



Sample Course Plan for Coursework MSCE: Geospatial Engineering

Assumed student background

The sample course plan shown below was designed assuming that a student has an undergraduate degree in engineering, surveying, geography, or natural sciences.

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

Sample Coursework List	Credits	Semester
1) SU 5140 – Photogrammetry & UAV Mapping	4	Fall
2) SU 5022 – Geodetic Positioning	3	Fall
3) SU 5060 – Geodesy	3	Spring
4) SU 5541 – Close-range Photogrammetry	3	Spring
5) SU 5640 – Introduction to Remote Sensing	3	Spring
6) FW 5550 – Geographic Information Science and Spatial Analysis	4	Fall
7) FW 5540– Remote Sensing of the Environment	3	Fall
8) FW 5541- Remote Sensing of the Environment Lab	1	Fall
9) Systems 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

MA 5701 – Statistical Methods	3	Fall/Spr/Sum
MA 5627– Numerical Linear Algebra	3	Spring
MA 5631– Advanced Numerical Linear Algebra	3	Fall
MA 5741– Multivariate Statistical Methods	3	Spring
CS 5841 – Machine Learning	3	Spring
EE 5522 – Digital Image Processing	3	Fall/Spr
FW 5553 – Python Programming for ArcMap GIS	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 geospatial 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**