



## DEPARTMENT OF EARTH SCIENCES

### **GVG450 Ore-forming processes, 7.5 higher education credits**

Malmbildande processer, 7,5 högskolepoäng

*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Earth Sciences on 2017-09-01 to be valid from 2017-09-01, autumn semester of 2017.

*Field of education:* Science 100%

*Department:* Department of Earth Sciences

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

The course can be part of the following programme: 1) Master's Programme in Earth Sciences (N2GVS)

*Main field of studies*

Earth Sciences

*Specialization*

A1N, Second cycle, has only first-cycle course/s as entry requirements

#### **Entry requirements**

For admission to the course, 165 ECTS credits are required with Earth science as the main subject. In addition, the course Economic geology (GVG430) is required. Students with equivalent education may, after examination, be admitted to the course. Students at N2GVS Master's Program in Geoscience are given priority.

#### **Learning outcomes**

After completion of the course, the student is expected to:

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*Knowledge and understanding*

Demonstrate a deeper understanding of ore-forming processes

Demonstrate knowledge and understanding of methods that can be used in the study of ore formation

*Skills and abilities*

Be able to plan, perform and document mapping and sampling in the field

Be able to describe ore mineralogy and textures

Be able to perform advanced geochemical analysis and data evaluation

Be able to present a scientific studies in writing and orally

*Judgement and approach*

Be able to use scientific literature to produce testable hypotheses about how a specific ore has been formed.

Be able to critically evaluate the reliability of geological data and geological interpretations

Be able to develop and present a logical argument for or against a hypothesis

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 full-time course includes field work, lab work, report writing, seminars and lectures. The course will train students in scientific methods and approaches that can be used for investigations of ores and ore-forming processes. The students themselves will design, perform, analyze and present scientific studies on ore-forming processes. The course can be seen as a preparation for further research studies or for project management in mineral exploration.

**Form of teaching**

Lectures, seminars, exercises, field studies, reports and presentations.

The assessment is based on participation in seminars and exercises, written reports, oral presentations and quizzes .

The final mark of the course is the weighting of the results.

*Language of instruction:* English

**Assessment**

Malmbildande processer (Ore-forming processes 7.5 hec), 7,5 hp U/G/V

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

The student is normally guaranteed three examinations (including regular opportunity)

**Grades**

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

**Course evaluation**

Course evaluation takes place in two steps. Partly in a dialogue between students and course leaders and partly in GUL where students answer an anonymous questionnaire.

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.