AG2416 Advanced Remote Sensing 7.5 credits

Avancerad fjärranalys

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

Establishment

Course syllabus for AG2416 valid from Autumn 2014

Grading scale

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

Education cycle

Second cycle

Main field of study

The Built Environment

Specific prerequisites

For admitted students to the Master of Science in Civil Engineering and Urban Management (CSAMH) or the Master of Science in Transport and Geoinformation Technology (TTGTM), there are no additional requirements.

For other students:

- A completed bachelor's degree in civil engineering, geomatics, geography, engineering physics, computer science, mathematics, statistics, environmental science, transport science, and/or urban planning, including at least 6 university credits (hp) in each of the following or their equivalents: Programming, Probability & Statistics; and

- Documented proficiency in English corresponding to English B

Language of instruction

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

Intended learning outcomes

After the course, students should be able to understand sophisticated techniques for acquiring remotely sensed data, to apply advanced methods for image processing and analysis, and to use remotely sensed data for various applications such as planning, environmental monitoring and natural resource management.

Course contents

- Remote Sensing & In Situ Data
- Image Processing
- Image Analysis
- Image Classification
- Digital Change Detection
- Remote Sensing Applications

The course is composed of lectures, laboratory exercises, project and student presentations.

Disposition

Lectures 20 hours

Labs 32 hours

Project 10 hours

Course literature

Introductory Digital Image Processing: A Remote Sensing Perspective, 3rd edition, Prentice Hall, Upper Saddle River, New Jersey. 526 pp.

Examination

- PRO1 - Project, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F

- LAB1 - Laboratory Work, 3.0 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.

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

Other requirements for final grade

LAB1 - Laboratory Work, 3.0 credits, grade scale: P, F
PRO1 - Project, 1.5 credits, grade scale: P, F
TEN1 - Examination, 3.0 credits, grade scale: A, B, C, D, E, FX, F

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.