

NGEU26, 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 2020-01-23 to be valid from 2020-01-23, spring semester 2020.

General Information

The course is offered as a commissioned education.

The course is a compulsory course for Master of Science in geomatics and elective course for a Master of Science in physical geography.

Language of instruction: English

Main field of studies

Physical Geography and Ecosystem Science

Geomatics

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

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.

Competence and skills

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.

Judgement 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.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent 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.

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 NGEN12 Geographical Databases, 7.5 credits and GISN06 Geographic databases, 7.5 credits.

Subcourses in NGEU26, Physical Geography: Geographical Databases

Applies from H21

2101 Geographical Databases, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction

Applies from V20

2001 Geographical Databases, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction