

# B.S.C.E. in Civil Engineering

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## Description

The B.S.C.E. degree emphasizes engineering sciences and civil engineering design with four proficiency areas: structural engineering, water resources and environmental engineering, transportation and construction management, and geotechnical engineering. The curriculum prepares the student for both professional practice and graduate study.

**Minimum Total Credit Hours: 129**

## Goals/Mission Statement

### Mission

1. To prepare students with a broad-based education for entering the civil and other related engineering professions, for advanced studies, and for careers in research;
2. To provide a top quality research program and graduate education in selected areas of science and engineering with its impact extending to regional, national, and global communities; and
3. To provide service to citizens, industry, and government via technological and educational innovations.

### Goal

Our graduates will be leaders of the profession and the society.

### Program Educational Objectives

1. Graduates will have a solid foundation in mathematics, sciences, and technical skills to analyze, design, and oversee construction of civil infrastructure systems.
2. Graduates will have the necessary qualifications for employment in civil engineering and related professions, and for pursuing advanced studies.
3. Graduates will be productive in the workplace, and employers will rate their performance as effective.
4. Graduates will rate their educational experience and its benefit as effective.
5. Graduates will demonstrate creativity, professionalism, leadership quality, and ethical and societal responsibilities.

## General Education Requirements

In addition to the courses specified by the School of Engineering general education requirements, the following are required: Math 263-264 and Math 353; laboratory science to be fulfilled by Chem 105, 115 and Phys 211, 212, 221, 222. Students must also complete at least 18 semester hours of general education requirements. Three hours of the course work must be in Econ 310, 3 hours must be in speech or oral communication (Spch 105), 3 hours in humanities, and 3 hours in fine arts. The remaining 6 hours can be in any of the social sciences/humanities/fine arts categories. Course categories acceptable for these 18 hours of credit are specified under the general education requirements for the School of Engineering.

## Course Requirements

Specific requirements for the B.S.C.E. include CSci 251, Engr 207, 309, 312, 321, 310, 323, 362, 400, 402, 453; C E 101, 102, 207, 307, 315, 407, 411, 412, 417, 431, 433, 455, 456, 471, 472, and 481; M E 325; and 9 hours of technical electives (selected in consultation with the student's department chair and adviser).

## Other Academic Requirements

Students in the Department of Civil Engineering are encouraged to take the Fundamentals of Engineering examination prior to awarding of the baccalaureate degree.

