



Faculty of Science

## GEOR12, Geology: Master Degree Project, 60 credits

*Geologi: Examensarbete för masterexamen, 60 högskolepoäng*

Second Cycle / Avancerad nivå

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### Details of approval

The syllabus was approved by The Education Board of Faculty of Science on 2024-12-03. The syllabus comes into effect 2024-12-03 and is valid from the autumn semester 2025.

### General information

The course is a compulsory course for second-cycle studies for a Degree of Master of Science (120 credits) in geology.

*Language of instruction:* Swedish

*Main field of study*    *Specialisation*

Geology            A2E, Second cycle, contains degree project for Master of Arts/Master of Science (120 credits)

### Learning outcomes

The aim of the course is that the student, after completing the course, will have acquired in-depth knowledge in a part of geology, practised geological research methodology, and developed their ability to independently run and carry out a research project. The course should also prepare the student for environmental science professional activities and graduate studies.

### Knowledge and understanding

On completion of the course, the student shall be able to:

- demonstrate advanced subject knowledge in the chosen geological discipline,
- describe in detail the current state of knowledge in the selected field of environmental science,
- describe in detail the methods used in the work and their applications, possibilities and limitations,

- master scientific methodology and critical approach.

### **Competence and skills**

On completion of the course, the student shall be able to:

- independently formulate, plan, carry out and evaluate a research project in environmental science within given time frames,
- compile a project plan, including problem analysis, a time plan and risk assessment,
- search, collect, evaluate and critically interpret information of relevance for a geological problem,
- present a scientific project orally and in writing, including issue, methods and results,
- Carry out a scientific discussion as an author of a thesis during oral presentations
- carry out a scientific literature search relevant to the thesis,
- orally and in writing present the completed project at a relevant scientific level.

### **Judgement and approach**

On completion of the course, the student shall be able to:

- critically evaluate and critically assess scientific information and interpret geological data,
- evaluate the results of their degree project in relation to the research frontier within the relevant subarea geology,
- identify and evaluate the scientific, societal and ethical aspects of the field of geology covered in the thesis,
- identify and discuss the role of geology in society and humanity's responsibility for how it is used,
- identify and reflect on their own need of additional knowledge and different ways of developing their skills in geology or other subjects.

### **Course content**

The degree thesis is an individual assignment. The student chooses a subject area and a task in consultation with one or more appointed supervisor(s). The final report (text, figures and tables) can therefore be prepared as a more or less finished manuscript for publication in a specialised journal. The thesis work can also be carried out as a collaborative project with external departments, universities, organisations or companies. Guidance can be partly external.

As a part of the thesis work, the student shall solve a well-constrained assignment according to an established time plan. Project planning, literature studies, as well as critical assessment, interpretation and evaluation of collected data are included in the thesis work. As a rule, some form of field and laboratory work using scientific methods of analysis is also required

## Course design

The degree project is carried out independently but with continuous supervisor contact. A high degree of autonomy in practical and theoretical elements is expected from the student. Work progress and results shall be documented in accordance with the requirements of the workplace and be sufficient to monitor the progress of the work.

At the halfway point, an assessment of the progress of the work is made together with the supervisor. The assessment shall be based on documented progress and performance against the project description and timetable. Any changes to the timetable, delays, interruptions or problems should be noted. The assessment is communicated with the examiner.

## Assessment

The course is examined through assessment of the completed thesis, scientific poster, scientific summary and popular science summary and oral presentation with critical oral review. Mid-term evaluation must also be completed. The grade is assigned by weighing all elements together, with the final report carrying the most weight. The final report is graded in accordance with the set grading criteria.

In the presentation of the individual degree project the following parts are included:

- a written report in Swedish or English, or in exceptional cases another language
- an oral presentation at a public seminar followed by review by a fellow student and a member of the examination committee
- a poster which presents the research problem, the methodology and the main results
- a scientific summary in Swedish and English and a popular summary of the work.

The report shall be made available for assessment at least a week before the seminar. The department shall archive the printed degree project. The student is examined by an examination committee which is present at the oral presentation. The examination committee shall consist of two individuals: examiner (permanently employed teacher at the Department of Environmental and Earth Sciences), one additional qualified person (teacher, researcher, doctoral student or other qualified person working at the university or outside academia). In addition to the examining board, a student opponent is also present. The student shall also fulfil the task of opponent for another degree project.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## Grades

Grading scale includes the grades: Fail, Pass, Pass with distinction

For a Pass grade on the entire course, the written report, oral presentation, scientific poster, scientific summary and popular science summary, and mid-term assessment must be completed and approved. The final grade is decided through a joint assessment of the results of these components, of which the written report has the greatest weight. To obtain pass with distinction, the work may not exceed the time plan by more than 20%. Grades are set by the examination committee in accordance with the set grading criteria.

## Entry requirements

For admission to the course the following courses (or equivalent) are required:

General entry requirements, 210 ECTS credits, of which at least 30 ECTS credits must be second-cycle courses in geology (normally GEOM20 and one of the courses GEOM11, GEOM12, GEOM09, GEON09, GEOM22, GEOP07) or an equivalent discipline and English B/English 6.

## Further information

The course cannot be credited in a degree together with GEOR01 Geology: Degree project for a Master's degree, 30 credits, GEOR02 Geology: Degree project for Master's degree, 45 credits, GEL545 Geology, degree project, 20 credits, GEL554 Geology, degree project 2, 10 credits, GEOY01 Geology: degree project 2, 15 credits, or GEOY02 Geology: thesis 3.

See additional rules and recommendations for degree projects at the faculty of natural sciences.

The course is offered at the Department of Geology, Lund University.