



Department of Earth and Environmental Sciences

## GISN09, GIS: Internet GIS, 7.5 credits

*GIS: Internet-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 2007-03-01 and was last revised on 2013-01-17. The revised syllabus comes into effect 2013-01-17 and is valid from the spring semester 2013.

### General information

The course is an elective course for second-cycle studies for a Degree of Master of Science (120 credits) in geographic information science. Language of instruction: English.

*Language of instruction:*

*Main field of study Specialisation*

Physical Geography            A1F, Second cycle, has second-cycle course/s as entry requirements

### Learning outcomes

*Knowledge and understanding* To pass the course, the student should:

- analyse the possibilities and the limitations to handle geographic information via Internet
- explain the theory of cartographic visualisation on screens,
- account for technologies to distribute geographic information via Internet and advantages and disadvantages with these technologies
- account for fields of use for geographic information processing via Internet
- describe basic programming techniques and the tagging language for GIS services on the Internet
- thoroughly describe standardised Internet based map services and
- illustrate some important aspects of introduction of map services in an organisation.

*Skills and abilities* To pass the course, the student should:

- 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 language and script programming.

*Judgement and approach* To pass the course, the student should:

- see the whole in how Internet can influence the use of geographic data and
- assess 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 the creation of Internet based GIS services by means of different programming systems and own encoding in tagging languages and scripts. The course is completed with a larger project work where the student individually creates a GIS service on the Internet.

## **Course design**

The teaching consists of lectures, laboratory sessions, seminars and independent advanced assignments. Participation in laboratory sessions, seminars and project work and thereby integrated other teaching is compulsory. The course is a distance course and is distributed on the Internet. It is flexible designed which facilitate that the student can carry out the course on full-, half- or part-time.

## **Assessment**

Examination takes place in writing in the form of examination, and as written presentation of independent advanced assignments. For students who have not passed the regular examination, additional examination in close connection to this is offered.

## **Grades**

Grading scale includes the grades: Fail, Pass

To pass the entire course, approved written exam, passed results of written assignments and presentations are required as well as participation in all compulsory parts. The final grade are decided through grade on the take-home exam.

## **Entry requirements**

General entry requirements including English B and 90 credits including 30 credits GIS.

**Further information**

The course may not be included in a higher education qualification together with NGE613 Geographic information processing via internet, 5p, GIS416 Internet-GIS, 5p or NGE07 Webb-GIS, 7.5 credits.