Major in Environmental Engineering

Environmental engineers design solutions that prevent future pollution as well as correct existing pollution problems. The undergraduate curriculum in Environmental Engineering is based on a strong foundation in physical and biological sciences, mathematics, and engineering fundamentals. The All-University Core Curriculum provides a broad background in communication, liberal arts, humanities, and social sciences. Upper-division courses address engineering applications for prevention and control of air, water, and land pollution. Required courses that are specific to the Environmental Engineering major come from several engineering and science disciplines, including organic and environmental chemistry, microbiology, hydrology, statistics, environmental toxicology, and water treatment. Technical electives provide specialization in a particular field of interest. Seniors complete the same year-long, capstone design experience as do Civil Engineering majors, working in teams on real-world engineering problems.

Participation in student professional societies, other campus organizations, internships, and volunteer activities is highly recommended to foster personal growth and professional development. The Fundamentals of Engineering (FE) exam is strongly encouraged and is the first step toward registration as a Professional Engineer, an important professional credential for environmental engineers. As in the case of the Civil Engineering majors, our graduates from this major consistently achieve a passing rate on the FE exam that is above the national average. The education outcomes and objectives for the Environmental Engineering major, along with additional information on this major, are found on the department’s website (http://www.engr.colostate.edu/ce/whatisee.shtml). The Environmental Engineering major is accredited by the Engineering Accreditation Commission of ABET (http://abet.org).

Potential Occupations

The expansion of our population and economy, along with increased public concern and regulation of environmental quality, will contribute to the increased demand for the services of environmental engineers, both in the U.S. and abroad. Environmental engineers typically are employed in designing pollution prevention equipment and systems, designing environmental monitoring systems, helping both government and industry implement environmental regulations, designing water and wastewater treatment systems, and restoring ecosystem health.

B.S. graduates in Environmental Engineering from CSU are well prepared for entry-level positions with regulatory agencies, engineering consulting firms, and environmental divisions of large corporations, particularly in the energy and manufacturing industries. Some example job titles for graduates include, but are not limited to, hydraulic engineer, water resources engineer, environmental engineer, geoenvironmental engineer, reclamation engineer, stormwater engineer, floodplain manager, groundwater engineer, hydrologist, urban/regional planner, water infrastructure engineer or manager, contract administrator, facilities engineer or manager, irrigation engineer, ecological engineer, and educator. Graduate study in a specific area of interest is highly recommended to enhance the ability to undertake more advanced technical responsibilities upon graduation.

Concentrations

- Environmental Engineering Concentration
- Ecological Engineering Concentration