NGN210   Geographical Informations Systems IV (GIS), Open source, 7.5 credits

Geografiska informationssystem IV (GIS), Öppen källkod, 7,5 högskolepoäng
Second Cycle

Confirmation

This course syllabus was confirmed by Department of Earth Sciences on 2011-10-20 and was last revised on 2019-06-10 to be valid from 2019-09-01, autumn semester of 2019.

Field of education: Science 100%
Department: Department of Earth Sciences

Position in the educational system

The course is included in the Master's programme in geography (N2GEO, 120 hec) and can also be read as a freestanding course. Advanced level

The course can be part of the following programmes: 1) Master's Programme in Geography (N2GEO) and 2) Master's Programme in Earth Sciences (N2GVS)

Main field of studies	*Specialization*
Earth Sciences	A1F, Second cycle, has second-cycle course/s as entry requirements
Geography	A1F, Second cycle, has second-cycle course/s as entry requirements
Conservation	A1F, Second cycle, has second-cycle course/s as entry requirements
Human and Economic Geography	A1F, Second cycle, has second-cycle course/s as entry requirements

Entry requirements

The entry requirements of the course are completed courses in Geographic information systems I (NGN180) and II (NGN190), Geographic information systems NGN170, GVS150, KGG120 or the equivalent 75% of which with the grade lowest accepted.

Students with equivalent education can after assessment be given admission to the course.

Learning outcomes

On successful completion of the course the student will be able to:

Knowledge and understanding

- Account and explain the concept open source
- Understand and describe fields of use of different spatial file formats

Skills and abilities

- Be able to create automatic processes by means of GIS
- Be able to carry out geographical analyses and transformations between different data formats by means of OS GIS
- Be able to communicate knowledge and functionality in geographic information technology (GIT)
- Be able to carry out simple programming

Judgement and approach

- critically argue for the choice of software in GIT
- Be able to evaluate advantages and disadvantages with different OS GIS programs and their application for different assignments, both based on a user and a scientific perspective

Course content

The aim of the course is to give advanced and broadened knowledge in what open source (OS) includes and how it is used in geographic information technology (GIT). Further, the aim is to give understanding in the potential possibilities that are included to use programs that are written as open source. The course treats theoretical background to some extend, but above all consists of practical components with programs built on open source. Basic programming is included.

Form of teaching

Lectures, supervised project work and written assignment (exercises).

Language of instruction: English and Swedish

Assessment

Project work 5 hp U/G/VG

Written assignments 2.5 hp U/G

For the course grade is required that all course components are passed.

A student thathas failedthe same
examination twiceisentitledto haveanotherexaminerappointed,ifit is possible.
The application shall be in writing and sent to the department.

In cases in which the course has been discontinuedor major changes have been made a
student should be guaranteed at least three examinations to complete the
course (including the regularly scheduled examination)during a time period of at least
one year from the last given course.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).
For a passing grade(G) for the entire course, a passing grade is required for all graded
sections.

To receive the grade passed with distinction(VG) for the final grade, the grade passed
with distinction for the Project work section(examination) as well as at least passed for
all other sections is required.

Course evaluation

The result and any changes in the course structure will be communicated to both the
students who completed the evaluation and to the students who will begin the course.

Additional information

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