

GEOA02, Geology: Planet Earth - an Introduction, 15 credits

Geologi: Planeten Jorden - en introduktion, 15 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2018-02-12. The syllabus comes into effect 2018-02-12 and is valid from the autumn semester 2018.

General information

The course is a compulsory first cycle component of a degree of Bachelor of Science in Geology and an elective first cycle component of a degree of Bachelor in Science with other specialisations.

Language of instruction: Swedish

Learning outcomes

The aim of the course is to provide students with the basic knowledge of geology that is required for further studies in the subject and that can serve as broadening in adjacent subjects by providing a geological perspective on science.

Knowledge and understanding

On completion of the course, the students shall be able to

- account, in overview, for the structure and composition of Earth and for different types of minerals and rocks
- account, in overview, for the plate-tectonic processes that control the formation and disappearance of mountains and oceans, volcanism and earthquakes

- account, in overview, for the processes that cause glaciation, large-scale climate and sea level change, and formation of different types of Quaternary deposits, sediments and land forms
- account, in overview, for the history of Earth, the geological time scale and the development of life based on fossil material

Competence and skills

On completion of the course, the students shall be able to

- understand and use basic geological terminology
- make reasonable interpretations of age relationships, and the formation of rocks, Quaternary deposits, sediments and land forms based on geological field observations
- clearly compile and present geological information in speech and writing

Judgement and approach

On completion of the course, the students shall be able to

- argue for the importance of knowledge of the impact of the exploitation of geological resources (loose deposits and rock materials, water and fossil fuels) on our environment and society

Course content

The course includes the following components:

- The origin, structure and development of Earth
- The geological time scale and geological dating methods
- Igneous, metamorphic and sedimentary rocks
- Endogenic and exogenic processes
- Minerogenic and organogenic deposits

- Fossil plants and animals and their development history and subdivision
- Glacial processes, sediments and land forms
- Exercises: rocks, minerals, fossils, Quaternary deposits, landscape analysis and geological maps
- Field trips: bedrock and Quaternary deposits

Course design

The teaching consists of lectures, literature seminars, field trips, exercises and project work. Participation in literature seminars, field trips, exercises and project work and associated elements is compulsory.

Assessment

The assessment is based on active participation in seminars and individual project reports. Students who did not pass at the first submission opportunity have another opportunity to complement the project reports.

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

For a Pass on the course, students must have passed the project reports and the compulsory components.

Entry requirements

General and courses corresponding to the following Swedish Upper Secondary School Programs: Biology 1, Chemistry 1, Mathematics 4, Physics 1a/1b1+1b2.

Further information

The course may not be included in a degree together with GEOA01 Planet Earth- an introduction, 15 credits, or GEOA82 Earth, Water and the Environment, 15 credits.