

University of Southern California
VITERBI SCHOOL OF ENGINEERING

Bachelor of Science in Environmental Engineering
Program Learning Objectives

The purpose of the USC Viterbi School of Engineering Bachelor of Science in Environmental Engineering (BSENE) program is to prepare students for professional employment in the broad area of environmental engineering, including the sub-disciplines of water quality control, water resources and water distribution, air pollution and control, solid and hazardous waste management, chemical and biological treatment and remediation procedures, and environmental health effects. Graduates will apply their knowledge in employment in private engineering firms or in the public sector and will be prepared to pursue graduate studies focusing on studies in environmental science, environmental engineering or in one or more of the sub-disciplines of the field.

- Upon completion of the BSENE, students will have a broad understanding of mathematics, science and engineering and will be able to formulate and solve engineering problems, pertinent to the practice of environmental engineering. In their studies, students may opt to pursue BSENE options that focus on particular environmental engineering sub-disciplines, including environmental processes and systems and environmental biotechnology.
- Upon completion of the BSENE, students will be able to apply critical technical skills to design components and systems, satisfying specified design criteria and constraints, and to characterize and solve engineering problems utilizing advanced techniques and modern engineering tools.
- Upon completion of the BSENE, students will be able to apply critical management and communication skills to effectively lead engineering organizations in the completion of complex projects involving multi-disciplinary teams and possibly geographically separated work places.
- Upon completion of the BSENE, students will be able to work in a manner consistent with understood professional standards and ethical responsibilities and to advance to the level of professional licensure in their field of expertise.
- Upon completion of the BSENE, students will have the broad background to allow them to understand and appreciate important issues, in the economic, environmental, and societal context, to allow them to associate engineering decisions with their impacts and to appreciate the domestic and international relationships and contexts that are a part of the current environmental engineering environment.