

MSCE Cross Cutting Program

Geotechnical/Geosynthetic Engineering

Required CROSS-CUTTING Courses (12 credits)

Course	Term	Name
ENVE 750 or ENVE 727	F/W	Data-Based Engineering Modeling or Risk Assessment
ENVE 555 or CIVE 615	F/F	Geographic Information Systems or Infrastructure Condition Evaluation
CIVE 731	W	Experimental Soil Mechanics-II
CAEE 790	S	Engineering Life Cycle Analysis

Required Theme Program Courses (12 credits)

Course	Term	Name
CIVE 632	F	Advanced Soil Mechanics
CIVE 838 or CIVE 635	W/F	Soil Behavior or Slope Stability and Landslides
CIVE 640 or CIVE 650	S/F	Environmental Geotechnics or Geosynthetics I – Waste Containment Applications
CIVE 730 or CIVE 651	W/W	Experimental Soil Mechanics-I or Geosynthetics II – Transportation Applications

Technical Elective Courses (12 credits)

These courses must be approved by the student's advisor and the graduate advisor.
From any of the following that were not already counted for credit:

Course	Term	Name
CIVE 530	S	Geotechnical Engr. for Highways
CIVE 615	F	Infrastructure Condition Evaluation
CIVE 635	F	Slope Stability and Landslides
CIVE 640	S	Environmental Geotechnics
CIVE 650	F	Geosynthetics I – Waste Containment Applications
CIVE 651	W	Geosynthetics II – Transportation Applications
ENVE 555	F	Geographic Information Systems
ENVE 727	W	Risk Assessment
ENVE 750	F	Data-Based Engineering Modeling
MATH 520	F	Numerical Analysis I
MATH 521	W	Numerical Analysis II
MEM 591	F	Appl. Engineering Analytical Methods I
MEM 592	W	Appl. Engineering Analytical Methods II
MEM 660	F	Theory of Elasticity I
MEM 663	S	Continuum Mechanics
MEM 664	W	Introduction to Plasticity
MEM 681	F	Finite Element Method I
MEM 682	W	Finite Element Method II
MEM 894	F	Engineering Mathematics

Electives or Thesis (9 credits)

For students writing an M.S. thesis, these nine credits should be 6 research credits and 3 Thesis Credits. Full-time Master students are encouraged to do a Thesis. Students opting not to do a Thesis will be required to select 9 credits of coursework from the Technical Elective Section listed above.