Hello again!

Our tour of Dartmouth’s curriculum continues with **Snapshot #4**, which highlights the departments and program in the Sciences division.

We hope that you are enjoying this exploration so far!

Don’t forget: local and online placement exam information can be found at [www.dartmouth.edu/~orientation/placement](http://www.dartmouth.edu/~orientation/placement).

Take care!
The Department of Biological Sciences offers students a range of courses that span from the subcellular to the ecosystem levels.

There are a variety of options for beginning the study of Biology at Dartmouth and the Department offers a placement/advisory test to help students choose the appropriate starting point. The placement/advisory test is available to members of the Class of 2023 via Canvas (see placement exam information on New Student Orientation website).

Details about courses for first-year students can be found on our website (biology.dartmouth.edu/welcome-class-2023).

Areas of faculty research are diverse, ranging from cell signaling to neurobiology to animal behavior, utilizing a wide range of organisms including bats, rice, worms, flies, and algae. Faculty welcome undergraduate researchers as active contributors to faculty research projects. The Department also offers a foreign study program in tropical ecology in Costa Rica and the Caribbean each Winter term.

**Location:** Class of 1978 Life Sciences Center  
**Email:** biology@dartmouth.edu  
**Website:** biology.dartmouth.edu  
**Phone:** (603) 646-2378
The Chemistry Department welcomes the Class of 2023! Many of you took a chemistry course in high school and may be interested in further study of chemistry, which can lead to some very interesting careers. Chemistry is the foundation for the life sciences, medicine, and materials science, and a background in chemistry is required for several science majors, as well as preparation for the health professions. The Department offers majors in Chemistry, Biological Chemistry, and Biophysical Chemistry, and a 4+1 program to earn a Masters degree in the year after graduation. The Chemistry faculty is committed to teaching that is engaging and inspiring, and their cutting-edge research provides undergraduate research opportunities in biochemistry, materials chemistry, and the synthesis of new molecules with potential therapeutic or commercial applications.

First-year students typically take two general chemistry courses (Chemistry 5 and 6), or the one-term honors course, Chemistry 10. Those with a score of 5 on the AP Chemistry exam receive prerequisite credit for Chemistry 5 and start with Chemistry 6. Others with a good background in chemistry are strongly encouraged to take the Chemistry 5 credit test on Tuesday, September 10 (see New Student Orientation webpage). We look forward to meeting you at our Open House!

**Location:** Burke Laboratory  
**Website:** chemistry.dartmouth.edu  
**Email:** chemistry@dartmouth.edu  
**Phone:** (603) 646-2501
This is an exciting time to be a technologist and to see the impact of technology on our lives and the world. We are excited to be training the next generation of technologists. Whether you are a computer scientist, neuroscientist, economist, linguist, biologist, earth scientist, or political scientist, there is no doubt the technology revolution is dramatically altering your field of interest.

The twenty-two Computer Science (COSC) faculty offer courses and have expertise in everything from Robotics, to Computer Graphics, Computer Vision, Machine Learning, Mobile Computing and Sensing, Security, Computational Biology, and more. We offer a flexible major, minor, and modified major in Computer Science. Many of our students combine Computer Science with majors across the Arts and Humanities, Social Sciences, and Sciences. We also offer a 4+1 program in which you can earn your Masters degree with just one extra year of graduate-level courses.

Our introductory course—COSC 1—is designed to be accessible for students with no background in computer programming. Many students reflect that this course was one of their favorites.

**Location:** Sudikoff Laboratory, Room 204  
**Website:** [cs.dartmouth.edu](http://cs.dartmouth.edu)  
**Email:** [thomas.h.cormen@dartmouth.edu](mailto:thomas.h.cormen@dartmouth.edu)  
**Phone:** (603) 646-2417
There has never been a more exciting and important time to study Earth, our home. Working closely with their professors, our students are investigating the interconnectedness of Earth’s systems, revealing how even small changes to one system can profoundly influence life. And how life, in both past environments such as those during the evolution of early life, and in the modern “Anthropocene,” can influence Earth’s systems.

Combining field studies across the globe with laboratory-based and theoretical studies, earth scientists at Dartmouth are addressing some of our most fundamental questions, such as how life on Earth began, and many of our most pressing challenges—dwindling energy and mineral resources, changing climates, water shortages—by integrating fundamental ideas from biology, chemistry, physics, engineering, and computer science. Our students are active participants in faculty research projects and go on to careers as geologists, environmental engineers, climate scientists, hydrologists, exploration geophysicists, space scientists, and oceanographers, among others. We work to provide a welcoming and friendly atmosphere for majors and non-majors alike who all share a common interest in how the Earth works.

**Location:** Sherman Fairchild Hall  
**Website:** [earthsciences.dartmouth.edu](http://earthsciences.dartmouth.edu)  
**Phone:** (603) 646-9037
Welcome to Engineering Sciences! If you want to have an impact on the world, experience engineering, the most popular science major at Dartmouth.

Our project-based approach emphasizes human-centered design, hands-on learning, teamwork, and creating working prototypes to solve real-life problems in medicine, energy, communications, and other areas of human need. Don’t worry if you’ve never used a tool before. Our maker spaces and project lab instructors will teach you how to design and build your projects. We’ll teach you how to pursue patents and start, finance, and grow a technology business.

You can modify the Engineering major with any of the sciences, economics, environmental studies, math, public policy, or studio art. Computer science and physics majors can pursue a joint AB/Bachelor of Engineering program. We offer foreign study programs in Denmark, Germany, Hong Kong, and Thailand. We also offer numerous courses for non-majors so everyone can gain the problem-solving skills and technical savvy needed to make a difference in our increasingly technology-driven world.

Location: Thayer School of Engineering, 14 Engineering Drive
Website: engineering.dartmouth.edu
Phone: (603) 646-2230 | (603) 646-3677
Environmental Studies examines the links between ecosystems and society based on a problem-oriented, interdisciplinary approach. Environmental degradation poses a cascade of escalating problems from local to global scales. Training students to understand and address these challenges is our core mission, supported by courses and research opportunities on a diversity of topics such as global environmental science, agroecology, nature writing, ecological economics, and environmental policy and governance. To meet the needs of our students, we offer a major in Environmental Studies and three minors: Environmental Studies, Environmental Science, and Sustainability. We also offer a Foreign Study Program in Southern Africa, where students and faculty explore the links between ecological conservation and community-based human development.

Students who have scored a 4 or 5 on the Environmental Science CEEB Advanced Placement Examination will receive credit on entrance for Environmental Studies 2. Credit on entrance appears on the Dartmouth transcript but does not count towards the 35 credits required to graduate.

**Location:** Steele Hall, Room 112  
**Website:** envs.dartmouth.edu  
**Email:** kim.wind@dartmouth.edu  
**Phone:** (603) 646-2838
The Department of Mathematics gives special attention not only to the future mathematician, computer scientist, physical scientist, and engineer, but also to students who primary interests are in the humanities or social sciences. The department recognizes that knowledge in the mathematical sciences is essential in many disciplines.

Information for first-year students (www.math.dartmouth.edu/undergraduate/first-year-students) will give some guidance to people choosing their first few mathematics courses at Dartmouth. Beyond these initial courses, interested students should feel free to contact the advisor to math majors and minors Professor Dana Williams (dana.williams@dartmouth.edu).

More complete descriptions of the courses are available in the ORC pages online (dartmouth.smartcatalogiq.com/en/current/orc/Departments-Programs-Undergraduate/Mathematics/MATH-Mathematics-Undergraduate).

Location: Kemeny Hall, Room 102  
Website: math.dartmouth.edu  
Email: deptaa@math.dartmouth.edu  
Phone: (603) 646-2415
Majors in Astronomy, Physics, and Engineering Physics are designed to provide students with a solid foundation in analytic thinking, problem solving, and the fundamentals of Physics and Astronomy. Our undergraduates can be actively involved in hands-on research at a variety of levels, from first-year projects, to summer internships and senior honors theses. The Astronomy foreign study program is based in South Africa at the South African Astronomical Observatory (SAAO), one of the darkest observatories on Earth. Our undergraduates’ research projects include studies of active galactic nuclei, auroral plasma physics, the outer heliosphere, habitable planets, entanglement, quantum spin chains, quantum computers, ultra-cold atomic gasses, and ionospheric spacecraft...there’s much to explore!

Introductory courses are offered at a number of levels; you can begin a major at Dartmouth even if you’ve never had any physics or astronomy before. There are also introductory sequences designed for students with advanced placement in just math, or in both math and physics. Information on specific tracks and placement, course sequences, and research activities led by our faculty, is available on the undergraduate and research pages of our Department website. We look forward to talking with you at our Open House during New Student Orientation.

Location: Wilder Laboratory, Room 105
Website: physics.dartmouth.edu/undergraduate/information-new-students
Email: physics.department@dartmouth.edu
Phone: (603) 646-2854