non-parametric statistical testing procedures including simple linear regression. Content also includes two-way ANOVA and foundational topics in classification performance metrics (e.g., sensitivity, specificity, AUC). Classwork will prominently feature active learning activities. Course material will use the R Language for Statistical Computing.

The course is intended for students who need a strong foundation in statistical thinking to pursue more advanced applied biostatistical coursework in multivariable statistical modeling. Students seeking to understand the mathematical foundations of statistical theory should enroll in QBS 120.

(1 unit)

Prerequisite: N/A

Cross-Listed as: HSE 119

Offered: Fall.

QBS 120 - Foundations of Biostatistics I: Statistical Theory for the Quantitative Biomedical Sciences

Instructor: Dr. Robert Frost

This is a time-intensive graduate-level course in mathematical statistics designed to teach the fundamental knowledge of statistical theory required to read and, with further study, contribute to the statistical methodology literature. An in depth overview of statistical estimation and hypothesis testing will be provided, including the method of least squares, maximum likelihood methods, asymptotic methods, and correction for multiple comparisons. The basic elements of statistical design and sample size calculations will be introduced. Resampling strategies will be discussed in the context of the bootstrap, as well as simulation as a tool for statistical research. The emphasis will be on theory used in modern applications in biomedical sciences, including genomics, epidemiology, and clinical and health services research. The statistical program language R will be leveraged for computational examples, problem sets and exams.

(1 unit)

Prerequisite: Dartmouth Coursework: No specific Dartmouth courses are required. See syllabus for specific prerequisites. QBS 120 is a fast-paced, calculus-based graduate mathematical statistics course with a strong theoretical component. It is assumed that students are comfortable with multivariate calculus, mathematical proofs, linear algebra and R programming. A strong internal motivation to learn the material and complete challenging assignments is essential to success in this class. Students should expect to spend 10-15+ hours per week outside of class. Students are strongly encouraged to review the content and level of theory in the class textbook (Rice, see below) prior to registering for the class. Versions of prior problem sets (and solutions) are also available on request to help students assess the class workload, theoretical component and assumed mathematical and computational background.

Cross-Listed as: HSE 120

Offered: Fall.

QBS 121 - Foundations of Biostatistics II: Statistical Regression

Instructor: Dr. Todd MacKenzie and Dr. Tor Tosteson

We cover the theory and applications of statistical regression, as practiced in biomedical research. We present statistical inference (estimation and hypothesis testing) for linear models, generalized linear models (e.g. logistic and Poisson regression), longitudinal models for repeated measurements, and models for times-to-event (survival analysis). The course emphasizes the primary goals of regression, which are (i) prediction and (ii) causal inference. It also introduces penalized regression for large numbers of predictors and methods for missing data in regression. The statistical software R is used for applications.

(1 unit)

Prerequisite: QBS 120 or QBS 119. Calculus, linear algebra. Programming: Intermediate proficiency in R.

Cross-Listed as: HSE 121

Offered: Winter.

QBS 122 - Foundations of Biostatistics III: Modeling Complex Data

Instructor: Dr. James O'Malley

This course follows QBS 120 (Biostatistics I: Theoretical Foundations) and QBS 121 (Biostatistics II: Modeling). The first module of the course extends standard regression models to analyze data when the data are statistically dependent. This component encompasses clustered, multi-level, longitudinal and other forms of structured data and will focus on hierarchical (mixed-effect) modeling

approaches. The consideration of random effects and their conditional distribution given that data links to the final two modules. Bayesian methodology is carefully developed and compared to the classical (frequentist) approach. Bayesian statistical methods are a feature of this course due to their affinity for solving challenging problems and their ubiquity across modern statistical applications. A variety of applications in which Bayesian methods are naturally suited are considered. Bayesian computation via Markov-chain Monte- Carlo (MCMC) is also developed and illustrated. The course concludes with the network analysis module. This includes visualization and summarization of networks; models of networks; and models of peer effects and social influence processes. The techniques and methods developed in the two prior modules are further illustrated in this module.

Learning Objectives

1. Become adept at recognizing when data has a nested, cross-classified, longitudinal or multivariate structure and familiar with statistical techniques for analyzing such data
2. Gain a strong understanding of the fundamentals of Bayesian Analysis and develop an ability to perform Bayesian analyses
3. Be able to conduct a social network analysis from the grassroots, encompassing specification of the research question, representation of data, choice of statistical analysis, implementation of analysis and visualization of results

(1 unit)

Prerequisite: QBS 120 and QBS 121 or, with permission of the instructor, QBS 119 and QBS 121. The course has a strong "hands-on" emphasis on analyzing data while consolidating ideas through relevant methodological and intuitive insights. Linear algebra, multivariate calculus, statistics, probability and basic computer programming with an emphasis on mathematical/statistical programming. Programming: Intermediate proficiency in R.

Cross-Listed as: HSE 122

Offered: Spring.

QBS 123 - Biostatistics Consulting Lab

Instructor: Dr. Todd MacKenzie & Dr. Tor Tosteson

This is a practicum that gives students experience in biostatistics consulting. Students will collaborate with clinician and other investigators to address clinical, translational and health services questions with the guidance of a faculty biostatistician.

(0.5 unit)

Prerequisite: QBS 121, Permission of Instructor.

Programming: Intermediate proficiency in R, Data Wrangling, Data Visualization are recommended. Open only to QBS PhD and MS of Epidemiology, Health Data Science, and Medical Informatics students, unless program and instructor permission is granted

Cross-Listed as: HSE 123

Offered: Fall, Spring, Summer, Winter.

QBS 124 - Advanced Biomedical Data Analysis

Instructor: Dr. Eugene Demidenko

This course offers innovative and advanced methods and techniques for biomedical data analysis, often overlooked in the traditional training practices, such as graphics animation, spatial statistics and disease mapping via kernel density estimation, discriminant analysis, logistic regression, and PCA for binary classification via ROC curve and optimal threshold analysis, PCA-based objects/subjects ranking, optimal number of clusters, estimation of dose-response relationships in pharmacology and toxicology, tumor growth analysis, statistical identification of drugs' synergy, nonlinear regression, D-value as an alternative to P-value, and others.

I follow the saying: "Examples are the expressway to knowledge." We will be working with large and diverse real-life data sets such as the hotspot identification of the lung cancer rate in New Hampshire, the toenail arsenic distribution, TCGA gene clustering, prediction of the absolute marathon time world record, college student admission data, city crime, T-cell counts for COVID-19 diagnosis, underage drinking, correlation heatmap animation for stock prices and bones correlation in the Goldman osteometric dataset, nonparametric regression for Forbes Worlds's biggest companies dataset, etc.

We will be using my book "Advanced Statistics with Applications in R" at www.eugened.org

(1 unit)

Prerequisite: QBS 121

Cross-Listed as: HSE 124

Offered: Spring.

QBS 126 - Analysis of Densely Collected Longitudinal Data

Instructor: Dr. Nicholas Jacobson

Rapid advances in technology has increasingly allowed for the collection of dense longitudinal data (i.e. data collected using many repeated measurements), and this type of data

now abounds within biomedical and social science research (e.g., heart rate sensors, accelerometers, electronic medical record patient visits). A large variety of tools have emerged to model and predict dynamics that evolve over the course of time. The current course will discuss tools focusing on (1) explainability and theory-testing of dynamic processes with applications towards causal inference (e.g. multilevel models, vector autoregressive models, frequency domain analysis, state-space models, person-specific data models, dynamical systems modeling, varying-coefficient models, continuous time models) and (2) maximizing predictive performance (e.g. unique considerations in cross-validation with time-series data, time-series feature engineering, nomothetic and person-specific machine learning models, recurrent neural networks). Given the breadth of the tools in this field, the focus of this course will be primarily applied. Students will need to utilize both R and Python for this course.

(1 unit)

Prerequisite: QBS 120 and QBS 121 or, with permission of the instructor, QBS 119 and QBS 121

Cross-Listed as: HSE 126

Offered: Spring.

QBS 130 - Foundations of Epidemiology I: Theory and Methods

Instructor: Dr. Diane Gilbert-Diamond (25 Fall), Dr. Caitlin Howe (25 Summer), both Fall in 26

This is the first of a two course sequence of graduate level epidemiology (Foundations of Epidemiology I and II). The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and prepare students for conduct of epidemiology research. Design of investigations seeking to understand the cause of human disease, disease progression, treatment and screening methods include clinical trials, cohort studies, case-cohort, case-case, nested case-control and case-control designs. Concepts of incidence rates, attributable rate and relative rate, induction and latent periods of disease occurrence, confounding, effect modification, misclassification, and causal inference will be covered in depth.

(1 unit)

Prerequisite: None for graduates. Biol 029 for undergraduates. Permission of Instructor

Cross-Listed as: BIOL 72, HSE 130

Offered: Fall, Summer.

QBS 131 - Foundations of Epidemiology II: Theory and Methods

Instructor: Dr. Megan Romano

This graduate-level course is the second in a two-part sequence. The two courses are designed to teach the underlying theory of epidemiologic study designs and analysis and to prepare students to conduct epidemiologic research. Expanding upon concepts covered in Foundations of Epidemiology I, students develop an in-depth understanding of advanced concepts related to confounding (including causal diagrams), learn how to interpret and critically analyze the biomedical primary literature, and gain experience in epidemiological study design. Concepts related to weight of evidence and systematic review, outbreak investigation, and assessment of the effects of policies on health are also covered.

(1 unit)

Prerequisite: QBS 130/BIOL 072. Permission of Instructor

Cross-Listed as: BIOL 73, HSE 131

Offered: Winter.

QBS 132 - Molecular Biologic Markers in Human Health Studies

Instructor: Dr. Lucas Salas

Epidemiologists are rapidly evolving from traditional observational data collection to incorporating molecular markers of exposure, disease, and susceptibility. As technologies advance, integrating molecular targets adds complexity to epidemiological study designs. This course provides a comprehensive overview of biomarkers applications in molecular epidemiology.

The first half of the course covers historical background, basic definitions, and principles, including the use of biomarkers, statistical and bioinformatic challenges, identifying susceptible populations, exposure assessment, dose-response, molecular classification of phenotypes, and evaluating study compliance and efficacy.

The second half focuses on applications in various fields, such as cancer, neurodegenerative diseases, infectious diseases, and cardiovascular diseases, with topics selected based on student interests. Each week, students will explore the challenges and tools in molecular epidemiology. They will take turns to discuss subjects such as biomarker study designs, biomarker validation, or biobanking. Students are encouraged to choose topics relevant to their research.

(1 unit)

Prerequisite: No prerequisites are needed for this course; however, the students are encouraged to co-enroll in QBS 130.

Cross-Listed as: HSE 132

Offered: Fall.

QBS 133 - Clinical Epidemiology

Instructor: Dr. Meghan Muse

Evidence-based medicine is the cornerstone of contemporary clinical practice. Clinical epidemiology aims to quantitatively evaluate medical interventions and technology and advance prediction and decision support tools to guide medical practice. The principles, tools and statistical approaches of clinical epidemiology are widely applicable in academic research, healthcare, and industry settings. In this course, students will learn to design and analyze both randomized and observational studies evaluating the efficacy of medical interventions, therapies, devices, screening programs and tests in order to understand therapeutic efficacy, therapeutic safety, and disease prognosis. Additional topics include the construction and validation of clinical risk prediction models (including discrimination, calibration, and reclassification), synthesis of quantitative data for medical decision making (such as meta-analysis), and cost-effectiveness analysis. The course draws on examples from pharmacoepidemiology, pharmacogenomics, real problems faced by medical professionals, and novel examples of clinical research.

(1 unit)

Prerequisite: QBS 130: Foundations of Epidemiology I or instructor permission

Cross-Listed as: HSE 133

Offered: Spring.

QBS 136 - Applied Epidemiological Methods I

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, and addressing confounding and effect modification within the context of a range of epidemiological study designs. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: QBS 130 (co-requisite) or permission of the instructor

Cross-Listed as: HSE 136

Offered: Fall.

QBS 137 - Applied Epidemiological Methods II

Instructor: Dr. Anne Hoen

Computer laboratory-based course designed to provide hands-on experience performing epidemiological data analyses relevant to the theoretical/conceptual material presented in Foundations of Epidemiology I and II. Students will complete laboratory exercises using epidemiological study data sets that guide them through descriptive data analyses, hypothesis testing, modeling, and meta-analysis approaches. Emphasis will be placed on interpretation of data and on learning to develop figures, tables and text for scientific communication. Analyses will be performed in the open-access programming language R.

(0.5 unit)

Prerequisite: QBS 136 or permissions of the instructor

Cross-Listed as: HSE 137

Offered: Winter.

QBS 139 - Advanced Health Services Research

Instructor: Dr. Erika Moen

This course will develop student analytic competencies to the level necessary to conceptualize, plan, carry out, and effectively communicate small research projects in health services or epidemiology. Lectures, demonstrations, and labs will be used to integrate and extend methods introduced in other QBS and TDI courses. The students will leverage synthetic electronic health record data provided by the Analytics Institute at Dartmouth-Hitchcock and publicly available data in classroom lab exercises and course assignments. Many of the labs build on one another, and the aim is that the skills developed in the labs will assist the students with their own student-led projects. The instructors will mentor students as they develop their own analytic projects. Practical skill areas include programming in R, developing an analytic workflow, data visualization, and data structure and management. The main goal of the course is to firmly ground students in the scientific process of observational research.

(1 unit)

Prerequisite: For QBS students: QBS 130, QBS 121; For MPH students: PH 141

Cross-Listed as: QBS139, PH 147

Offered: Spring.

QBS 140 - Decision & Cost Effectiveness Analysis

Instructor: Dr. Anna Tosteson & Dr. James Stahl

This course covers the fundamental principles and mechanics of decision analysis and cost-effectiveness

analysis. Topics covered in the course include basics of probability (including Bayes' Theorem), structuring decision problems as decision trees and Markov models, components of preference (value preference, time preference, and risk preference), valuing multidimensional outcomes, evaluating decision trees, sensitivity analysis, value of information, and basic principles of cost-effectiveness analysis. Weekly problem sets are also used to reinforce the concepts presented in class. The course has a weekly lab that involves the use of decision analysis software to reinforce concepts presented in class. Labs are also used for development, progress review and discussion of small group decision analysis projects, which culminate in formal presentations the last week of class.

(1 unit)

Prerequisite: PH100, PH139, PH140 or permission of Instructor. Programming language: Students learn TreeAge Software.

Cross-Listed as: PH 121, HSE 140

Offered: Spring.

QBS 145 - Computational Immunology

Instructor: Dr. Li Song & Dr. Kenneth Hoehn

This course will introduce students to fundamental concepts and the latest techniques for using computational methods to analyze immunological data. After a brief introduction to immunology, the course will move to its primary focus of analyzing sequencing data from immune cells. The first part will cover the bulk RNA-seq data analysis, including cell-type deconvolution. The second part is for single-cell RNA-seq analysis, such as cell type discovery, differentially expressed gene (DEGs) analysis, and trajectory analysis. The third part is about immune repertoire analysis, including lineage tree construction. The fourth part of the course covers advanced topics, such as spatial RNA-seq analysis. In the last a few sessions, we will see how the techniques learned from the course can be applied to the studies of infectious diseases, autoimmune disorders, and cancers.

(1 unit)

Prerequisite: QBS146 Introduction to Bioinformatics I or permission of instructors

Offered: Fall.

QBS 146 - Foundations of Bioinformatics I

Instructor: Dr. Aaron McKenna

The goal of computational biology is to catalog and model the information within living systems. In this class, we use tools developed in statistics, computer science, and biology to explore how living systems encode and process information to generate complex structures and interact with the world at large. We'll review key conceptual advances and implement a number of core computational algorithms, including Gibbs sampling, clustering, and hidden Markov models, all of which we run on biological data.

(1 unit)

Prerequisite: Basic knowledge of Python programming is helpful but not required.

Cross-Listed as: GENE 146, HSE 146

Offered: Winter.

QBS 147 - Genomics: From Data to Analysis

Instructor: Dr. Olga Zhaxybayeva

Massive amounts of genomic data pervade 21st century life science. Physicians now assess the risk and susceptibility of their patients to disease by sequencing the patient's genome. Scientists design possible vaccines and treatments based on the genomic sequences of viruses and bacterial pathogens. Better-yielding crop plants are assessed by sequencing their transcriptomes. Moreover, we can more fully explore the roots of humanity by comparing our genomes to those of our close ancestors (e.g., Neanderthals, Denisovans). In this course, students will address real-world problems using the tools of modern genomic analyses. Each week students will address a problem using different types of genomic data, and use the latest analytical technologies to develop answers. Topics will include pairwise genome comparisons, evolutionary patterns, gene expression profiles, genome-wide associations for disease discovery, non-coding RNAs, natural selection at the molecular level, and metagenomic analyses.

(1 unit)

Prerequisite: Permission of instructor required.

Cross-Listed as: BIOL 47/147, EEES 147, HSE 147

Offered: Fall.

QBS 148 - Introduction to Statistical Genetics

Instructor: Dr. Siming Zhao

This course is designed as an introduction to statistical genetics/computational biology. It reviews the key statistical concepts and methods relevant to statistical genetics, discusses various topics that have significant statistical components in genetics and genomics. It serves as the entry point to several areas, including GWAS and post GWAS analysis, functional genomics, statistical modeling and inference.

(1 unit)

Prerequisite: QBS 119 , QBS 120

Cross-Listed as: HSE 148

Offered: Spring.

QBS 177 - Methods of Statistical Learning for Big Data

Instructor: Dr. Jiang Gui

This course provides an introduction to algorithms used in data science with applications to biomedical and health data science. The goal of this course is to present an overview of many of the approaches used for big data focusing on analytical methods and algorithms. The course assumes that students have some knowledge of R. Students will be provided with 2 large data sets. Lectures on data reduction, classification, and optimization will request students complete homework for these datasets. Special attention will be given to students' active learning by programming in a statistical software package R.

(1 unit)

Prerequisite: QBS 119 or QBS 120, or permission of instructor. Co-requisite QBS 121.

Cross-Listed as: MATH 177, HSE 177

Offered: Winter.

QBS 180 - Data Visualization

Instructor: Dr. Ramesh Yapalparvi

Biomedical and health data visualization is an important and necessary step of preliminary statistical analysis. "A picture is worth a thousand words" is the impetus of this course. This course will teach best practices for visualizing data, including exploratory statistics and effective communication of statistical analysis. Data visualization is a key component that all data scientists' needs to be fluent in. Students will become competent users of Tableau, R graphics and R-Shiny. Real-life biomedical and health related data will be used throughout the course.

(0.5 unit)

Prerequisite: N/A

Cross-Listed as: HSE 180

Offered: Winter.

QBS 181 - Data Wrangling

Instructor: Dr. Carly Bobak

Data wrangling is the process of mapping and transforming data into new formats for the increased ease and efficiency of downstream analysis. In this course, students will learn about the different types of data structures and formats,

and how to create, merge, subset, and manipulate these structures. Students will wrangle data using excel, SQL, and R programming as appropriate, learn the principles of tidy data and the tidy verse, learn string processing with regular expressions, and have an introduction to web scraping and API's for data collections.

(1 unit)

Prerequisite: Linear Algebra. QBS 103 or Intermediate proficiency in R.

Cross-Listed as: HSE 181

Offered: Fall.

QBS 187 - PhD Student Internship

Instructor: Dr. Kristine Giffin

PhD students pursuing an internship after the spring term of their first year will need to register for this course. This course seeks to provide opportunities for field experience and additional training that will strengthen a student's understanding of core concepts in the QBS academic curriculum while preparing students for career placement. Qualifying Exam completion is a prerequisite, unless otherwise approved, and students must be in good academic standing to be eligible. Enrollment in this course should not impact the time towards PhD degree completion. Enrollment in this course is limited to 2 times/2 quarters, unless otherwise approved.

This course is available only to QBS PhD students. Internships are generally expected to be a full time commitment, and therefore this course is worth 3 units. Students who wish to do an internship that is not full time or plan to remain engaged in research while completing their internship, need to discuss these terms with the QBS Administration. Please email Dr. Kristine Giffin for more information. For students who are visa holders and registering for CPT, please note that the start and end dates of the internship must strictly coincide with start and end dates of a quarter or otherwise be discussed prior with QBS Administration.

(3 units)

Prerequisite: N/A, Successful Completion of the Qualifying Exam or permission from the QBS Administration

Offered: Fall, Spring, Summer, Winter.

QBS 192 - Health Informatics

Instructor: Dr. Inas Khayal

Our health is everywhere. It is affected by how, where, and who we live, work & play with (i.e. biological, behavioral, social, and environmental factors). The explosion of digitization of data captured both outside 'in the wild' and

within the healthcare delivery system, allows us to understand and address the many factors affecting the complexity of our health. Today, health & healthcare data is continuously being generated by healthcare delivery systems, organizations, or users and can be accessed through devices, databases, or the web (e.g., APIs). Deriving information and knowledge to improve and maintain health requires health informatics. Data science plays an active role as a profession and within its research efforts in informing and developing all aspects of health informatics: data capture, data storage, and data analytics. Students will gain experience with Python. Prior experience with Python is not necessary, but students should have some prior programming and statistics experience. The goal of this course is two-fold: first, to learn about the latest topics in health informatics and second, to design and develop a health informatics project. Special topics in health informatics will be introduced through lectures and primary literature. These topics will be organized into 4 themes:

- 1.) Applications Theme: exploring several key current applications of health informatics
- 2.) Data Capture Theme: learning about data capture technologies and standards
- 3.) Data Storage Theme: presenting data formats, databases, and issues of security & privacy
- 4.) Data Analytics Theme: a brief introduction to the data analytics cycle and special topics of visualization and analytics methodologies.

(1 unit)

Prerequisite: Prior programming and statistical experience preferable

Cross-Listed as: COSC 89.17, HSE 192

Offered: Fall.

QBS 193 - Independent Journal Club

Instructor: Dr. Kristine Giffin & Faculty

Offered every quarter, this course provides QBS PhD students with the opportunity to fulfill a required journal club credit through an independent, faculty-mentored format. Prior to the start of the quarter, the student must develop a journal club proposal in collaboration with an approved faculty mentor who will serve as the course instructor. The proposal must outline the selected topics, literature review timeline, weekly meeting schedule, and deliverables to be completed by the end of the quarter. This proposal must be submitted to and approved by the QBS Administration no later than one week before the end of the drop/add period. The course requires a minimum of 1

to 1.5 hours of weekly meetings with the instructor, in addition to approximately 3 hours per week of independent work (e.g., readings, written assignments, presentations). These expectations must be clearly documented in the proposal. The faculty instructor is responsible for monitoring the student's progress and submitting a final grade to the QBS Administration at the end of the quarter.

Non-QBS PhD students can enroll in independent QBS journal clubs with the approval of their program if they would like this to count towards their degree.

For more information please email Dr. Kristine Giffin.

(0.5 unit)

Prerequisite: Consult Faculty Advisor

Cross-Listed as: HSE 193

Offered: Fall, Spring, Summer, Winter.

QBS 194 - Biostatistics Journal Club

Instructor: Dr. Pablo Martinez-Camblor

The objective of this course is to discuss selected academic papers. Participants will propose topics of interest and recommend among one to four papers (on the same topic) to discuss. Topics will be related by new or classical biostatistical procedures. Both technical and practical aspects of the considered procedures will be opened to discussion. Controversial methodologies of applied clinical papers may also be welcomed. The journal club format is an informal structure, and students are free to choose the way they present their proposed topic. Students are expected to, read the proposed materials, attend class, and be willing to participate.

(0.5 unit)

Prerequisite: College-level statistics course work.

Cross-Listed as: HSE 194

Offered: Fall.

QBS 195 - QBS Independent Study

Instructor: Dr. Kristine Giffin & Faculty

QBS 195 is designed to provide PhD students with the opportunity to deepen their knowledge and training in quantitative disciplines relevant to biomedical research. Offered each academic quarter, this course may be counted toward elective credit for QBS PhD students. Prior to the start of the quarter, students must develop a detailed course proposal in collaboration with an approved faculty mentor. The proposal must be submitted to the QBS Administration for approval no later than one week before the end of the drop/add period. It should clearly outline the educational objectives, weekly, in-person instructional plan (equivalent to 3.3 hours per week), and an estimated 6.6 hours of independent student work per week. The proposal must also define the project's purpose, expectations,

timeline, and specific deliverables to be completed by the end of the quarter. The faculty mentor is responsible for supervising the student's progress throughout the term and submitting a final grade to the QBS Administration. Please email Dr. Kristine Giffin for more information.

(1 unit)

Prerequisite: Consult Faculty Advisor, open only to QBS PhD students

Cross-Listed as: HSE 195

Offered: Fall, Spring, Summer, Winter.

QBS 196 - Supervised Teaching in QBS

Instructor: Dr. Kristine Giffin

This required course provides QBS PhD students with hands-on teaching experience through service as a teaching assistant (TA) for a QBS course. Teaching is considered a vital component of graduate training, offering students the opportunity to develop communication, leadership, and instructional skills that are often relevant to future academic or professional careers. TA responsibilities may include leading discussion sections or office hours, grading assignments, managing course websites, and attending lectures. The time commitment will not exceed 10 hours per week. In some cases, students may work closely with the course instructor to develop course materials or assignments. While not required, students interested in expanding their teaching experience may have the opportunity to design and deliver guest lectures.

This course is open only to QBS PhD students.

(1 unit)

Prerequisite: Successful completion of the course being TA'd or permission of course instructor

Offered: Fall, Spring, Summer, Winter.

QBS 197 - Graduate Research in Quantitative Biomedical Sciences I

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in quantitative biomedical sciences, this course is open only to QBS PhD graduate students *prior* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Level 200 graduate research courses in QBS are open only to QBS PhD students after successful completion of the qualifier exam. Please email Dr. Kristine Giffin for more information.

(1 unit)

**Students enrolling in an additional 2 or more units of courses will elect this option.*

Prerequisite: N/A. QBS PhD Students Only.

Offered: Fall, Spring, Summer, Winter.

QBS 198 - Graduate Research in Quantitative Biomedical Sciences II

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in quantitative biomedical sciences, this course is open only to QBS PhD graduate students *prior* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Level 200 graduate research courses in QBS are open only to QBS PhD students after successful completion of the qualifier exam. Please email Dr. Kristine Giffin for more information.

(2 units)

**Students enrolling in and additional 1 or 1.5 units of courses will elect this option.*

Prerequisite: N/A. QBS PhD Students Only.

Offered: Fall, Spring, Summer, Winter.

QBS 199 - Graduate Research in Quantitative Biomedical Sciences III

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in quantitative biomedical sciences, this course is open only to QBS PhD graduate students *prior* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Level 200 graduate research courses in QBS are open only to QBS PhD students after successful completion of the qualifier exam. Please email Dr. Kristine Giffin for more information.

(1 unit)

**Students enrolling in an additional 2 or more units of courses will elect this option.*

Prerequisite: N/A. QBS PhD Students Only

Offered: Fall, Spring, Summer, Winter.

QBS 270 - First-Year Quantitative Biomedical Sciences Journal Club

Instructor: Dr. Kristine Giffin & QBS Faculty

This year-long journal club series, spanning the fall, winter, and spring quarters, is a required component of the first-year curriculum for QBS PhD students. Designed to build essential skills in scientific literacy and communication, the course is structured to guide students from foundational understanding to independent analysis and presentation of scientific literature.

In the **fall quarter**, under close faculty guidance, students will learn how to read, interpret, and critically engage with primary scientific papers. The **winter quarter** focuses on identifying the key elements of a well-constructed paper and developing the skills needed to critique, present, and lead thoughtful discussions. **By the spring quarter**, students will take greater ownership of the learning process, selecting relevant publications to present and facilitate group discussions with minimal faculty involvement. Constructive feedback from faculty and peers will follow each presentation, helping students refine their analytical and communication skills.

Fall

Instructor: Kristine Giffin, PhD

(0.5 units)

Winter

Instructor: Kristine Giffin, PhD & QBS Faculty

(0.5 units)

Spring

Instructor: Kristine Giffin, PhD & QBS Faculty

(0.5 units)

Prerequisite: First-year QBS PhD students only

Offered: Fall, Spring, Winter.

QBS 271 - QBS Epidemiology Journal Club

Instructor: TBD

This course emphasizes critical evaluation of epidemiological studies and the development of effective presentation skills. Students will gain exposure to a breadth of epidemiological methodologies while examining classical and current epidemiological studies within public health and biomedical research. Class will meet weekly. Each week, all students will read one peer-reviewed, published study and an additional article or other paper for supplemental reading. One student will present on the published study, and we will all discuss the study as well as the relevance of the additional reading. Discussion will include an assessment of study components as related to study design, statistical analyses, inference and interpretation, bias, generalizability, and implications. Students will be asked to specifically discuss components

of the study (e.g., to restate what one figure or table presents).

(0.5 unit)

Cross-Listed as: HSE 271

Offered: Spring.

QBS 296 - Senior Supervised Teaching in QBS

Instructor: Dr. Kristine Giffin

PhD students awarded the Quantitative Biomedical Sciences (QBS) Teaching Assistant Training Fellowship are required to enroll in QBS 296 during any academic quarter in which they serve as a teaching assistant (TA) under the fellowship. The fellowship spans the duration of the course being taught and includes augmented stipend support for one-unit courses. The maximum expected effort is 10 hours per week. These hours count toward the total allowable work hours for PhD students and must not exceed this limit. This fellowship is available to all QBS PhD students and may also be open to non-QBS students, subject to appropriate approvals.

(1 unit)

Prerequisite: Open only to QBS PhD Students

Offered: Fall, Spring, Summer, Winter.

QBS 297 - Advanced Graduate Research in Quantitative Biomedical Sciences I

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in quantitative biomedical sciences, this course is open only to QBS PhD graduate students *after* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Please email Dr. Kristine Giffin for more information.

(1 unit)

**Students enrolling in an additional 2 or more units of courses will elect this option.*

Prerequisite: QBS PhD Students Only. Successful Completion of the QBS PhD Qualifier Exam

Offered: Fall, Spring, Summer, Winter.

QBS 298 - Advanced Graduate Research in Quantitative Biomedical Sciences II

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in

quantitative biomedical sciences, this course is open only to QBS PhD graduate students *after* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Please email Dr. Kristine Giffin for more information.

(2 units)

**Students enrolling in an additional 1 or 1.5 units course will elect this option.*

Prerequisite: QBS PhD Students Only. Successful Completion of the QBS PhD Qualifier Exam

Offered: Fall, Spring, Summer, Winter.

QBS 299 - Advanced Graduate Research in Quantitative Biomedical Sciences III

Instructor: Dr. Kristine Giffin & QBS Faculty

An original, individual, experimental, or theoretical investigation beyond the undergraduate level research in quantitative biomedical sciences, this course is open only to QBS PhD graduate students *after* to passing their qualifying exam; it may be elected for credit more than once and is offered all quarters. Students either in research rotations or dissertation labs are required to register for research every quarter, including summer. Please email Dr. Kristine Giffin for more information.

(3 units)

**Students enrolling in no other courses or a 0.5 unit course will elect this option.*

Prerequisite: QBS PhD Students Only. Successful Completion of the QBS PhD Qualifier Exam

Offered: Fall, Spring, Summer, Winter.

QBS 700 - Responsible and Ethical Conduct of Research

Instructor: Dr. Kristine Giffin & Dr. John Brand

QBS 700 is a required course for all PhD students in the QBS program and in the Geisel MS Degree Programs in Epidemiology, Health Data Science, and Medical Informatics. As part of a campus-wide initiative, this course fulfills the Dartmouth requirement for training in the responsible and ethical conduct of research. The course consists of five two-hour, discussion-based modules, each requiring preparation through assigned readings and brief written assignments. Topics include professionalism, authorship, mentoring, data management, and rigor and reproducibility, with a focus on their application to graduate training and careers in biostatistics, epidemiology, bioinformatics, data science, and medical informatics. Developed in collaboration with Dartmouth's

Ethics Institute and the Graduate Studies Office, the curriculum uses real-world case studies to guide interactive discussions. Faculty facilitators work with first-year PhD and MS students to explore ethical challenges they may face during their training and in future academic or industry careers.

QBS 700 provides a foundational framework for ethical and professional conduct in biomedical research and satisfies NIH requirements for ethics training in federally sponsored research.

(Mandatory for QBS PhD students; does not count toward core or elective credit)

Prerequisite: N/A

Cross-Listed as: HSE 700

Offered: Fall.

Sonic Practice

Chair: William Cheng

Professors M. A. Casey, W. Cheng, K. Dong, T. C. Levin, S. Pinkas, S. R. Swayne; **Associate Professor** R. A. Beaudoin, A. R. Fure (Director, Graduate Program in Sonic Practice); **Assistant Professors** C. Alvarez, A. Martin; **Senior Lecturers** R. L. Braude, L. G. Burkot, M. L. Cassidy (Assistant Conductor, Dartmouth Symphony Orchestra), J. P. Ennis, A. R. Garapic, J. Halloran, E. C. Mellinger (Assistant Conductor for Choral Ensembles), R. Moseley, S. W. Nam, J. E. Polk, M. E. Zsoldos; **Lecturers** N. M. Browne, T. H. Bynum (Director, Coast Jazz Orchestra at Dartmouth), P. Chin, F. Ciabatti (Director of Orchestral and Choral Programs), S. Felix, S. Fulginiti, A.R. Gray, O. Guey, P. J. Kennelly, A. J. Lakota, B. E. Messier (Director of Bands), S. Rogers, S. Sanchez, B. Selby, T. D. Sessions, S. Sinha, H. Sinno, J. Taitt, B. Younge.

To view Music Undergraduate courses, click here.

To view Music Graduate requirements, click here.

To view Music Graduate courses, click here.

Requirements for the Master of Fine Arts Degree (M.F.A.) in Sonic Practice

Dartmouth's M.F.A. in Sonic Practice is a 3-year graduate program for composers, artists, and scholars working expansively with sound. The program draws together a close-knit community of makers and thinkers concerned with the visceral and social force of sound: its capacity to move bodies, shape cultures and stretch our sense of the palpable and the possible. Through one-on-one conversation with faculty, seminars, group critiques, and

extra-disciplinary classes, students foster critical and technical skills that empower their independent creative practices while deepening their intersectional grasp of the aesthetics and politics of sounding and listening.

Candidates for admission to the M.F.A. in Sonic Practice typically have:

1. A bachelor's degree in a field relevant to their creative and/or scholarly practice.
2. Demonstrated knowledge and experience in some area of sonic arts, including (for example) composition, sound art, music theater, instrumental performance, songwriting, improvisation, spatial audio, sound installation and/or electronic music.

The Graduate Record Examination is not required for application to the program.

Regardless of a student's area of specialization within the program, the requirements for completion of the Master of Fine Arts Degree in Sonic Practice include:

1. A minimum of eleven terms fully enrolled. Fall, Winter, and Spring terms must be in residence on campus; summer term is geographically flexible.
2. Enrollment in the Graduate Seminars (MUS 101-109), given each term (excluding summer), for a total of 9 graduate seminars.
3. A number of electives in different disciplines (as well as music), including, but not limited to engineering, visual art, computer science, theater, and creative writing. The electives and the specific courses will depend on the student's background and area of specialization within the program.
4. Directed research (thesis courses). Two courses (MUS 138) taken under the supervision of a member of the music faculty and/or joint supervision with a member of another cooperating department.
5. Enrollment in Contemporary Music Lab (MUS 50.21-23) during each term (excluding the summer term).
6. Completion of one graduate ethics module (MUS 700) taught by a music faculty.
7. Enrollment in 2 courses per term in addition to Graduate Seminar and Contemporary Music Lab. (These can be Directed Research or Undergraduate Courses).
8. A thesis approved by the student's graduate committee demonstrating mastery of the materials in the student's area of concentration within the program.

MUS - Music - Graduate Courses**MUS 700 - Responsible and Ethical Conduct of Research**

Instructor: Fure

Required course for all Sonic Practice graduate students. Generally consists of five two hour sessions as well as additional reading and preparation.

*Proseminars***MUS 101 - Sonic Arts Salon**

Instructor: Alvarez

The objective of this seminar is to create a space of critical engagement, feedback, support and sharing. In the spirit of the salon, we will have guests throughout the term who will bring their own academic and creative pursuits into the space. We also may have other faculty and undergraduates as guest observers in the class from time to time. Most weeks there is required performance and/or reading/listening. And there are 3 opportunities to present over the term: 1st informal presentation, mid-term crit and final crits. Towards the end of term we will take a NYC trip.

MUS 102 - Advanced Critical Listening Skills

Instructor: Younge

This course delves into the art of critical listening, emphasizing a listening-based approach to musical analysis that transcends traditional score-based analytical methods. Students will explore varying listening theories and modes, including non-cochlear sound, embodied listening, ubiquitous listening, and others while honing their ability to analyze music across various time scales—from minute details to broader structural implications. Through collective listening sessions, engaging discussions, and supplementary readings, students will cultivate a refined capacity to critically engage with music. By the course's conclusion, students will have developed a sophisticated toolkit of focused and informed listening practices, enabling them to navigate and appreciate the complexities of sonic works with heightened awareness and analytical acumen.

MUS 103 - Sound Art Practice

Instructor: Fure

The past half-century has witnessed a “sonic turn” in the visual arts. From installation to sonic sculptures, performance-based and participatory practices, artists have increasingly explored sound as a cultural, political, and corporeal phenomenon. This course is a studio introduction to the development of sound art as a social, sculptural and environmental medium. Exploring repertoire at the nexus of experimental music, sculpture, installation, architecture and relational art, students will develop conceptual tools and practical skills that enable independent creative work.

MUS 104 - Collaboration, Collectivity and Community

Instructor: Alvarez

This seminar is an investigation of the creative and relational dynamics of collaboration, group process, shared leadership and cross-disciplinary artmaking. Over the term students will read, discuss and explore different lineages of collaborative process while working on three projects in succession: 1. A project with one member of the cohort. 2. Collaboration with an artist outside of the cohort working in another discipline. 3. A group project as a cohort. Through these three modes of collaborative work, students will reflect on their individual processes and what types of collaboration might best catalyze their own creative visions.

MUS 105 - Critical Studies in Sonic Communication

Instructor: Younge

This course explores the multifaceted world of creative communication in music and sonic art, examining the intricate relationships between creators, performers, and audiences. Students will explore a diverse array of scoring techniques, including video scores, traditional notation, text-based scores, and audio scores. The curriculum emphasizes the art of establishing clear forms of verbal and non-verbal communication with performers,

accommodating the creators' varying degrees of desired artistic freedom and interpretation. Through in-depth analysis of artistic goals and their communicative efficacy, students will gain valuable insights into audience perception as well as participation strategies. By investigating these interconnected elements, the course aims to cultivate a profound understanding of the complex ecosystem of sonic art creation, performance, and reception, empowering students to become more versatile and effective communicators in their artistic endeavors.

MUS 106 - Sounding Bodies: A Laboratory

Instructor: Sinha

This class will be a laboratory, a space of discovery for how we can work with vibration, the voice, the body and breath to open possibilities. How can sound and vibration reconfigure our bodies and minds? How can this most elemental material recalibrate our capacity to sense and relate to ourselves, each other, and the world around us? This course will consist of both the practice of embodied sound--working with unraveled elements of Indian vocal traditions to generate a new language of sound and the body--as well as readings, listenings, discussion, and written responses.

MUS 107 - Autonomous Musical Bodies

Instructor: Younge

As artists, can we build our way out of anthropocentrism? Can we breathe life and independence into musical bodies, whether human or otherwise? In this course, we will analyze varying musical and sounding bodies, their roles as actants, and their potential for autonomy and agency. In surveying the relationships we inhabit with musical instruments and/or sounding objects, we will assess varying modes of corporeal vulnerability and the ways in which this vulnerability can be enhanced by instrument design and construction. With our critical framework in mind, we will brainstorm—both collectively and individually—approaches to building instruments and/or sonic accouterments. In doing so, our central aim is to disrupt delineations between composer, performer, human, non-human, musical, and non-musical entities.

MUS 108 - Signal Process as Creative Process

Instructor: Alvarez

This seminar is a hands-on studio course where students will explore audio processing as a path toward narrative and compositional possibilities. Over the term we will study the technical and creative dimensions of eight signal processes: Compression, Equalization, Reverb, Delay, Phasing, Distortion, Autotune and Vocoding. Through reading, listening, discussion and hands-on experimentation students will work to gain deep familiarity with the technical parameters of the operations in order to locate the somatic, psychoacoustic and poetic possibilities of each. Assignments will focus on incorporating these explorations into creative work and using the eight processes as expressive tools.

MUS 109 - Site - Sound - Space

Instructor: Fure

This course is a laboratory for spatial sound experiments and a site of critical engagement with contemporary perspectives on sonic and social space. Our time together will be shared three ways: discussing readings and repertoire (with weekly written reflections); building technical competency with spatial audio tools (both software and hardware); and sharing short creative exercises meant to stretch your understanding of how sound moves through bodies, buildings, and cultures. MUS 109 will be held in The Warehouse, Dartmouth's 24.2 channel spatial sound lab.

MUS 110 - Topics in Sonic Practice

Instructor: Sinno

What does it mean to give someone, or something a voice? What does it mean to find your voice? To raise it? This course is an excursion into vocal embodiment as an enunciation of race, class, gender, etc. using case studies and analysis by Cavarero, Capalleto, Dolar, Eidsheim. We explore disembodied vocalities, looking at Gunning, Chion, Piekut, Stanyek and others to question the necropolitics of the recorded voice and the vocal clone. This course follows a typical seminar format, where students will survey assigned essays and articles, critically engage in group discussions, and produce writing that reflects on the material as it relates to their own lives. Ultimately, students will leave this class having developed a more nuanced appreciation of vocality, and a familiarity with some of the theoretical questions at the heart of the interdisciplinary field of voice studies.

MUS 137 - Directed Research I

Instructor: Alvarez/Fure/Sinha/Younge

Equivalent to one course credit.

Offered: Fall, Spring, Summer, Winter.

MUS 138 - Directed Research II

Instructor: Alvarez/Fure/Young

Equivalent to two courses.

Offered: Fall, Spring, Summer, Winter.

MUS 139 - Directed Research III

Instructor: Alvarez/Fure

Equivalent to three courses.

Offered: Summer.

Unspecified Graduate Courses

To view Unspecified Graduate Courses, [click here](#).

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