AG2414 Spatial Analysis 7.5 credits

Rumslig analys

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

Establishment

Course syllabus for AG2414 valid from Spring 2020

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): AG2412 Geovisualisation or an equivalent course.

For other students:

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

- Documented proficiency in English corresponding to English B
- AG2412 Geovisualisation or equivalent course

Language of instruction

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

Intended learning outcomes

The course is designed to familiarize students with the principles of spatial analysis and advanced concepts/techniques used to explore, analyze and model geospatial data.

Course contents

- Cartographic Modeling and Multi-Criteria Evaluation
- Spatial Statistics, Interpolation and Kriging
- Space Syntax and Urban Morphology
- Cellular Automata and Agent-based Modeling
- Geographical Data Mining

Disposition

Lectures 20h
Laborations 36h
Seminar 6h
Written examination

Course literature

Annonseras vi kursens start

Examination

- SEM1 - Seminar, 1.5 credits, grading scale: P, F
- TEN2 - Written examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB2 - 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

Written exam (TEN2; 3 cr)
Seminar (SEM1; 1,5 cr)
Approved laboratory reports (LAB2; 3 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.