VIII. MPH and MS Curricula

A. MPH Program Requirements
The requirements for completing the Master of Public Health degree are:

- Satisfactory completion of the core TDI courses – ECS 100, 102, 111, 117, 140A, 140B, and 144.
- Satisfactory completion of the MPH core courses – ECS 115, 151, and 154.
- Satisfactory completion of the internship – ECS 161.
- Satisfactory completion of a capstone project – see section B on MPH Capstone Project Guidelines below for more information.
- Satisfactory completion of any elective courses.
- A minimum of fifty-six (56) successfully completed credits.

By completing the MPH degree, students will be competent in the areas of knowledge basic to public health:

- Biostatistics - collection, storage, retrieval, analysis and interpretation of health data; design and analysis of health-related surveys and experiments; and concepts and practice of statistical data analysis.
- Epidemiology - distributions and determinants of disease, disabilities and death in human populations; the characteristics and dynamics of human populations; and the natural history of disease and the biologic basis of health.
- Environmental health sciences - environmental factors including biological, physical, and chemical factors which affect the health of a community.
- Health services administration - planning, organization, administration, management, evaluation, and policy analysis of health programs.
- Social and behavioral sciences - concepts and methods of social and behavioral sciences relevant to the identification and the solution of public and population health problems.

MPH Curriculum Example *(Full-time)*

**LATE SUMMER**
- ECS 100: Inferential Methods & Systematic Review: Part 1 (4 cr)
- ECS 111: Critical Issues in Health & Health Care (4 cr)
- ECS 140A: Epidemiology/Biostatistics 1: Part 1 (4 cr)
- ECS 154: Social & Behavioral Determinants of Health (4 cr)
*Total credits: 16*

**FALL**
- ECS 102: Inferential Methods & Systematic Review: Part 2 (4 cr)
- ECS 117: Continual Improvement of Healthcare (4 cr)
- ECS 140B: Epidemiology/Biostatistics 1: Part 2 (4 cr)
- ECS 144: Practice Variation Research (1 cr)
*Total credits: 13*

**WINTER**
- ECS 115: Strategic & Financial Management of Health Care Institutions (4 cr)
- ECS 151: Environmental Health Science and Policy (4 cr)
- ECS Elective course
*Total credits: 9 (plus any elective courses)*

**SPRING**
- ECS 161: Public Health Internship (4 cr)
- ECS 162: Public Health Capstone Project (4 cr)
- ECS Elective course
*Total credits: 8 (plus any elective courses)*

**TOTAL CREDITS: 46 (plus any elective credits)**

A minimum of 56 credits are required to graduate.
B. Guidelines and Principles for the Capstone Project for MPH Students
These guidelines are targeted to those students entering in the Late Summer 2012 or after. All MPH candidates are required to complete a capstone project prior to receipt of their degree. There are a number of ways that a student can complete this requirement; however, there are some common elements of the project regardless of how it is completed.

1. The Capstone Project represents an opportunity for a student to pursue a topic of interest in more depth. It also represents a significant body of individual work, more so than any one course would customarily offer.

2. The Capstone Project applies skills and knowledge learned during the MPH program including critical thinking and analysis and documents the capability of a student to pursue a topic thoroughly post-graduation.

3. The Capstone Project will include both written and oral components. The written component includes an abstract/summary and a full paper. The oral component includes an oral presentation during a designated class or special time period.

4. The Capstone Project products will be developed with the support and guidance of an identified faculty member with a process of feedback by the faculty member and revision by the student.

5. The Capstone products will be of sufficient quality to meet standards required for submission of a peer-reviewed manuscript, a presentation at a professional meeting and/or a grant proposal ready for submission.

C. MPH Capstone Pathways
MPH students have some flexibility in the pathways they can choose to complete their Capstone Project. Below are the possible pathways an MPH student may follow to complete this MPH requirement:

1. Complete a research project: Students may enroll in the Research Capstone series (ECS 177-179) for the Fall, Winter, and Spring terms. Specific goals are to assure acquisition, demonstration, and documentation of specific competencies taught at TDF and guide and support the completion of an academically robust, high quality culminating research proposal or paper. Capstone products may include an NIH grant proposal, a research manuscript using secondary data analysis, a quality improvement research, or a qualitative research project. Depending on the nature of the project, additional courses may be required to supplement the work on the capstone (e.g. Epidemiology/Biostatistics 2, Survey Research Methods, and/or Qualitative Methods Toolbox).

2. Complete a quality improvement project: Students may enroll in the quality improvement sequence (ECS 117, 126, and 124) and expand on the knowledge and skills gained in those courses to complete a quality improvement implementation project to fulfill the capstone requirement. This strategy should be finalized in advance of the beginning of the Winter term with the quality improvement faculty.

3. Expand on the work developed in a Late Summer, Fall, and/or Winter term course: An independent project may be developed based on coursework from classes taught in the Late Summer, Fall or Winter terms. This project must represent work that is above and beyond the requirements for other students. This may result in enrolling in an existing course with additional credits for a student who is completing a capstone. The Decision and Cost-Effective Analysis course is an example of an existing course where the six-credit version of the course with a more extensive and individual project could qualify as a capstone.

Courses from which Capstone projects are likely to emerge:
- Critical Issues in Health and Healthcare
- Inferential Methods and Systematic Review
- Social and Behavioral Determinants of Health
- Qualitative Methods Toolbox (short course)
- Environmental Health Science and Policy
- Health Policy Reform (short course)

Courses in which Capstone projects are likely to be completed:
- Advanced Methods in Health Services Research
4. Design an independent Directed Readings or Directed Research course: Students may solicit faculty to work with them on an independent project in an area of interest that will meet the requirements of a capstone. This work might grow out of work initiated in a Late Summer, Fall, or Winter term course (as described further in #3 above), or it may develop as a project independent of any specific course when a faculty member and a student have shared interests.

5. Students whose potential Capstone projects which do not fall under any of the above pathways, students without approved capstone advisors, or students uncertain of the direction for their Capstone project should enroll in a one-credit Winter term MPH Capstone Project 1 course (ECS 160) to work with the Capstone Project Course Faculty to develop an idea for a capstone project. The subsequent Capstone Project may result in pathways 3 or 4 above or a student will enroll in the Capstone Project 2 course (ECS 162) in the Spring term to complete a supervised Capstone project that meets the guidelines for receipt of the MPH degree.

Students who do not meet the requirements of the Capstone Project will not be approved for graduation until such requirements are met, as determined by the appropriate faculty member overseeing the final Capstone Project.
D. MS Program Requirements
The requirements for completing the Master of Science degree in Health Policy and Clinical Practice are:

- Satisfactory completion of the core TDI courses – ECS 100, 102, 111, 117, 140A, 140B, and 144.
- Satisfactory completion of a practicum course in their preferred concentration area (ECS 119, 124, or 147), and any elective courses. MS students must also meet any additional requirements of their specific MS concentration.
- Satisfactory completion of any elective courses.
- A minimum of fifty-six (56) successfully completed credits.

MS Program: Clinical/Health Services Research
The Clinical/Health Services Research concentration provides students with a rigorous understanding of the following areas: fundamentals of epidemiology and biostatistics; quantitative techniques in the assessment of the outcomes of medical care; historical and contemporary theories in decision making; decision analyses and cost effectiveness analyses; and clinical guidelines, patient satisfaction, and survey methods. In addition to the required courses noted above, satisfactory completion of the core MS courses – ECS 177, 178, and 179 – is also required for this concentration.

An example of the MS in Clinical/Health Services Research is below (electives to be determined by student):

MS in Clinical/Health Services Research Curriculum Example (Full-time)

LATE SUMMER
ECS 100: Inferential Methods & Systematic Review: Part 1 (4 cr)
ECS 111: Critical Issues in Health & Health Care (4 cr)
ECS 140A: Epidemiology/Biostatistics 1: Part 1 (4 cr)
Total credits: 12

FALL
ECS 102: Inferential Methods & Systematic Review: Part 2 (4 cr)
ECS 117: Continual Improvement of Healthcare (4 cr)
ECS 140B: Epidemiology/Biostatistics 1: Part 2 (4 cr)
ECS 144: Practice Variation Research (1 cr)
ECS 177: Research Capstone Series 1 (2 cr)
Total credits: 17

WINTER
ECS 122: Survey Research Methods & Principles (4 cr)
ECS 141: Epidemiology/Biostatistics 2 (6 cr)
ECS 178: Research Capstone Series 2 (2 cr)
ECS elective course
Total credits: 12 (plus any elective credits)

SPRING (Practicum Course in either ECS 119 or ECS 147 is required)
ECS 119/121: Decision & Cost-Effectiveness Analysis (ECS 119=Practicum course) (6 cr/4 cr)
ECS 147: Advanced Methods in Health Services Research (Practicum course) (6 cr)
ECS 179: Research Capstone Series 3 (2 cr)
ECS Elective course
Total credits: 8 (plus any elective credits)
TOTAL CREDITS: 49 (plus any elective credits)
A minimum of 56 credits are required to graduate.
The Dartmouth Institute for Health Policy and Clinical Practice
Academic Calendar 2014-2015 for MPH and MS Programs
\(\text{(dates and times subject to revisions)}\)
\(\text{(unless otherwise noted, all classes will be held at 30 Lafayette in Centerra Park, 1st Floor Classroom)}\)

### Late Summer Term 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 28-29</td>
<td>New Student Orientation</td>
</tr>
<tr>
<td>Thu., July 31</td>
<td>Term begins</td>
</tr>
<tr>
<td>July 30-Aug 1</td>
<td>Official registration and on-line check-in</td>
</tr>
<tr>
<td>July 31-Aug 8</td>
<td>Add/Drop period for MPH &amp; MS students</td>
</tr>
<tr>
<td>Aug. 25-27</td>
<td>Fall term pre-registration</td>
</tr>
<tr>
<td>Mon., Sep. 1</td>
<td>Labor Day – No Class</td>
</tr>
<tr>
<td>Fri., Sep. 26</td>
<td>Late Summer term classes end</td>
</tr>
<tr>
<td>Sep. 29-30</td>
<td>Final Exam period</td>
</tr>
<tr>
<td>Fri., Oct. 3</td>
<td>4pm Grades due by faculty to TDI Registrar.</td>
</tr>
</tbody>
</table>

**New Student Orientation**

Monday, July 28 and Tuesday, July 29
8:00am-5:00pm (lunch provided each day)

### Fall Term 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Mon., Oct. 6</td>
<td>Classes begin</td>
</tr>
<tr>
<td>Oct. 6-8</td>
<td>Official registration and on-line check-in</td>
</tr>
<tr>
<td>Oct. 6-10</td>
<td>Add/Drop period</td>
</tr>
<tr>
<td>Nov. 3-5</td>
<td>Winter term pre-registration</td>
</tr>
<tr>
<td>Nov. 24-28</td>
<td>No classes – Thanksgiving Week Break</td>
</tr>
<tr>
<td>Mon., Dec. 1</td>
<td>Classes resume</td>
</tr>
<tr>
<td>Fri., Dec 12</td>
<td>Fall term classes end</td>
</tr>
<tr>
<td>Fri., Jan. 2</td>
<td>Grades due by faculty to TDI Registrar.</td>
</tr>
</tbody>
</table>

**Mondays, 8:00am – 5:00pm**

- **ECS 140B – Epidemiology/Biostatistics: Part 2 with Lab** – 4 cr – required for MPH and MS – PASSOW
- **ECS 117 – Continual Improvement of Health Care** – 4 cr – required for MPH and MS – FOSTER/BROWN/STONE
- **ECS 148 – International Perspectives on Health Care Systems** (elective short course) – 2 cr – GOODMAN

**Continued in next block**

**Wednesdays, 3:00pm – 5:00pm**

- **ECS 177 – Research Capstone Series 1** - 2 cr – required for MS in Health Services Research & for MPH students interested in research pathway BROWN/LURIE/MCDONOUGH

**Thursdays, 8:00am – 12:00pm**

- **ECS 100 – Inferential Methods and Systematic Review: Part 1** – 4 cr – required for MPH and MS – LARSON
- **ECS 111 – Critical Issues in Health and Health Care** – 4 cr – required for MPH and MS – GARDENT

**ECS 154 – Social and Behavioral Determinants of Health** – 4 cr – required for MPH (NOTE: First class meets Thursday, July 31 from 1pm-5pm; all other classes will be on Wednesday mornings)

**ECS 140A – Epidemiology/Biostatistics: Part 1 with Lab** – 4 cr – required for MPH and MS (no class on Sep. 1-Labor Day) – PASSOW

**ECS 130 – Practical Approaches for Today’s Health Care Ethics Challenges** (elective short course) – 2 cr – NELSON

**ECS 102 – Inferential Methods and Systematic Review: Part 2** – 4 cr – required for MPH and MS – LARSON

**ECS 177 – Research Capstone Series 1** - 2 cr – required for MS in Health Services Research & for MPH students interested in research pathway BROWN/LURIE/MCDONOUGH

*choose one of the two sections of ECS 144 to enroll in for the term.
# Academic Calendar 2014-2015

## Winter Term 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 5-6</td>
<td>Official registration and on-line check-in</td>
</tr>
<tr>
<td>Jan. 5-9</td>
<td>Add/Drop period</td>
</tr>
<tr>
<td>Mon., Jan. 5</td>
<td>Classes begin</td>
</tr>
<tr>
<td>Mon., Jan. 19</td>
<td>Martin Luther King Day (no classes)</td>
</tr>
<tr>
<td>Feb. 2-4</td>
<td>Spring term pre-registration</td>
</tr>
<tr>
<td>Fri., Mar. 13</td>
<td>Winter term classes end</td>
</tr>
<tr>
<td>Mar. 16-17</td>
<td>Final Exam Period</td>
</tr>
<tr>
<td>Mar. 20 at 4pm</td>
<td>Grades due by faculty to TDI Registrar.</td>
</tr>
</tbody>
</table>

Mondays, 8:00am – 5:00pm

- **ECS 141** – Epidemiology/Biostatistics 2 with Lab – 6 cr (Mon, Jan. 19–MLK Day-no class) SIROVICH
- **ECS 125** – Qualitative Methods Toolbox (elective short course) – 2 cr DAVIES/LANHAM
- **ECS 131** – Patient Centered Health Communications (elective short course) – 2 cr VIDAL/ANDREWS
- **ECS 126** – Statistical Measurement & Analysis in Quality Improvement – 4 cr OLIVER/BROWN

## Spring Term 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon., Mar. 30</td>
<td>Classes begin</td>
</tr>
<tr>
<td>Mar. 30-Apr. 1</td>
<td>Official registration and on-line check-in</td>
</tr>
<tr>
<td>Mar. 30-Apr. 3</td>
<td>Add/Drop period</td>
</tr>
<tr>
<td>Apr. 20-Apr. 22</td>
<td>Late Summer term pre-registration</td>
</tr>
<tr>
<td>Mon., May 25</td>
<td>Memorial Day (no classes)</td>
</tr>
<tr>
<td>Fri., June 5</td>
<td>Spring term classes end</td>
</tr>
<tr>
<td>June 8-9</td>
<td>Final Exam Period</td>
</tr>
<tr>
<td>June 10 at 4pm</td>
<td>Grades due by faculty to TDI Registrar.</td>
</tr>
</tbody>
</table>

Mondays, 8:30am – 4:00pm

- **ECS 147** – Practicum: Advanced Methods in Health Services Research with Lab – 6 cr (May 25 class is rescheduled to Friday, May 29, 12:15pm-5:00pm) ONEGA
- **ECS 124** – Practicum: Design & Improvement of Clinical Micro-Systems – 6 cr FOSTER/GODFREY
- **ECS 119/121** – Decision & Cost-Effectiveness Analysis – 6 cr (ECS 119=Practicum Course=6 credit) TOSTESON
- **ECS 162** – Public Health Capstone Project: Part 2 – 4 cr – THURBER

Wednesdays, 8:30am – 3:00pm

- **ECS 122** – Survey Research Methods – 4 cr WOLOSHIN/SCHWARTZ
- **ECS 178** – Research Capstone Series 2 – 2 cr – required for MS in Health Services Research & for MPH students interested in research pathway BROWN/LURIE/MCDONOUGH
- **ECS 151** – Environmental Health Science and Policy – 4 cr – required for MPH MURRAY/MCLELLAN

Thursdays, 8:00am – 12:00pm

- **ECS 160** – Public Health Capstone Project: Part 1 – 1 cr – required for MPH students without prior Capstone Director approval) THURBER
- **ECS 115** – Strategic & Financial Management of Health Care Institutions – 4 cr – required for MPH GARDENT
- **ECS 113** – Current Issues in Health Policy: Understanding Health Reform (elective short course) – 2 cr COLLA

## Commencement Events 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri., June 12</td>
<td>TDI Class Day</td>
</tr>
<tr>
<td>Sat., June 13</td>
<td>Geisel Class Day (Hooding Ceremony)</td>
</tr>
<tr>
<td>Sun., June 14</td>
<td>Commencement</td>
</tr>
</tbody>
</table>
Organizations Where the Class of 2013 are Employed

**Healthcare – Clinical**
- DHMC
- Cornell University
- Lahey Health and Medical Center
- Veterans Health Administration
- Dr. William M. Scholl College of Podiatry
- Elliot Hospital
- Geisel School of Medicine at Dartmouth

**Healthcare – Administration**
- School Street Associates
- DHMC
- Massachusetts Eye & Ear Institute
- Norris Cotton Cancer Center
- Dartmouth College
- ICF International
- The Dartmouth Institute

**Healthcare – Research**
- Dickey Institute
- Milkin Institute
- Gile Mountain Scientific
- The Dartmouth Institute
- Merit Medical Systems
- Yale
- DHMC
- Veterans Administration

**Healthcare – Consulting**
- Booz Allen Hamilton
- Boston Healthcare Associates
- The Chartis Group
- Marwood Group
- Cerner

**Healthcare – Government**
- ORISE
- China Food and Drug Administration

**Healthcare – Pharma**
- Genentech
Career Services & Alumni Relations

TDI Alumni Career Paths

Organizations Where TDI Alumni Are Employed

**Government**
- Center for Disease Control & Prevention
- Centers for Medicare & Medicaid
- Veterans Affairs Medical Center
- Department of Health & Human Services
- Department of Defense

**Consulting**
- The Advisory Board Company
- Arcadia Solutions

**Pharmaceutical**
- HIS Global Insight
- Bain & Company
- McKesson
- Accenture
- Johnson & Johnson
- AstraZeneca
- Merck
- Amgen Pharmaceuticals

**Non-Profit**
- RTI International

**Managed Care**
- Dana-Farber Cancer Institute
- New America Foundation
- United Way
- United HealthCare
- Blue Cross Blue Shield
- Geisinger Health System

**Research**
- Institute for Healthcare Improvement
- Health Dialog
- Center for Healthcare Research

Positions Held by TDI Alumni

**Biotech/Pharmaceuticals**
- Project Engineer
- Biopharmaceutical Consulting
- Dir. of Regulatory Compliance & Development

**Disaster Preparedness & Response**
- Emergency Preparedness Specialist
- Program Analyst

**Evaluation, Safety, & Quality**
- Program Evaluator
- Quality Improvement Specialist
- Quality Improvement Consultant
- Outcomes Researcher
- Manager for Injury Prevention
- Clinical Informatics Analyst

**Food Safety & Nutrition**
- Nutritionist
- Employee Wellness Coach

**Global Health**
- Health Services Researcher
- International Programs Manager
- Program Coordinator
- **Health Communication**
  - Communications Director
  - Medical Writer
- **Health Disparities**
  - Population Health Researcher
  - Minority Health Director
- **Health Education**
  - Community Health Educator
  - Continuing Education Coordinator
- **Infectious & Chronic Disease**
  - State/Clinical Epidemiologist
  - Medical Officer
  - Public Health Nurse
  - Public Health Advisor
  - Asst. Professor of Infectious Disease
  - Transplant/Infectious Disease Fellow

**Non-Profit**
- Grant Writer
- Program Officer
- Volunteer Coordinator
- **Public Health Law/Policy**
  - Sr. Research & Policy Analyst
  - Health Economist
  - Advocacy Director
  - Lawyer
- **Public Mental Health**
  - Mental Health Researcher
  - Public Health Social Worker
- **Public Health Administration**
  - Health Commissioner
  - Medical Director CMO/ CEO
  - Dir. of PH Assessment & Planning
  - Hospital Administrator

**Other**
- Managing Dir. of ACOs
- Biophysics Researcher