Environmental Engineering, B.S.E.

Graduates of the Bachelor of Science in Engineering (B.S.E.) program in environmental engineering apply engineering principles to design systems that control pollution and protect public health. Environmental engineers restore air, soil, and water quality at previously contaminated sites, and develop systems that convert waste into clean energy. Environmental engineering addresses the complex food, energy, and water issues of the 21st century.

Requirements

The Bachelor of Science in Engineering with a major in environmental engineering requires a minimum of 131 s.h.

All engineering students complete the B.S.E. core requirements, which include RHET:1030 Rhetoric; ENGR:1100 Introduction to Engineering Problem Solving and ENGR:1300 Introduction to Engineering Computing; and courses in chemistry, engineering mathematics and fundamentals, and physics. They must earn a grade of C-minus or higher in the core requirements MATH:1550 Engineering Mathematics I: Single Variable Calculus and MATH:1560 Engineering Mathematics II: Multivariable Calculus.

They also complete the curriculum designed for their major program, which covers four major stems: mathematics and basic sciences, engineering topics, an elective focus area, and the general education component (15 s.h. of humanities and social science courses). For information about the curriculum stems, see Bachelor of Science in Engineering in the Catalog.

Students must select elective focus area courses according to guidelines established by the Department of Civil and Environmental Engineering. See “Elective Focus Area” below.

Elective Focus Areas

Environmental engineering students may choose from a standard and elective focus area developed by the department or create an individual focus area tailored to their interests.

For more detailed information about elective focus areas, see Bachelor of Science in Engineering in the Catalog. For a description of the standard elective focus area options and guidelines for tailored elective focus areas in environmental engineering, see Elective Focus Areas on the Department of Civil and Environmental Engineering website.

B.S.E./M.S.

The College of Engineering offers a fast-track Bachelor of Science in Engineering/Master of Science for environmental engineering undergraduate students who intend to earn a M.S. in civil and environmental engineering. B.S.E./M.S. students may attend the departmental graduate seminar and work on a master’s thesis or research project while they are still undergraduates. They may count a limited amount of course work toward both degrees. Once students complete the requirements for the bachelor’s degree, they are granted the B.S.E., and they normally complete the M.S. one year later.

To be admitted to the degree program, students must have completed at least 80 s.h. and have a cumulative g.p.a. of at least 3.25. They must submit an application form to the Department of Civil and Environmental Engineering, along with a letter stating their proposed area of specialization and the name of a department faculty member willing to be their primary M.S. advisor. Graduate Record Examination (GRE) General Test scores are not required for the fast-track degree program.

Applications are due by May 15.

Career Advancement

The engineering profession is a foundation for a variety of careers in industry, medicine, law, government, and consulting. Engineering majors hold eight of the top ten spots on the list of top-paid majors for bachelor’s degree graduates, according to the National Association of Colleges and Employers (NACE). On average, 93-98 percent of graduates are employed in their field of study or pursuing advanced education within seven months of graduation.

Engineering Professional Development (EPD) develops and promotes experiential education and professional opportunities for students. Professional staff coordinate the college’s co-op and internship program, engage in employer outreach, and provide opportunities for students to network with employers, including an engineering career fair and other career-development programming each semester.

EPD also offers individual advising and class presentations on résumé and cover letter preparation, job and internship search strategies, interviewing skills, and job offer evaluation.