
The Civil Engineering Program prepares graduates for local, regional or world-wide employment in the engineering profession or placement in a graduate school. The program affords students opportunities to meet and interact with practicing engineers, businesses and government agencies; to participate in professional engineering organizations and in research. The faculty endeavor to be accessible, maintain state of the art instruction and facilities, and to provide liberal access to laboratories and academic support.

A – GENERAL EDUCATION CORE – 42 HOURS

Students must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education core requirements.

Required

020 - Mathematics – 3 hours

MATH 2413 Calculus I (or MATH 2487 Honors) three-hour lecture

030 - Life and Physical Science – 6 hours

PHYS 2425 Physics for Scientists and Engineers I three-hour lecture

PHYS 2426 Physics for Scientists and Engineers II three-hour lecture

040 - Language, Philosophy, and Culture – 3 hours

PHIL 2326 Ethics, Technology, and Society

090 - Integrative and Experiential Learning – 6 hours

Choose any 3 credit hour English Course, and complete:

PHYS 2425 Physics for Scientists and Engineers I one-hour lab

PHYS 2426 Physics for Scientists and Engineers II one-hour lab

Choose corresponding lab from Basic Science section below:

CHEM 1109 Chemistry for Engineers Lab

CHEM 1111 General Chemistry I Lab

B – MAJOR REQUIREMENTS – 76 HOURS (53 advanced)

1 – Civil Engineering Core – 64 hours (41 advanced)

CIVE 1101 Introduction to Civil Engineering

CIVE 2220 Civil Engineering Measurements

CIVE 2440 Civil Engineering Materials

CIVE 3315 Fluid Mechanics and Hydraulics

CIVE 3115 Fluid Mechanics and Hydraulics Laboratory

CIVE 3324 Structural Analysis

CIVE 3331 Environmental Engineering

CIVE 3341 Structural Steel Design

CIVE 3345 Transportation Engineering

CIVE 3475 Geotechnical Engineering and Applications

CIVE 4335 Water Resources Engineering

CIVE 4346 Reinforced Concrete Design

CIVE 4347 Foundation Design

CIVE 4349 Construction Planning and Management

MANE 2332 Engineering Statistics

MANE 3337 Engineering Economics

MECE 2301 Statics

MECE 2302 Dynamics

MECE 2350 Numerical Methods for Engineers

MECE 3321 Mechanics of Solids

MATH 2415 Calculus III

MATH 3341 Differential Equations

2 – Senior Design – 6 hours (6 advanced)

CIVE 4391 Civil Engineering Senior Fundamentals

CIVE 4392 Civil Engineering Senior Project

3 – Technical Electives – 6 hours (6 advanced)

Choose from:

CIVE 4315 Applied Hydrology
CIVE 4333 Water and Wastewater Treatment
CIVE 4348 Highway Engineering
CIVE 4350 Open Channel Flow
CIVE 4351 Structural System Design
CIVE 4352 Earthwork Engineering and Design
CIVE 4359 Construction Scheduling
CIVE 3300 UG Directed Research, Internship/Co-Op in Civil Engineering

C – SUPPORT COURSES – 11 HOURS MINIMUM

1 – Basic Science – 6 hours minimum

Choose one:

CHEM 1309 Chemistry for Engineers
CHEM 1311 General Chemistry I

Choose one:

GEOL 4411 Introduction to Geographic Information Systems
GEOL 1403 Physical Geology
ENVR 3304 Sustainable Development
ENVR 4301 Environmental Regulations
BIOL 1406 General Biology I (or BIOL 1487 Honors)
GEOL 1401 Earth Sciences I
GEOL 1404 Historical Geology
ENVR 1401 Introduction to Environmental Science I
ENVR 1402 Introduction to Environmental Science II

2 – Mathematics – 5 hours

MATH 2413 Calculus I (or MATH 2487 Honors) one-hour lecture
MATH 2414 Calculus II (or MATH 2488 Honors)

TOTAL CREDIT HOURS FOR GRADUATION – 129 HOURS

TOTAL ADVANCED HOURS – 53 HOURS

ADMISSION, PROGRESSION, AND GRADUATION REQUIREMENTS, if applicable:

Progression requirements

Students must receive a grade of 'C' or better in all courses that are prerequisites for civil engineering courses.

Graduation requirements

1. Students must receive a grade of 'C' or better in all civil engineering courses.
2. In addition to the graduation requirements listed in the UTRGV 2018-2019 Undergraduate Catalog, demonstration of proficiency in a language other than English is required at the undergraduate level equivalent to a minimum of six credit hours. Proficiency can be demonstrated by a college credit exam, a placement test approved through the UTRGV Department of Writing and Language Studies, and/or up to six credit hours of college-level language coursework.