



Faculty of Health, Science and Technology  
Geo-Science

## Syllabus

### Scientific methods in geomatics

<b>Course Code:</b>	NGGC20
<b>Course Title:</b>	Scientific methods in geomatics <i>Vetenskaplig metod inom geomatik</i>
<b>Credits:</b>	7.5
<b>Degree Level:</b>	Undergraduate level
<b>Progressive Specialisation:</b>	First cycle, has at least 60 credits in first-cycle course/s as entry requirements (G2F)

#### 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 2018-08-30, and is valid from the Spring semester 2019 at Karlstad University.

#### Prerequisites

At least 45 ECTS credits completed for the BSc programme in Surveying Technology and Geographic IT (TGLIT) or at least 45 ECTS credits completed for the Surveying and Mapping programme.

Attended courses Geographic Information Systems II, 7.5 credits, and Remote Analysis and Digital Photogrammetry, 7.5 credits, or equivalent.

#### Learning Outcomes

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

- independently identify, formulate and handle issues in the GIS/GIT field,
- present orally and discuss information, problem and solutions in groups,
- seek relevant literature in research data bases,
- analyse and evaluate research literature,
- use a reference system correctly,
- discuss and suggest appropriate methods to answer research questions in the field,
- critically review a research project,
- identify their need of further knowledge and ability to update their competence,
- write research texts and articles.

#### Content

The course provides lectures describing the research process and prepares students for the degree project.

Lectures alternate with exercises and seminars in which students test and discuss the following components:

- theory of science perspectives, approaches and concepts
- the steps in the research process
- data base searches
- academic writing: structure, formal aspects, referencing, copyright, etc.

### **Reading List**

See separate document.

### **Examination**

Assessment is based on an individual, written report, presented and discussed in seminar. A number of hand-in assignments are required. Seminar attendance is mandatory.

### **Grades**

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), 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 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.