

## Master of Science in Civil Engineering

- With thesis (30 credits): 15 credits from the approved list; 9 credits of electives (with approval of the advisor); and 6 credits of thesis.
- Non-thesis (33 credits): 21 approved credits, 9 elective credits, and 3 credits of technical report.  
Note: At least 15 credits of 6000 level classes must be taken.

### List of Approved Graduate CE Courses \*

CE 5506 Green and Sustainable Engineering, 3 cr.  
CE 5524 Open Channel Flow, 3 cr.  
CE 5525 Water Resources, 3 cr.  
CE 5531 Advanced Mechanics of Solids, 3 cr.  
CE 5534 Geotechnical Design, 3 cr.  
CE 5535 Hydraulic Design, 3 cr.  
CE 5554 Basic Engineering Geology, 3 cr.  
CE 5555 Geologic Data Methods, 3 cr.  
CE 5560 Project Management, 3 cr.  
CE 5562 Design of Steel Structures, 3 cr.  
CE 5564 Design of Concrete Structures, 3 cr.  
CE 5565 Design of Prestressed Concrete Structures, 3 cr.  
CE 5566 Design of Wood Structures, 3 cr.  
CE 5568 Behavior of Composite Mat., 3 cr.  
CE 5599 Foundation Engineering, 3 cr.  
CE 5599 Experimental Course, 1-6 cr.  
CE 6626 Introduction to Computational Fluid Dynamics, 3 cr.  
CE 6628 Hydraulics of Pipelines, 3 cr.  
CE 6652 Structural Reliability, 3 cr.  
CE 6652 Advanced Topics in Civil Engineering, 3 cr.  
CE 6664 Dynamics of Structures, 3 cr.  
CE 6665 Finite Element Methods, 3 cr.  
CE 6650 Thesis, 1-6 cr.  
CE 6660 Special Project, 3 cr.

### List of Approved Graduate Elective Courses \*\*

ENGR 5521 Advanced Engineering Mathematics I, 3 cr.  
ENGR 5522 Advanced Engineering Mathematics II, 3 cr.  
ENVE 5504 Environmental Risk Assessment, 3 cr.  
ENVE 6615 Water Quality Modeling and Control, 3 cr.  
ENVE 6616 Biological Treatment of Wastewater, 3 cr.  
ENVE 6630 Air Pollution and Control, 3 cr.  
EDUC 6601 Research and Writing, 3 cr.  
MATH 5557 Applied Regression Analysis, 3 cr.  
MATH 5558 Experimental Design, 3 cr.  
ME 5540 Vibration Analysis, 3 cr.  
ME 5551 Compressible Fluid Flow, 3 cr.  
PSCI 6603 Scientific Communication, 3 cr.  
GEOL 5502, 5502L Geomorphology and Laboratory, 4 cr.  
GEOL 5503, 5503L Principles of Geographical Information System and Laboratory, 3 cr.  
GEOL 5504 Advanced Geographic Information Systems, 3 cr.  
GEOL 5506 Environmental Geology, 3 cr.  
GEOL 5507 GPS Application in Research, 3 cr.

\* Other graduate credits can be taken with the approval of the advisor and/or the advisory committee.

\*\* Approved CE and ENVE courses may also be used as approved elective courses.