
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

Choose one:

PHIL 1310 Ethics, Happiness, and the Good Life (Must be Engineering/Computer Science section)

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 1107 Chemistry for Engineers Lab

CHEM 1111 General Chemistry I Lab

B – MAJOR REQUIREMENTS – 76 HOURS (54 advanced)

1 – Civil Engineering Core – 67 hours (45 advanced)

CIVE 1221 Engineering Graphics

CIVE 2220 Civil Engineering Measurements

CIVE 2240 Materials of Construction

CIVE 3315 Fluid Mechanics and Hydraulics

CIVE 3115 Fluid Mechanics and Hydraulics Laboratory

CIVE 3252 Civil Engineering Systems Analysis

CIVE 3324 Structural Analysis

CIVE 3331 Environmental Engineering

CIVE 3341 Structural Steel Design

CIVE 3345 Transportation Engineering

CIVE 3475 Geotechnical Engineering and Applications

CIVE 4315 Applied Hydrology

CIVE 4335 Water Resources Engineering

CIVE 4346 Reinforced Concrete Design

CIVE 4349 Constructional Planning and Management

MANE 2332 Engineering Statistics

MECE 2301 Statics

MECE 2302 Dynamics

MECE 2340 Engineering Materials

MECE 2140 Engineering Materials Lab

MECE 2350 Numerical Methods for Engineers

MECE 3321 Mechanics of Solids

MECE 3449 Mechanical Engineering Analysis I

MECE 3450 Mechanical Engineering Analysis II

2 – Senior Design – 3 hours (3 advanced)

CIVE 4190 Civil Engineering Senior Design Project I

CIVE 4290 Civil Engineering Senior Design Project II

3 – Technical Electives – 6 hours (6 advanced)

Choose from:

CIVE 4333 Water and Wastewater Treatment
CIVE 4347 Foundation Design
CIVE 4348 Highway Engineering
CIVE 4350 Open Channel Flow
CIVE 4351 Masonry and Timber Design
CIVE 4352 Earthwork Engineering and Design
CIVE 3300 Internship/Co-Op in Civil Engineering

C – SUPPORT COURSES – 11 HOURS MINIMUM

1 – Basic Science – 6 hours minimum

Choose one:

CHEM 1307 Chemistry for Engineers
CHEM 1311 General Chemistry I

Choose one:

GEOL 3308 Introduction to Geographic Information Systems
GEOL 1403 Physical Geology
ENVR 3304 Environmental Approaches to 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 Environmental Science I
ENVR 1402 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 – 54 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 2015-2017 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.