

## NGEU21, Web GIS, 7.5 credits

### *Webb GIS, 7,5 högskolepoäng*

#### Second Cycle / Avancerad nivå

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### Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2019-12-04 to be valid from 2019-12-04, autumn semester 2019.

### General Information

The course is offered as a commissioned education.

The course is a compulsory course at second cycle level for a Degree of Master of Science (120 credits) with a specialisation in geomatics. The course is also given for students at the faculty of technology and as a freestanding course.

*Language of instruction:* Swedish

#### *Main field of studies*

Geomatics

Physical Geography and Ecosystem Science

#### *Depth of study relative to the degree requirements*

A1N, Second cycle, has only first-cycle course/s as entry requirements

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### Learning outcomes

#### Knowledge and understanding

To pass the course, the student should be able to:

- analyse the possibilities and limitations to handle geographic information via Internet
- explain the theory of cartographic visualisation on computer screens,
- account for different technologies to distribute geographic information via Internet and advantages and disadvantages with these technologies
- account for applications and use of geographic information processing via Internet,

- describe basic programming techniques and tagging languages for GIS services on the Internet
- thoroughly describe standardised Internet based map services and
- illustrate some important aspects of implementation of map services in an organisation.

### **Competence and skills**

To pass the course, the student should be able to:

- independently handle a program for development of GIS services on the Internet
- create a map service with good cartographic properties, and
- have basic skills in adapting a GIS service by means of tag languages and script programming.

### **Judgement and approach**

To pass the course, the student should be able to:

- have a holistic view on how Internet can influence the use of geographic data and
- understand which laws and ethical rules that must be observed when using geographic data.

### **Course content**

In the basic courses, the students have got familiar with GIS as an information system that is used on an independent computer. The aim of this course is to study how GIS can be used in a client-server environment where the communication takes place via Internet. A part of the course also treats cartographic rules for computer screens. The lectures treat the most important technologies for transfer of geographic data via Internet. Exercises are mainly directed towards creating Internet GIS services by means of different programming systems and own encoding using tag languages and script programming. A part of the course treats rules for cartographic presentation on computer screens. The course ends with a larger project where the student individually creates a GIS service on the Internet.

### **Course design**

The teaching consists of lectures, exercises, seminars and project work. Participation in exercises, seminars and project work and thereby integrated other teaching is compulsory.

### **Assessment**

Examination consists of a written exam paired with oral and written presentations of project work. For students not passing the regular exam, an additional exam event is offered in close proximity.

In consultation with Disability Support Services, the exam may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equal to that of a student without a disability.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## **Grades**

Marking scale: Fail, Pass, Pass with distinction.

For a Pass on the course, students must have passed the exam, the written assignments and project presentations, and participated in all compulsory components.

## **Entry requirements**

Admission to the course requires Degree of Bachelor in physical geography or the equivalent including 30 credits in GIS.

## **Further information**

The course may not be included in qualification together with GISN09 Internet GIS, 7.5 credits or NGEN07, Web GIS, 7.5 credits.

## Subcourses in NGEU21, Web GIS

Applies from H21

2101 Web GIS, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction

Applies from H19

1901 Web GIS, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction