

Civil and Environmental Engineering

Bachelor of Science Degree

Contact

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Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 1 Biology (recommended)
- 2 Algebra I & II
- 1 Geometry
- 1 Pre-Calculus
- 2 Lab Science (chemistry and physics)
- 2 History/Social Studies
- Academic electives (to equal at least 17 total credits)

To ensure current mathematical skills, students should take a mathematics course during their senior year of high school.

Did You Know?

- The curriculum is designed to provide a well-founded civil engineering education while allowing students to select electives in such disciplines as water resources, environmental, geotechnical, structures, transportation, construction, and coastal engineering.
- For undergrads completing their junior year with a GPA of 3.0 or higher, the department will offer early admission to the graduate program. This enables students to start taking graduate courses in their senior year, leading to bachelor's and master's degrees at the end of five years.

College of Engineering

Program Description

Civil engineering is the oldest and the broadest of the engineering disciplines. Indeed, civilization started by addressing basic civil engineering problems — ensuring clean water, shelter and transportation for commerce. UMaine's Civil and Environmental Engineering Program is honed to introduce and develop a wide range of problem-solving skills that prepare students for a vast array of potential career paths. Developing these skills requires study in a diverse mix of disciplines. In broad terms, these disciplines include engineering design, engineering science, basic science and mathematics, humanities and social sciences, and oral and written communication, as well as professional and contemporary practice issues. All these elements are critical in promoting the creativity, innovation and global view that are hallmarks of successful engineering. The curriculum builds engineering problem-solving skills in the first semester and culminates with a senior design project that encompasses a wide range of real-life engineering and economic constraint issues.

Specialized Information

UMaine civil and environmental engineering students have endless opportunities. A dynamic and diverse faculty are leaders in their fields. That leadership translates to numerous options for students to conduct laboratory and field research that complements their classroom activities. Current projects include offshore wind energy and its associated structural and geotechnical challenges, issues of arsenic in groundwater, the role of climate change in hydrologic cycles, the fate of airborne and waterborne mercury in the environment, inflatable and rigidified composite structures, disaster-resistant construction, and composite ship structures. Through our many connections with companies in Maine and New England, students have opportunities for paid summer internships that enhance their portfolios.

Associated Honor Societies and Student Organizations

UMaine has an extremely active student body. Within the discipline, most students participate in the Student Chapter of the American Society of Civil Engineers (ASCE). ASCE organizes frequent lunch meetings with invited professional engineers, as well as the popular concrete canoe and steel bridge teams. Civil engineering students also are actively leading college-wide organizations, such as Engineers Without Borders, a group working to solve basic engineering problems in the developing world, the Engineering Art Club and the Society of Women Engineers. Some students may qualify for membership in Chi Epsilon, the civil engineering honor society, as well as Tau Beta Pi, a college-wide engineering honor society.

Representative Courses

CIE 100 Introduction to Civil and Environmental Engineering
CIE 101 Civil Engineering Graphics
CIE 110 Materials
CIE 111 Materials Lab
CIE 115 Computers in Civil Engineering
CIE 225 Transportation Engineering
CIE 331 Environmental Engineering
CIE 340 Introduction to Structural Analysis

CIE 350 Hydraulics
CIE 351 Hydraulics Lab
CIE 365 Soil Mechanics
CIE 366 Soil Mechanics Lab
CIE 410 Engineering Ethics
CIE 411 Project Design
CIE 412 Engineering Decisions
CIE 413 Project Management

Career and Graduate Opportunities

The diversity of the civil and environmental engineering professions naturally leads to a diversity in professional opportunities. Our graduates work for large and small companies, indoors and out; private and public entities; global concerns; and local municipalities. The options are endless. Our graduates solve problems of transportation networking and safety, wind energy and power distribution, sustainable and environmentally balanced land use and resource utilization. Indeed, civil engineers work on the systems that people rely on every minute of every day for a high quality of living. With a bachelor's degree, graduates have the qualifications to enter the workforce and work toward professional licensure. Alternatively, graduates may choose to specialize in an engineering sub-discipline through graduate study.

UMaine Graduate Programs

Master of Science in Civil Engineering
Doctor of Philosophy in Civil Engineering

About UMaine

The University of Maine, founded in Orono in 1865, is the state's premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 60 countries. It currently enrolls 12,000 total undergraduate and graduate students who can directly participate in groundbreaking research working with world-class scholars. Students are offered 88 bachelor's degree programs, 64 master's degree programs, 25 doctoral programs and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, go online (umaine.edu). Equal opportunity information also is available online (umaine.edu/eo).

How do I apply?

Visit go.umaine.edu for an application as well as information about academics and life at UMaine.



Academic Programs 2011-12

The latest versions of the UMaine fact sheets are online (factsheets.umaine.edu). This fact sheet is intended for informational purposes only and is subject to change.

