MAJOR IN CONSTRUCTION ENGINEERING

CSU recognizes the industry's interest in developing a workforce pipeline of qualified construction engineers ready to make an immediate impact across the nation. CSU delivers a comprehensive ABET-accredited Construction Engineering program with robust course offerings that focus on the excellence required to make this program unique and exceptional.

The program achieves industry expectations and anticipated future needs by including focus areas aligned with strengths of CSU faculty experts: Heavy Civil/Infrastructure, Structures/Buildings, and Water/Environmental Facilities. The Construction Engineering degree also includes industry-informed curriculum in virtual design and construction and construction safety engineering.

The program includes an engaged industry advisory board with an active commitment to ensure the success of the program and students, and Enrichment Programming with Industry and Peer Mentorship.

Learning Objectives and Outcomes

The Major in Construction Engineering program strives to provide students with the knowledge, training, and opportunity to achieve the primary educational objective of rewarding careers in construction or related fields, in addition to the expectation that these students, within five years of graduation, will:

1. Be successfully employed in engineering, science, technology, or related careers;
2. Assume management or leadership roles;
3. Engage in continual learning by pursuing advanced degrees or additional educational opportunities through coursework, professional conferences and training, and/or participation in professional societies;
4. Pursue professional registration or other appropriate certifications; and
5. Be active in civic engagement.

The outcomes that students are expected to have attained upon graduation with a B.S. in Construction Engineering are the ability to:

1. Apply knowledge of mathematics, science, and engineering;
2. Design and conduct experiments;
3. Analyze and interpret data;
4. Design a sustainable system or component to meet desired performance specifications;
5. Identify, formulate and solve engineering problems;
6. Communicate and demonstrate professional and ethical responsibilities;
7. Communicate effectively through writing and drawing;
8. Communicate effectively through oral presentations;
9. Explain the impact of engineering on society;
10. Engage in life-long learning;
11. Explain contemporary issues in civil, environmental and architectural engineering;
12. Use modern construction engineering tools, skills; and
13. Explain basic concepts in management, business, public policy and leadership.