



## DEPARTMENT OF EARTH SCIENCES

### **GV2001 Regional Environmental Earth Science, 7.5 credits**

Regional miljögeovetenskap, 7,5 högskolepoäng

*First Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Earth Sciences on 2020-01-17 to be valid from 2020-08-31, autumn semester of 2020.

*Field of education:* Science 100%

*Department:* Department of Earth Sciences

#### **Position in the educational system**

The course includes 7,5 credits at the undergraduate level. The course is offered as an elective course subject to availability.

The course can be part of the following programmes: 1) Bachelor's Programme in Earth Sciences (N1GVS) and 2) Bachelor of Science in Environmental Science (N1MVN)

*Main field of studies*

Earth Sciences

*Specialization*

G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

#### **Entry requirements**

For admission to the course, at least 40 credits are required in the main field of Earth Sciences, Marine Sciences or Environmental Sciences. Applicants with equivalent education can, after review and approval, be given access to the course.

#### **Learning outcomes**

On successful completion of the course the student will be able to:

*Knowledge and understanding*

- have a clear understanding of the environmental problems associated with the geological materials (bedrock and surface sediment) in the greater Gothenburg region.
- have a basic understanding of the region's geologic history.
- have an understanding of the geomorphic development of the region.
- have a clear understanding how the regions specific geology relates to environmental problems.
- understand the role of consulting firms and government regulations in addressing environmental problems.
- evaluate environmental problems and the scope of their remediation in the field.
- have an understanding how environmental problems are remediated.

#### *Competence and skills*

- describe the regions geologic history and explain how the local bedrock and surface sediment lead to specific environmental problems.
- map and identify surficial sediments in the field.
- explain the geomorphology of the region.
- on a basic level describe what needs to be done to alleviate regional environmental problems.

#### *Judgement and approach*

- understand the importance of geologic and geomorphologic knowledge in dealing with environmental problems.
- find the appropriate geologic information needed to solve problems.
- identify which field work and sampling strategies are necessary for different environmental problems.

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

#### **Course content**

The course will include two excursions, one to Norway (one week) and one local (2-3 days). The Norway trip is to observe in the field materials and concepts developed during the first year of the Bachelor's Programme in Earth Sciences (rock, sediment, hydrologic features, and geomorphic features). The local trip is to observe landforms, sediments and rock in the field.

The course will also include visits to local consulting firms to observe first-hand how environmental problems are handled.

The course will consist of lectures on regional environmental concerns and mitigation strategies.

The course will include identification of current 'problem' areas in the region, and developing of field strategies and sampling strategies that will be carried out as part of the class.

### **Form of teaching**

The course consists of lectures, Norway excursion, Local excursion, laboratory work, group work and fieldwork.

Independent assignments may be provided for those unable to attend the Norway excursion.

*Language of instruction:* English

The course can be given in Swedish if needed.

### **Assessment**

Norway excursion, 1,5 credits : Fail / Pass

Local excursion, 1 credits: Fail / Pass

Theory, 2,5 credits: Fail / Pass / Pass with Distinction

Project and laboratory work (Microstructures, Field Work), 2,5 credits: Fail / Pass / Pass with Distinction

If a student, who has failed the same examined element on two occasions, wishes to change examiner before the next examination session, such a request is to be submitted to the department in writing and granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, though at most two years after the course has ceased/been changed. The same applies to work experience and VFU, although this is restricted to just one additional examination session.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

The theory grade is based on a final exam. The excursion grades are based on attendance as well as short presentations in the field. The grade of the "Project and lab

work" part is based on participation and a written report, which is rated between 0-100% (VG>80%).

To pass the course, a student needs to pass all sections of the course with a minimum of Pass (G). In order to achieve Pass with Distinction (VG) for the course grade Pass with Distinction (VG) is needed on the written exam and and project and lab work.

### **Course evaluation**

The students are given the opportunity to make a anonymous written evaluation of the course.

The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course.