Civil Engineering (MS)

Overview

The Master of Science in Civil Engineering supports the mission of The University of Texas Rio Grande Valley by preparing students who are globally competitive to effectively practice engineering with professionalism and a commitment to ethnical responsibilities. Students will be afforded opportunities to meet and interact with practicing engineers, businesses, and governmental agencies as well as to participate in professional engineering organizations and in research. The program prepares students for local, regional, or worldwide employment in the engineering profession with a 30-hour degree program.

Admission Requirements

To be admitted to the Master of Science in Civil Engineering degree program with clear admission status, prospective candidates must first meet all requirements for graduate admission to UT Rio Grande Valley, as well as the other requirements listed below:

1. Bachelor's degree in Civil Engineering or a bachelor's degree in another field with courses and/or experience that prepare the applicant for graduate work in Civil Engineering.
2. Undergraduate GPA of at least 3.0 in the last 60 semester credit hours. Students with an undergraduate GPA between 2.75 and 3.0 may be considered for conditional admission.
3. Three letters of recommendation from professional or academic sources.
4. Letter of intent detailing professional goals and reasons for pursuing the graduate degree.
5. Curriculum Vitae or Resume.

Application must be submitted prior to the published deadline. The application is available at www.utrgv.edu/gradapply.

Program Requirements

Leveling Courses

Students admitted to the MS in Civil Engineering without a civil engineering background may be required to completed one or more of the leveling courses below as determined by the advisor

CIVE 3331	Environmental Engineering	3
CIVE 3341	Structural Steel Design	3
CIVE 3345	Transportation Engineering	3
CIVE 4335	Water Resources Engineering	3
CIVE 4346	Reinforced Concrete Design	3
CIVE 4347	Foundation Design	3
CIVE 4349	Construction Planning and Management	3

Required Courses - 6 Hours

This degree plan includes courses that appear in more than one section of the degree plan. These courses can only be used to fulfill one requirement on the degree plan and credit hours will only be applied once.

Choose two from the following:

CIVE 6341	Advanced Water Resources Engineering	3
CIVE 6352	Advanced Geotechnical Engineering	3
CIVE 6354	Advanced Transportation Engineering	3
CIVE 6359	Advanced Construction Scheduling	3

CIVE 6361	Theory of Structures	3

Non-Thesis Option

Prescribed Electives - 24 Hours

This degree plan includes courses that appear in more than one section of the degree plan. These courses can only be used to fulfill one requirement on the degree plan and credit hours will only be applied once.

CIVE 6311	Open Channel Flow	3
CIVE 6315	Hydrologic Modeling	3
CIVE 6322	Construction Estimating	3
CIVE 6324	Construction Method and Equipment	3
CIVE 6340	Advanced Cement Concrete Materials	3
CIVE 6341	Advanced Water Resources Engineering	3
CIVE 6343	Water Quality Engineering	3
CIVE 6345	Geo-Environmental Engineering	3
CIVE 6352	Advanced Geotechnical Engineering	3
CIVE 6354	Advanced Transportation Engineering	3
CIVE 6356	Introduction to Data Science	3
CIVE 6359	Advanced Construction Scheduling	3
CIVE 6361	Theory of Structures	3
CIVE 6362	Structural Dynamics	3
CIVE 6364	Finite Element Methods for Engineers	
CIVE 6369	Construction Contracts	
CIVE 6381	Independent Study and Research	3
CIVE 6399	Topics in Civil Engineering	3

With program coordinator's approval, students may take up to 6 credit hours outside of the Department of Civil Engineering at UTRGV.

Capstone Requirement

Technical Report Requirement

To fulfill the program's requirements and qualify for graduation, students are mandated to submit a technical report covering advanced topics related to a civil engineering course of their choice, during their enrollment in a CIVE course. The majority of CIVE courses necessitate a technical report that fulfills this requirement. The report should meet the standards of a master's-level document, containing essential chapters including an introduction, results, conclusion, and references. However, the specific criteria for the quality of the report should be discussed with the course instructor. The course instructor will evaluate the quality of the reports, and then the reviewed report will be submitted to the graduate program coordinator for final approval regarding the fulfillment of the technical report requirement.

Thesis Option

Prescribed Electives - 18 Hours

This degree plan includes courses that appear in more than one section of the degree plan. These courses can only be used to fulfill one requirement on the degree plan and credit hours will only be applied once.

CIVE 6311	Open Channel Flow	3

CIVE 6315	Hydrologic Modeling	3
CIVE 6322	Construction Estimating	3
CIVE 6324	Construction Method and Equipment	3
CIVE 6340	Advanced Cement Concrete Materials	3
CIVE 6341	Advanced Water Resources Engineering	3
CIVE 6343	Water Quality Engineering	3
CIVE 6345	Geo-Environmental Engineering	3
CIVE 6352	Advanced Geotechnical Engineering	3
CIVE 6354	Advanced Transportation Engineering	3
CIVE 6356	Introduction to Data Science	3
CIVE 6359	Advanced Construction Scheduling	3
CIVE 6361	Theory of Structures	3
CIVE 6362	Structural Dynamics	3
CIVE 6364	Finite Element Methods for Engineers	
CIVE 6369	Construction Contracts	
CIVE 6381	Independent Study and Research	3
CIVE 6399	Topics in Civil Engineering	3

With program coordinator's approval, students may take up to 6 credit hours outside of the Department of Civil Engineering at UTRGV .

Thesis - 6 Hours

CIVE 7300	Master Thesis I	3
CIVE 7301	Master Thesis II	3

Total Credit Hours: 30