



Faculty of Health, Science and Technology  
Geo-Science

# Syllabus

## GIS - Introduction

<b>Course Code:</b>	NGGAD1
<b>Course Title:</b>	GIS - Introduction <i>Orienteringskurs i GIS</i>
<b>Credits:</b>	7.5
<b>Degree Level:</b>	Undergraduate level
<b>Progressive Specialisation:</b>	First cycle, has only upper-secondary level entry requirements (G1N)

**Major Field of Study:**  
NGA (Physical Geography)

### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2023-09-07, and is valid from the Spring semester 2024 at Karlstad University.

### Prerequisites

General admission requirements

### Learning Outcomes

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

- describe and define Geographical Information Systems (GIS) and give examples of how they can be utilized,
- use and process geographic data in various formats,
- describe the differences between vector and raster data,
- assess and compare various geographic internet-based systems, and
- carry out simple geographic analyses in vector data.

### Content

The course is primarily designed for students who want to learn different ways of using GIS technology and to students seeking a general understanding of GIS in order to collaborate more effectively with experts in the field.

The course covers central concepts and definitions. Students are given a number of reading and literature assignments. The course includes an introduction to commonly used GIS software, including introductory exercises as well as more advanced exercises designed to help students learn a particular software programme, deepen their knowledge, and apply their knowledge in practice. Students are also introduced to ongoing processes of development and standardization in the field. Finally, students undertake a project in which they apply the theoretical knowledge that they have acquired.

### **Reading List**

See separate document.

### **Examination**

Examination is in the form of individual hand-in assignments and a written individual project that can be presented and discussed in a seminar. In the seminar or at another occasion, students are required to prove their identity.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

### **Grades**

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 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 course NGGAD1 cannot be included in the same degree programme as the courses GEGC32, NGGA16, and NGGA23.

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