The Ohio State University
College of Engineering
Department of Civil, Environmental and Geodetic Engineering
Surveying and Mapping Minor (SURVMAP-MN)

Department of Civil, Environmental and Geodetic Engineering 470
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Surveying is a crucial part of land development. Professional Surveyors must have a Bachelor of Science in Civil Engineering or Surveying and Mapping, and often work closely with architects and builders to produce precise surveys and maps of surface features of the earth. Surveyors can choose from many specialties and get involved at many stages of a project. Students who pursue a Surveying and Mapping minor will gain an understanding of global positioning; analyzing spatial data; digital map production and electronic data collection; survey software applications, boundary surveying and construction layout techniques. Students interested in pursuing a career in professional land surveying should consider completing the Surveying and Mapping minor. Completion of the minor, in combination with a BS-Civil Engineering degree, will enable students to sit for their Fundamentals of Surveying Exam in the State of Ohio and pursue licensure as a Professional Surveyor.

Prerequisites (3 course; 11-15 CH)
Students must complete the following course prior to beginning the minor coursework.
MATH 1172 (5) or MATH 1152 (5) AND 2153 (4) or equivalent
CIVILEN 2050 (3) – Probabilistic Applications and Data Interpretation in Civil and Environmental Engineering
CIVILEN 2410 (3) – Introduction to Surveying

Required Courses (5 Courses; 16 CH)
Students must complete all of the following courses:

CIVILEN 5410 (3) – Engineering Surveying
CIVILEN 5411 (3) – Legal Aspects of Surveying
CIVIL EN 5412 (3) – Land Boundary & Development Principles
CIVILEN 5441 (3) – Introduction to GPS: Theory and Application
CIVILEN 5461 (4) – Geospatial Numerical Analysis

Course	Title	Term	Hours	Pre-Reqs
2410	Intro to Surveying	AU/SP	3	CIVILEN 2050 (concur) and enrollment in CIVILEN or EVENG major
5410	Engineering Surveying	AU	3	CIVILEN 2410
5411	Legal Aspects of Surveying	AU	3	CIVILEN 2410
5412	Land Boundary & Development Principles	SP	3	CIVILEN 5411
5441	Introduction to GPS	SP	3	Math 1172 or 2153 and Jr. standing
5461	Geospatial Numerical Analysis	AU	4	CIVILEN 2410

Surveying and Mapping minor program guidelines

The following guidelines govern this minor:

Credit hours required A minimum of 16 credit hours. At least 6 credit hours must be 3000-level or above.

Transfer and EM credit hours allowed A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE A student is permitted to overlap up to two courses between the GE and the minor as long as the minor consists of at least 4 courses.

Overlap with the major and additional minor(s)
• The minor must be in a different subject than the major.
• The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required
• Minimum C- for a course to be listed on the minor.
• Minimum 2.00 cumulative point-hour ratio required for the minor.
• Coursework graded Pass/Non-Pass cannot count on the minor.

Minor Approval/Changing the Minor
Any changes must be approved by the Department Civil, Environmental, and Geodetic Engineering.

Filing the minor program form: If required by the student's respective department, the minor program form must be filed at least by the time of the graduation application.

College of Arts and Sciences
Curriculum and Assessment Services
306 Dulles Hall, 230 W. Annie and John Glenn Ave.
http://artsandsciences.osu.edu

5/15/12 DH
3/12/15 BV
Revised CAA 10-18-2023 RLS
Updated 10-28-2026 MCR