



## DEPARTMENT OF EARTH SCIENCES

### **GVG330 Applied Geology, 7.5 credits**

Tillämpad geologi, 7,5 högskolepoäng

*First Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Earth Sciences on 2012-09-27 and was last revised on 2023-10-13 to be valid from 2024-02-16, spring semester of 2024.

*Field of education:* Science 100%

*Department:* Department of Earth Sciences

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

The course includes 7.5 credits at the undergraduated level. The course is also offered as an elective course subject to availability.

The course can be part of the following programme: 1) Bachelor's Programme in Earth Sciences (N1GVS)

*Main field of studies*

Earth Sciences

*Specialization*

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

#### **Entry requirements**

Admission to the course requires a passing grade in the course GVG280 Structural geology, 7.5 credits and at least 120 credits in the main field of earth sciences of which at least 75% with the grade "Pass" (G). Students with equivalent education may, after assessment, be admitted to the course.

#### **Learning outcomes**

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

*Knowledge and understanding*

- explain and exemplify basic principles in solid mechanics with a focus on bedrock and soil properties.
- describe and explain the most important factors that affect construction in rocks and on soil.
- explain how landslides occur in different geological conditions and what measures can be applied for risk reduction.
- demonstrate an increased understanding of how geologist work in society and what opportunities exist.

#### *Competence and skills*

- calculate and evaluate slope stability.
- record and plot structures from drill cores.
- record geological structures and plot measurements in appropriate diagrams.

#### *Judgement and approach*

- use an in-depth knowledge of the geological importance for issues in construction in and on rock as well as in different soil types.
- compare the main factors affecting construction in rock.
- use a basic geological understanding in geotechnical 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**

This multidisciplinary course focus on how the principles of geology, economics, engineering, and environmental science interwine. Studying Applied Geology improves the understanding on how these fields combine to improve our lives.

#### **Form of teaching**

The teaching consists of lectures (online and/or on campus) and graded assignments (e.g. laboratory work, group work, student presentations, fieldwork, excursions).

*Language of instruction:* English

#### **Assessment**

Graded assignments, 7.5 credits: Fail/Pass/Pass with distinction

If a student who has twice received a failing grade for the same examination component wishes to change examiner ahead of the next examination session, such a request should

be made to the department in writing and should be approved unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance).

If a student has received a recommendation from the University of Gothenburg for study support for students with disabilities, the examiner may, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, decide to allow the student to sit an adjusted exam or alternative form of assessment.

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, but no longer than two years after the course has ceased/been changed. The same applies to internships and professional placements (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).

For the grade "Pass" (G) on the entire course, it is required that all graded assignments are approved (>50% of the maximum points for each assignment). For the grade Pass with distinction (VG), at least 80% of the maximum points is required for each assignment.

### **Course evaluation**

Students are given the opportunity to make a written, anonymous evaluation of the course.

The result and any changes in the course structure must be communicated to both the students, who completed the evaluation and to the students who will start the course.

### **Additional information**

Students admitted to N1GVS Bachelor's Programme in Earth Sciences, are given priority to the course.

Excursions may involve some additional costs for students. According to the institution's policy, students participating in an excursion must pay up to 200 SEK per night for transportation and accommodation.

Fieldwork may take place in cold, wintry weather conditions, so students must have appropriate clothing.