Faculty of Science

NGEN12, Physical Geography: Geographical Databases, 7.5 credits

Naturgeografi: Geografiska databaser, 7,5 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2009-09-11 to be valid from 2009-10-01, spring semester 2010.

General Information

The course is a compulsory course for Master of Science in geomatics and elective course for a Master of Science in physical geography. The course is also given as an individual course.

Language of instruction: English
The course is given in English.

Learning outcomes

The course intends to give a theoretical understanding of how a geographic database is built-up and how it can be used. Furthermore, the course intends to give practical skills to model, create and use a geographic database.
Knowledge and understanding
To pass the course, the student should be able to:
explain how query language can be used to create a relational database and to make advanced queries
describe how geographic data can be stored and searched in a database
analyse advantages and disadvantages with storing geographic data in a database compared with a file system
account for basic concepts of object-oriented modelling, and
explain how object-oriented modelling can be used to describe the structure in a geographic database.

Skills and abilities

To pass the course, the student should be able to:
independently create an object-oriented model over the structure in a geographic database in a standardised modelling language and

be able to communicate with a database designed for geographic data.

Assessment skills and approach

To pass the course, the student should be able to:
critically relate to structure and storing models for geographic data.

Course content

The course contains the central concepts for handling geographic databases. Fields that are particularly emphasised are spatial databases, object-oriented modelling of the contents of a geographic database, the query language SQL (and a spatial expansion of this language) and spatial indexes.

Course design

The theoretical parts of the course are given in lectures followed by thematic sections of practical exercises. These exercises are compulsory.

Assessment

Examination takes place through written examination combined with grading of project assignments. For students who have failed the regular examination, additional occasion in close connection to this is offered.

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.
The grades in the course are pass with credit, passed and failed.
To pass the entire course, approved examination, passed written assignments and passed project reports are required.
The final grade is decided through joining the results of the parts that are included in the examination.

Entry requirements

For admission to course is required at least 90 credits within the fields of technology or science of which at least 30 credits should be within geographic information science or the equivalent.

Further information

The course may not be included in a higher education qualification together with GISN06 Geographic databases, 7.5 credits.

Subcourses in NGEN12, Physical Geography: Geographical Databases

Applies from H09

0901 Geographical Databases, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction