



Faculty of Arts and Social Sciences  
Geo-Science

### Syllabus

#### Course Approval

The syllabus was approved by the Faculty Board of Arts and Social Sciences on 25 March 2014 , and is valid from the Autumn semester of 2014 at Karlstad University.

**Course Code:** NGGB47

**Geographic Information Systems II, 7.5 ECTS Credits**

**(Geografiska informationssystem II, 7.5 Swedish credit points)**

**Degree Level:** Bachelor

**Progressive Specialisation:** G1F (First cycle, has less than 60 credits in first-cycle course/s as entry requirements)

#### Language of Instruction

Swedish

#### Prerequisites

At least 4 ECTS cr completed for the courses NGGA23 GIS I, 7.5 ECTS cr and at least 1.5 ECTS cr for one of the courses DVGB04 Database Technology or ISGB1 Database design, 7.5 ECTS cr or equivalent.

#### Major Field of Study

MAT (Surveying and Mapping), NGA (Physical Geography)

#### 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,
- assess the quality of geographic data and
- work in groups to solve a given problem.

#### Content and Form of Instruction

The course focuses on the functions and application areas of advanced vector-based GIS. The approach to learning is problem-based. 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 oral and written project reports.

Assessment is based on an individual, written report, presented and discussed in seminar, seminar peer reviewing, and oral presentation of group project (geographic database). Participation in laboratory work and supervision is mandatory.

#### Grades

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

#### 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 assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

#### Course Certificate

A course certificate will be provided upon request.

#### Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

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

The course is required for the engineering programme Surveying Technology (TGLIT) and Geographical IT, and the survey and mapping programme (TGMKT).

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