

## Contact

**Eric Landis**, Chair  
 Department of Civil & Environmental Engrg.  
 5711 Boardman Hall, Room 105  
 Orono, ME 04469-5711

207-581-2170  
 FAX: 207-581-3888

E-mail: [landis@maine.edu](mailto:landis@maine.edu)  
 Web site: <http://www.civil.umaine.edu>

## Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 2 Algebra I & II
- 1 Geometry
- 1/2 Trigonometry
- 2 Lab Science (*chemistry & 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.*

## Major Requirements

- 37 credits Civil Engineering (*including capstone design*)
- 12 credits Engineering Science
- 21 credits Civil & Technical Electives
- 35 credits Sciences & Mathematics
- 18 credits Human Values & Social Context (*including CMJ 103*)
- 6 credits Communications (*ENG 101, three one-credit technical writing modules*)

*129 Minimum total credit hours required for graduation*

## College of Engineering

### Program Description

The Civil Engineering degree allows the graduate to engage in a wide variety of career options, extending across many technical specialties. These specialties include **structural engineering**—plan and design buildings, bridges, dams, airplanes; **geotechnical engineering**—analyze the properties of soil and rock supporting foundations, dams and other facilities; **environmental engineering**—provide safe drinking water, prevent and control pollution in the environment; **transportation engineering**—develop safe and efficient movement of people and goods; **construction engineering**—plan and build public and private projects and commercial developments; and engineering management in all specialties.

Individuals who are interested in science and mathematics, and in helping people live better, who are curious about how things work and how to make them work better, possess some of the important traits of civil engineers. Depending on the chosen specialty, an individual can spend a great deal of time outdoors or in an office using a computer for design and other applications, working for themselves or with many other professionals in a large company, or within a myriad of other possibilities. Given these activities, a student interested in engineering should very carefully evaluate the many career opportunities available as a civil engineer.

Additional consideration should be given to the many co-op positions students majoring in Civil Engineering have undertaken: Civil Engineering Aide, City of Brewer; Engineering Technician, Cianbro Corporation; Environmental Engineering Aide, Woodward & Curran; Hazardous Waste Control Assistant, Department of Environmental Protection.

### Career Opportunities

Employment opportunities for graduates exist in a variety of environments and in a variety of capacities, depending upon the specialty chosen. With the appropriate specialty, graduates can pursue careers in commercial planning, transportation planning, building and public works, construction planning and design, foundation support analysis, and control of pollutants to avoid environment contamination.

### General Education Requirements\*

- ENG 101 College Composition
- 18 credits Human Values & Social Context area (*a single course may satisfy more than 1 sub-category, but a total of 18 credits must be completed*)
  - Western Cultural Tradition
  - Social Context & Institutions
  - Cultural Diversity & International Perspectives
  - Population & the Environment
  - Artistic & Creative Expression
- 2 courses Designated Writing Intensive (*1 must be within the major*)
- 2 courses Biological or Physical Sciences (*must include at least 1 laboratory course*)
- 1 course Ethics (*emphasis on discussion of ethical issues in 1 course or series of courses*)
- 6 credits Mathematics (*including statistics & some computer science, only 3 credits in computer science can count toward this requirement*)
- 1 capstone An approved experience in which the student integrates the components of his or her undergraduate training to perform at a professional level. The capstone experience is usually completed during the senior year in consultation with the student's academic advisor.

*\*All UMaine students must complete these general education requirements, which are counted in the total credit hours required for graduation and may be contained in the Major Requirements previously listed.*

## **Specialized Information**

For students outside of the department, the Department of Civil and Environmental Engineering offers minors in Civil Engineering with concentrations in environmental quality, structures and water resources. The minors are open to all undergraduate, degree-seeking University of Maine students and requires the completion of 19 credit hours in Civil and Environmental Engineering courses.

The Civil Engineering curriculum is designed so that students will automatically meet the general education requirements. However, students are given the opportunity to select the humanities and social context electives (18 credits).

## **Graduate Study**

The University of Maine Civil and Environmental Engineering program includes graduate education in the areas of Environmental and Water Resources; Geotechnical Engineering; and Structural Engineering at the Master of Science, Master of Science (non-thesis) and Doctor of Philosophy degree levels. Given the many specialties within Civil Engineering, many civil engineers choose to obtain advanced training through a Masters degree. For the outstanding undergraduate, early admission to the graduate program is possible so that both the B.S. and the M.S. (non-thesis) can be completed in a five-year program.

### **Academic Programs 2008-2009**

Please refer to the web site (<http://factsheets.umaine.edu/>) for the most updated version of the fact sheets.

This fact sheet is intended for informational purposes only and is subject to change.