CIVIL ENGINEERING, BS

for the degree of Bachelor of Science in Civil Engineering

Civil and environmental engineers apply basic principles of science, supported by mathematical and computational tools, to address the biggest challenges facing society: ensuring clean air, safe drinking water and sanitation; addressing our changing environment; protecting the population from natural and man-made hazards; designing a sustainable infrastructure that serves everyone; re-imagining human and commodity traffic for an automated future; and of course designing and constructing the world's tallest buildings and most iconic bridges.

The civil engineering program comprises seven focus areas (construction engineering and management, construction materials, environmental engineering and science, geotechnical engineering, water resources engineering and science, structural engineering, and transportation engineering) and three interdisciplinary programs (sustainable and resilient infrastructure systems; energy-water-environment sustainability; and societal risk and hazard mitigation). Although each area and program has its own special body of knowledge and engineering tools, civil and environmental engineering projects often use knowledge and data from many of these topical areas together in order to address societal challenges.

CEE's Program Education Objectives are to educate CEE students to:

1. Successfully enter the civil and environmental engineering profession as practicing engineers and consultants with prominent companies and organizations in diverse topic areas it comprises;
2. Pursue graduate education and research at major research universities and national laboratories;
3. Pursue professional licensure;
4. Advance to leadership positions in the profession;
5. Engage in continued learning through professional development;
6. Participate in and contribute to professional societies and community services.

Program Review and Approval

To qualify for the degree of Bachelor of Science in Civil Engineering, each student's academic program plan must be reviewed by a standing committee of the faculty (the Program Review Committee) and approved by the Associate Head of Civil and Environmental Engineering in charge of undergraduate programs. This review and approval process ensures that individual programs satisfy the educational objectives and all of the requirements of the civil and environmental engineering program, that those programs do not abuse the substantial degree of flexibility that is present in the curriculum, and that the career interests of each student are cultivated and served.