

# Syllabus

for course at first level

**Geographic Information Systems (GIS)**  
**Geografiska informationssystem (GIS)**

**7.5 Higher Education  
Credits**  
**7.5 ECTS credits**

<b>Course code:</b>	GE4030
<b>Valid from:</b>	Autumn 2023
<b>Date of approval:</b>	2018-08-20
<b>Changed:</b>	2022-11-29
<b>Department</b>	Department of Physical Geography
<b>Main field:</b>	Earth Sciences
<b>Specialisation:</b>	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

## Decision

This syllabus has been approved by the Board of Science at Stockholm University 2018-08-20 and revised 2022-11-29.

## Prerequisites and special admittance requirements

Admission to the course requires knowledge equivalent to 30 ECTS credits in Earth sciences, or geography, or 60 ECTS credits in another subject exclusive introductory courses.

## Course structure

Examination code	Name	Higher Education Credits
DEL1	Fundamental GIS Methods	3.5
DEL2	GIS Theory	2
DEL3	Advanced GIS Applications	2

## Course content

a. This course addresses the fundamental concepts, theory and practical skills in geographic information systems (GIS) with focus on applications in physical geography. The practical learning includes spatial data management, processing and visualization methods in a geographic information system (GIS) for scientific and practical applications.

b. The course consists of the following modules:

1. Fundamental GIS Methods 3.5 credits
2. GIS Theory 2 credits
3. Advanced GIS Applications 2 credits

## Learning outcomes

Upon completion of the course, the student is expected to be able to:

- explain fundamental concepts and theory in geographic data processing (module 1, 2 and 3)
- implement spatial mapping, visualization and analysis in a geographic information system (Unit 1 and 3)
- plan geoscience projects based on geographic data (Unit 3)

## Education

Teaching is provided as distance learning. The teaching consists of web-based teaching and independent project work. Instructions are in English.

## Forms of examination

a. The course is examined in the following manner:

Assessment takes place through

- written presentations of assignments and project work (module 1 and 3)
- written examination (Unit 2)

The examiner can decide on adapted or alternative examination formats for students with disabilities.

Examinations are written in English but answers can be given in Swedish.

b. The course has no compulsory instruction.

c. Grading: The course's final grade is set according to a seven-point criterion-referenced scale:

A = Excellent

B = Very good

C = Good

D = Satisfactory

E = Adequate

Fx = Fail, some additional work required

F = Fail, much additional work required

Grades of module 1 will be set according to a two-point grading scale: fail (U) or pass (G).

Grades of module 2 and 3 will be set according to a seven-point criterion-referenced scale.

A passing final grade requires passing grades on all included parts.

The final grade of the course is determined by weighing the grades from all course modules, where each grade is weighed in relation to the scope of the course modules.

d. The course's grading criteria are handed out at the start of the course.

e. Students who receive a failing grade on a regular examination are allowed to retake the examination as long as the course is still provided. The number of examination opportunities is not limited. Other mandatory course elements are equated with examinations. A student who has received a passing grade on an examination may not retake the examination to attain a higher grade. A student who has failed the same examination twice is entitled to have another examiner appointed, unless there are special reasons to the contrary. Such requests should be made to the department board. The course includes at least three examination opportunities per academic year the course is offered. For the academic years that the course is not offered, at least one examination opportunity is offered.

f. There is no possibility to improve the grade U in module 1 to a pass grade in this course.

There is no possibility to improve the grade Fx to a pass grade in module 2.

Students awarded the grade Fx in module 3 are given the opportunity to improve their grade to E. The examiner decides on the supplementary assignments to be performed and the pass mark criteria. The supplementary assignments will take place before the next examination opportunity. Upon a passing supplementation of deficiencies in understanding – minor misunderstandings, minor inaccuracies or too limited reasoning in some parts – the grade E is used. Upon a passing supplementation of basic formality errors, the grades A-E are used.

## Interim

Students may request that the examination be conducted in accordance with this course plan even after it has ceased to be valid. However, this may not take place more than three times over a two-year period after the course was discontinued. Requests must be made to the departmental board. The provision also applies in the case of revisions of the course syllabus and revisions of the required reading.

## Limitations

This course may not be included in a degree together with the courses GIS and Remote Sensing (GE4012), Geographic Information Systems (GE4019), Geographic Information Systems (GIS) (GE4027/GE4035), or Applied Remote Sensing and GIS for Landscape Analysis (GE7062/GE7088) or equivalent.

## Misc

The course is offered as a separate course.

## Required reading

The course literature is decided by the department board and published on the Department of Physical Geography's website at least two months before the start of the course.