



Faculty of Health, Science and Technology
Geo-Science

Syllabus

Geographic Information Systems II

Course Code:	NGGB47
Course Title:	Geographic Information Systems II <i>Geografiska informationssystem II</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:

MAT (Surveying and Mapping)

NGA (Physical Geography)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2018-02-14, and is valid from the Autumn semester 2018 at Karlstad University.

Prerequisites

At least 4 ECTS cr completed for the course GIS I, 7.5 ECTS cr and at least 1.5 ECTS cr for one of the courses Database Technology 7.5 ECTS cr or Database design 7.5 ECTS cr, or corresponding courses in database technology, or equivalent.

Learning Outcomes

Upon completion of the course, the students should be able to:

- work independently with an advanced vector-based GIS,
- plan and carry out a GIS project based on a specific problem,
- use and analyse geographic information in accordance with topographical regulations,
- identify and solve geographic problems,
- develop and test methods for presenting quality in geographic data,
- work in groups to solve a given problem,
- report project results in writing,
- critically review a project in writing and orally at a seminar.

Content

The course is based on problem-solving learning and focuses on the functions and application areas of advanced vector-based GIS. Students carry out supervised independent GIS-projects in groups. New concepts and functions are introduced and processed. The project requires students to seek and use new information to move the project ahead. In computer exercises, for instance, students work on the structure of topological data designs, data editing and data quality.

Reading List

See separate document.

Examination

Assessment is based on an individual, written report, presented and discussed in seminar, and performance as peer reviewer. Participation in laboratory work and supervision is mandatory.

Grades

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), or U(Fail) is awarded in the examination of the course, or one of the grades Pass with Distinction (VG), Pass (G), or Fail (U).

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.

The course is required for the engineering programme Surveying Technology and Geographical IT (TGLIT), the Survey and Mapping (TGMKT), and Land Surveying and Cartography TGLMK.