

**Sample Course Plan for Coursework MSCE: Geotechnical Engineering****Assumed student background**

The sample course plan shown below was designed assuming that a student has taken (as a minimum) CEE 3101 (Civil Engineering Materials) and CEE 3810 (Soil Mechanics for Engineers), or equivalents.

Requirements: 30 credits *minimum* (12 maximum credits at 3000-4000 level; 18 credits at 5000 level)

Sample Coursework List

	Credits	Semester
1) CEE 4820 – Foundation Engineering	3	Fall
2) CEE 4830 – Geosynthetics Engineering	3	Spring
3) CEE 5102 – Advanced Concrete Materials	3	Fall
4) CEE 5810 – Advanced Soil Mechanics	3	Fall
5) CEE 5811 – Fundamentals of Soil Behavior & Eng. Lab.	3	Spring
6) CEE 5870 – Multiphysics of Porous Materials	3	On Demand
7) GE 4860 - Computer Methods for Slope Stability	3	Spring
8) Systems Elective	3	
9) Graduate Elective	3	
10) Graduate Elective	3	

Systems Elective (Must take at least one of these courses.)

CEE 5710 – Modeling and Simulation Applications	3	Fall
CEE 5730 – Probabilistic Analysis and Reliability	3	Fall
CEE 5740 – Introduction to System Identification	3	Spring
CEE 5760 – Optimization Methods	3	Spring

Sample Graduate Electives

CEE 4401 – Pavement Design	3	Fall
CEE 4850 – Rock Engineering for Civil Engineers	3	Spring (alt)
CEE 5101 – Bituminous Materials	3	Fall
CEE 5350 – Infrastructure Life Cycle Engineering	3	Spring
CEE 5401 - Advanced Pavement Design	3	Spring
CEE 5890 – Special Topics in Geotechnical Engineering	1-3	Fall/Spr/Sum
GE 4100 - Geomorphology and Glacial Geology	3	Spring (alt)
GE 5250 - Advanced Computational Geosciences	3	Spring
MEEM 5160 – Experimental Stress Analysis	3	Fall
MSE 4320 – Corrosion and Environmental Effects	3	Fall
MSE 5140 – Mechanical Behavior of Materials	3	Fall

Disclaimer: This course plan is meant to serve as a sample for a student interested in pursuing a coursework-only MSCE degree with a focus on geotechnical engineering. This plan may not be appropriate for all students, nor is it necessary for a student to follow this schedule to earn a coursework-only degree. Student-specific goals and prior education must be considered and consultation with faculty members is required. Consult with

instructors before enrolling in courses that are outside of the Department to ensure that the course will be consistent with your goals and background since sometimes other courses may provide more value to the student. **All MSCE degree requirements and rules set forth by the Department and the Graduate School must be met in order for a student to finish the program**