



DEPARTMENT OF EARTH SCIENCES

GVG370 Economic geology, 7.5 credits

Ekonomisk geologi, 7,5 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Earth Sciences on 2018-07-04 and was last revised on 2020-01-14 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 with a specialization in geology. The course is 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

For admission to the course at least 60 credits in the main field of Earth Sciences, of which 90% shall have the grade Pass, is required. Applicants with equivalent education can, after review and approval, be given access to the course.

Students on the N1GVS program has priority to the course.

Learning outcomes

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

Knowledge and understanding

- develop an understanding of the resource sector in terms of importance to society, sustainability and economic conditions.
- demonstrate knowledge and understanding of ore-forming processes.
- describe the variety of mineral desposits, their distribution in time and space, and how ore formations is linked to the large scale dynamics of the earth,
- demonstrate knowledge of exploration methods and economic assessment of ore deposits.

Competence and skills

- identify common rock types and minerals found in and around ore deposits.
- identify a viable exploration target.
- plan an exploration program.
- build geological models and estimate ore reserves using 3D software.

Judgement and approach

- assess and anlyze geological literature and data.
- assess economic value of exploration targets and ore deposits.
- evaluate ethical aspects and impacts of mining activities on the environment and society to be able to adopt an appropriate conduct towards stakeholders e.g. shareholders, authorities, NGOs and local communities.

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 provide students with an understanding of fundamental ore forming mechanisms and classification of ore deposits. The students will be trained to use this knowledge to help e.g. identify exploration targets, plan exploration and drilling programs, and to estimate ore reserves. The resource sector, importance of natural resources and future sustainability of the mining industry is also covered.

Form of teaching

The teaching includes lectures, compulsory practicals and compulsory excursions.

Theory (Theory), 3,5 hp grading scale: Fail (U), Pass (G), Pass with Distinction (VG)

- Exercises/ group work (Exercises/group work), 2,5 hp grading scale: Fail (U), Pass (G)

Identification of ore textures and minerology (1,5 hp) Individual oral exam (U/G)

Language of instruction: English

Assessment

Theory 3.5 hp (U/G/VG)

- Three examination occasions are guaranteed (including the ordinary examination occasion)

Exercises/field studies (2.5 hp) written reports (U/G)

Identification of ore textures and minerology (1,5 hp) Individual oral exam (U/G)

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).

For the grade Pass (G) in the course the grade Pass (G) is needed in all sub-courses. For the grade Pass with Distinction (VG) the Theory part must have the grade Pass with Distinction (VG) and all other parts must have the grade Pass (G).

Course evaluation

The student 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.

Additional information

In case of over-night stays associated with the excursion, the student will be charged an extra cost of 200 SEK / night. A no cost option is available.

Students admitted to NIGVS Bachelor's Programme in Earth Sciences have precedence for admittance to the course.