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.