



COURSE SYLLABUS **Geographical Information Systems, 6 credits**

Geografiska informationssystem, 6 högskolepoäng

Course Code: TGIK18	Education Cycle: First-cycle level
Confirmed by: Dean Feb 1, 2017	Disciplinary domain: Technology (95%) and social sciences (5%)
Revised by: Director of Education Sep 27, 2021	Subject group: BY1
Valid From: Jan 1, 2022	Specialised in: G1F
Version: 2	Main field of study: Civil Engineering

Intended Learning Outcomes (ILO)

After completing the course, the student shall:

Knowledge and understanding

- demonstrate basic knowledge about geographical information systems, GIS
- demonstrate knowledge about different methods to perform spatial analyses

Skills and abilities

- demonstrate the ability to use GIS tools to perform spatial analyses
- demonstrate the ability to independently solve a problem by using GIS, and present the result in a well structured report

Judgement and approach

- demonstrate the ability to evaluate and critically judge the reliability and usability of GIS analyses

Contents

This course gives basic knowledge about GIS and the application within the field of urban planning and spatial management.

This course includes the following elements:

- Data structures and data modelling
- Spatial data structures
- Geographical databases
- Cartographical presentation
- Data collection for GIS by remote sensing and geodetic surveying
- Spatial analysis
- Applications within urban planning and spatial management

Type of instruction

The teaching consists of lectures and project work. The project work is mandatory.

The teaching is conducted in English.

Prerequisites

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Project work	6 credits	5/4/3/U

Course literature

The literature list for the course will be provided 8 weeks before the course starts.

Harrie L. (red). Geografiska informationsbehandling, Teori, Metoder och Tillämpningar. (upplaga 6).

ISBN-nummer: 9789144088778

Laboratory material is provided digitally during the course.

Heywood I., Cornelius S., Carver S. An Introduction to Geographical Information Systems. 4/E.

ISBN-nummer: 9780273722632