



LUND UNIVERSITY
Faculty of Science

SYLLABUS

Date
20 September 2016

Reg. Nr.
U 2016/626

Syllabus for the course Geographic Information Science, NAGE005 *Swedish title: Geografisk informationsvetenskap*

The course syllabus was confirmed by the Faculty board for graduate studies 25 November 2016. The course is in the third cycle and amounts to 5 credits.
The course syllabus is formally approved in Swedish. This is a translation.

Learning outcomes

On completion of the course, participants shall be able to:

Knowledge and understanding

- Describe several research issues in geographic information science..
- State how to describe geographic data based on semantic models.
- Describe the use of spatio-temporal analysis models in the context of their own thesis area.

Skills and abilities

- Analyse and present how current research issues in geographic information science are relevant to the students' own dissertation work
- Search for, read and summarize scientific literature.

Judgement and approach

- recognize the importance of keeping abreast of current research issues not only within their own dissertation TOPIC but also wider in geographic information science.

Course content

This postgraduate course aims to be a link between the content of courses at the master level, and current research issues in geographic information science. the exact content of the course may vary, partly depending on the research development and partly on the direction of the department's research groups. examples of issues that the course can include are:

- Development and use of more advanced models to perform geographic analysis. Of particular interest are models that include both space and time (so called spatio-temporal models)
- Development of semantic techniques (Ontologies , etc.) within geographic information and links to the semantic web technology.
- Management of the time dimension in the collection and representation of spatial data.
- Use of Data Structures (network and other topological structures) and the development of methods based on them to perform geographic analysis.

Teaching

The course will consist of around four segments. each segment will have an introductory lecture, followed by exercises or independent tasks. each segment ends with a seminar, with individual feedback on submitted exercises or reports.

Assessment

Assessment is based on participation in the seminar, submission of reports and practical exercises.

Grading scale

Possible grades are Pass and Fail. To pass the course, the student must actively participate in the seminars and have approved reports and exercises.

Language of instruction

This course is given in English.

Entry requirements

A Masters degree in science or engineering with a significant component of geographic information science.