UNIVERSITY OF GOTHENBURG

DEPARTMENT OF EARTH SCIENCES

GVG570 Geophysics III - The real world, 7.5 credits

Geofysik III - verkligheten, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Earth Sciences on 2016-09-22 and was last revised on 2023-09-28 to be valid from 2024-04-26, 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 Master's level and can be included in a Master's Degree in Earth Sciences. The course is offered as an elective course subject to availability.

The course can be part of the following programmes: 1) Marine Science, Master's Programme (N2MAV) and 2) Master's Programme in Earth Sciences (N2GVS)

Main field of studies	*Specialization*
Earth Sciences	A1F, Second cycle, has second-cycle course/s as entry requirements

Entry requirements

Admission to the course requires 165 credits completed courses in the main field of Earth Sciences of which 90 % should have the grade lowest Pass. Furthermore, completed GVG470 Applied Geophysics, 7,5 credits, is required. Applicants with equivalent education can, after review and approval, be given admitted to the course.

Learning outcomes

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

Knowledge and understanding

- apply the knowledge that is learned in earlier courses.
- supplement study with additional methods such as gamma spectrometry and DGPS.
- show an increased understanding of the economic side of the consulting buisness.

Competence and skills

- handle a number of geophysical instruments.
- use and compile geophysical measurements; seismics, gravitation, magnetism, electricity, electromagnetism, gamma spectrometry and DGPS.
- process raw data.
- make an economic follow-up analysis of the project.
- model an interpret geophysical measurement results.
- carry out report writing and present collected data and interpretations orally.

Judgement and approach

- identify geological problems and plan own projects.
- follow time and economic constraints and framework.
- make the employer satisfied.

Course content

Course participants form a fictitious three-person consulting agency and will be given an assignment to examine with geophysical methods.

The assignments will be randomised and the consulting agency, wether responsible for one large or several small assignments, will determine its strategic plan (which method, how long, profiles, etc.). The assignments for the different groups can be designed according to the geophysical instuments available and/or required. The consulting agency should make an offer for the estimated cost and the labour time needed to make an economic assessment.

The different projects should be presented as presentations and in a written report in front of a jury of prefessional consultants.

Form of teaching

The teaching consists of lectures and an extensive project work.

Language of instruction: Swedish and English

Assessment

Component 1 Seminars (Seminars), 1 credits: Fail/Pass

Component 2 Project Work (Project work), 6.5 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 by the department unless there are special reasons to the contrary (Chapter 6, Section 22 of 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 more 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).
The grade Pass (G) for the entire course requires that all, including compulsory parts are passed. To obtain the grade Pass with Distinction (VG) on the course, the report must be submitted no later than two working days after the final presentation.

Course evaluation

Students are given the opportunity to make a written, anonymous 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

Students admitted to N2GVS Master's Programme in Earth Sciences, are given priority to the course.

The course can accept a maximum of 12 students, as the number of geophysical instruments is limited.

There is no established reading list, students themselves will find relevant literature for the course.