



Civil Engineering

College of Engineering

The student of civil engineering has a broad field of study to provide a strong foundation for entry into the profession or graduate school. Major areas include construction engineering, environmental engineering, geotechnical engineering, materials engineering, structural engineering, transportation engineering, and water resources engineering.

Admission to the degree program is selective. Students should refer to the UK *Bulletin* for general information concerning admission and graduation requirements.

Degree Requirements

The following curriculum meets the requirements for a B.S. in Civil Engineering, provided the student satisfies University Studies and College of Engineering requirements.

Freshman Year

First Semester

CE 120 Introduction to Civil Engineering	1
CHE 105 General College Chemistry I	3
ENG 101 Writing I	3
MA 113 Calculus I	4
HIS 106 Western Culture: Science and Technology I (Humanities)^*	3
GEO 130 Earth's Physical Environment (Cross-Disciplinary)^*	3

Second Semester

CE 106 Computer Graphics and Communication	3
CHE 107 General College Chemistry II	3
COM 199 Presentational Communication Skills	1
ENG 102 Writing II	3
MA 114 Calculus II	4
HIS 107 Western Culture: Science and Technology II (Humanities)^*	3

Sophomore Year

First Semester

CE 211 Surveying	4
CS 221 First Course in Computer Science for Engineers	2
MA 213 Calculus III	4
PHY 231 General University Physics	4
PHY 241 General University Physics Laboratory	1
ECO 201 Principles of Economics I (Social Science)^*	3

Second Semester

EM 221 Statics	3
MA 214 Calculus IV	3
ME 220 Engineering Thermodynamics I	3
PHY 232 General University Physics	4
PHY 242 General University Physics Laboratory	1
Social Science Elective*	3

Junior Year

First Semester

CE 331 Transportation Engineering	3
CE 341 Fluid Mechanics I	3
CE 351 Introduction to Environmental Engineering	3
EM 302 Mechanics of Deformable Solids	3
GLY 220 Principles of Physical Geology	4
MNG 303 Deformable Solids Laboratory	1

Second Semester

CE 303 Introduction to Construction Engineering	3
CE 381 Civil Engineering Materials I	3
CE 382 Structural Mechanics	3
CE 441 Fluid Mechanics II	3
CE 471G Soil Mechanics	3

Senior Year

First Semester

CE 401 Seminar	1
CE 421 Civil Engineering Systems Analysis	3
CE 461G Hydrology	3
EM 313 Dynamics	3
Structures Elective†	3
Technical Elective**	3

Second Semester

System Design Elective††	4
Technical Electives**	6
Supportive Elective†††	3
Cross-Cultural Elective*	3

^Recommended University Studies elective.

*To be selected from University Studies areas in Social Science (6 credits), Humanities (6 credits), Cross-Cultural (3 credits) and Cross-Disciplinary (3 credits/one-half the requirement) in consultation with academic advisor. A minimum of 18 credits in the humanities and social sciences are required.

**The technical electives are to be chosen from any of the courses at the 300 level or above which carry a CE prefix and in which a student is qualified to enroll, exclusive of required courses.

†The structures elective is to be chosen from the following: CE 482 for students **not** intending to take the structural design elective (CE 589) or CE 486G and CE 487G (one of these will count as a technical elective).

††The system design elective is to be chosen from the following: CE 539, CE 569 or CE 589.

†††The supportive elective is to be chosen from any university course excluding more elementary versions of required courses, such as precalculus mathematics or PHY 211.