AG1311 Graphic Information Systems 7.5 credits

Grafiska informationssystem

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 AG1311 valid from Spring 2011

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Introduction to the Planning and Building Process

For single course:
Basic university entrance requirements including documented proficiency in Swedish.
Basic computer skills recommended.

Language of instruction

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

Intended learning outcomes

When the course is finished you should know:

- How to create a database and how to import data to it
- How to write simple SQL questions
- How different reference systems are designed and how they can be used
- How to acquire data to a GIS
- Which benefits GIS have and how GIS are used in different fields in the society
- How to choose and obtain suitable data
- How to estimate the quality of different kind of data
- How to design a geographic database
- How to solve common problems with GIT
- How to present the result in a thematic map
- The basic commands in Autocad
- How to draw, edit and write distances in 2D-models
- How to handle and use layer structures in a CAD program
- How to interpret the most common drawing symbols used in the building trade.

Course contents

Databases: How to design and use databases. Database structure, query languages, different types of database structures.

Reference systems: Description of some reference surfaces, how reference systems can be established, examples of local and global existing systems. Acquisition of data.

Geographic Information Technology: Areas of application. Data sources, quality of data, data access etc.

Digitising and scanning. Data structure and storage. Searches and analyses, visualisation.

CAD: Principles of graphic representation, drawing technique, norms.

Disposition

Lectures 24h
Laboration 44h
Project 10 h

Course literature

- Harrie, Lars (red). Geografisk informationsbehandling – teori, metoder och tillämpningar. In Swedish.
- The literature in Autocad is not yet decided.

Examination

- LAB2 - Laboratory Work, 3.0 credits, grading scale: P, F
- PRO1 - Project, 1.5 credits, grading scale: P, F
- TEN2 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, 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

Written exam (TEN2; 3 cr), laboratory work (LAB2; 3,0 cr) and projects (PRO1; 1,5 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.