



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

*Geografiska informationssystem, 6 högskolepoäng*

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<b>Course Code:</b> TGIK18	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Dean Feb 1, 2017	<b>Disciplinary domain:</b> Technology (95%) and social sciences (5%)
<b>Valid From:</b> Jan 1, 2018	<b>Subject group:</b> BY1
<b>Version:</b> 1	<b>Specialised in:</b> G1F
<b>Reg number:</b> JTH 2017/387-313	<b>Main field of study:</b> Civil Engineering

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### **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.

The final grade is based on the grades from the separate tasks.

Final grade is given when all tasks are approved.

Registration of examination:

Name of the Test	Value	Grading
Examination	2 credits	5/4/3/U
Project work	4 credits	5/4/3/U

### Course literature

The literature is preliminary until one month before the course starts.

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

ISBN-nummer: 9789144088778

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

ISBN-nummer: 9780273722632