



FAG3112 Spatial Analysis 7.5 credits

Spatial analys

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

Establishment

Course syllabus for FAG3112 valid from Autumn 2019

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

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 introduce the principles of spatial analysis and advanced concepts/techniques which are used to explore, analyze and model geospatial data.

Spatial analysis is the crux of GIS: the means of adding value to geospatial data, and turning data into information. Therefore, the goals of this course are 1) to teach students the

fundamental concepts and advanced techniques of spatial analysis in lectures, 2) to allow students to experience these concepts and apply these techniques to solve realistic model problems in laboratory exercises, and 3) to develop deeper understanding for these concepts and techniques by critically evaluating prominent related scientific articles in seminars. In addition to enforcing concepts and techniques, the laboratory work and seminar will also prepare students to design, undertake, and critically evaluate GIS projects, and the seminars will strengthen the students' public speaking skills as they present scientific articles to their peers and will improve the students' scientific comprehension, design, presentation, and writing skills as they read, summarize, and review the seminar articles.

Course contents

Cartographic modeling & Multi-Criteria Evaluation (MCE)

Point pattern analysis

Geostatistics, interpolation and Geographically Weighted Regression (GWR)

Space syntax and urban morphology

Cellular automata and agent-based modeling

Spatial, spatio-temporal and trajectory data mining

Examination

- PRO1 - Project work, 7.5 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.

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

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.