



Course Syllabus

Course Code	Course Title	ECTS Credits
CEE-280	Engineering Surveying	7
Prerequisites	Department	Semester
None	Engineering	Spring
Type of Course	Field	Language of Instruction
Required	Civil & Environmental Engineering	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr Loizos Papaloizou	2 nd
Mode of Delivery	Work Placement	Corequisites
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce the basics of Geomatics (Surveying).
- Provide students with the essential tools needed in surveying.
- Teach students to understand and analyse errors in surveying.
- Provide students experiences via the practical usage of surveying equipment.
- Improve students' knowledge of the mathematical background required in engineering surveying methods.

Learning Outcomes:

After completion of the course students are expected to be able to:

- Understand the various stages of survey work.
- Know how to use a level to perform height measurements.
- Use a total station and determine point coordinates.
- Identify, formulate, and solve survey problems.
- Understand the propagation of errors in surveying.
- Use software packages specific for surveying and map making.
- Create maps with contours and produce map sections.

Course Content:

- Introduction geomatics. Importance and History of Surveying
- Coordinate systems, plane and geodetic surveys. principles of surveying
- Methods of location of a point
- Introduction to surveying instruments
- Errors in measurements sources, types of errors and their treatment.
- Methods of height determination;
- Levelling; Theory and field exercises.
- Distance measurement, EDMs.
- Bearings Azimuths and angles
- Total stations; Field exercises.
- Contours and Cross sections
- Mapping

Learning Activities and Teaching Methods:

Lectures, Field Projects, Experiments, in-class assignments, discussion.

Assessment Methods:

Homework, Field project, mid-term exam, final exam.

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Elementary Surveying: An Introduction to Geomatics	Charles D. Ghilani	Pearson	2017	978-0134604657

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Surveying	Jack C. McCormac, Wayne Sarasua, William Davis	McGraw Hill	2012	978- 0470496619
Engineering Surveying	W. Schofield M. Breach	Routledge	2007	978- 0750669498