AH1812 Geodetic Surveying I 7.5 credits

Geodetisk mätningsteknik I

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for AH1812 valid from Autumn 2014

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

For admitted students to the Master of Science in Civil Engineering and Urban Management (CSAMH) or Bachelor's Programme in Property Development and Agency (TFAFK) there are no additional requirements.

For other students:

General eligibility for university studies in Sweden, i.e. completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B/Swedish 3 and English corresponding to English A/English 6. In addition, specific requirements of mathematics corresponding to Mathematics C/Mathematics 3b or Mathematics 3c.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After the course the student should be able to:

- understand the principles for how geodetic instruments are functioning and how they are used
- understand how local and regional geodetic reference and height systems are built up
- measure and compute simple densifications of geodetic networks
- plan and perform the different main parts in a setting out project
- plan and perform the different main parts in a positioning project
- evaluate the quality in different types of observed data and in the result

Course contents

Instruments and methods for different types of positioning.

Control networks: the structure of local reference systems in different dimensions. Setting out: planning, coordinate computations, measure and computation methods and report writing.

Positioning, detail measurements: measurement and computation methods and further handling in a CAD-software. Quality in the measured data and in the final results.

The exercises and laboratory work includes e.g. two larger projects, one for a setting out project and one for a positioning project. The aim of these projects is that the student will work with and understand the whole process chain in such types of projects.

Disposition

Lectures 22 h

Exercises 40 h

Course literature

Lantmäteriet m.fl. 2012: Geodetisk och fotogrammetrisk mätnings- och beräkningsteknik. Tillgänglig på www.lantmateriet/hmk.

Examination

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 4.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

A written examination (TEN1; 3 cr)
Exercises and laboratory work (ÖVN1; 4,5 cr)

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.