Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Natural Sciences

4MX008 Lagring i prekambrisk berggrund, 7,5 högskolepoäng
Geological storage in Precambrian bedrock, 7.5 credits

Main field of study
Environmental Science

Subject Group
Environmental Science

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by the Board of the School of Natural Sciences 2010-12-14

The course syllabus is valid from autumn semester 2011

Prerequisites
Bachelor of Science in a Natural Science or Technical subject or corresponding course qualifications.

Expected learning outcomes

Upon completion of the course students are expected to be able to:
- create and present a geological map of a limited area
- create and present a tectonic map of limited area
- present a 3-dimensional geological presentation of the mapped area
- describe the Precambrian rocks and minerals in the mapped area
- describe the distribution of soils in the mapped area
- compile a summary of the hydrogeological conditions in the mapped area
- present the KBS method for storing nuclear waste in Precambrian rocks
- compile a summary of the social aspects of storing nuclear waste

Content

- Petrology and mineralogy
- Plate tectonics
- Metamorphism
- Quaternary geology
- Hydrogeology in soil
- Hydrogeology in fractured bedrock
- Hydrogeochemistry
- The KBS metod
- Social aspects of storing of nuclear waste

Type of Instruction
Lectures and seminars on the web. Fieldwork and laboratory work at Äspö Laboratory and an excursion in southeast Sweden.

Examination
The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
Examination is based on an individual knowledge test and the written and oral presentation of an individual field work project.

Course Evaluation
Upon completion, the course will be evaluated by filling out the evaluation form. The result of the individual evaluations are turned into a summary report that will be kept in the department administrational archives. The outcome of the evaluation of the previous year, as well as possible measures taken, will be discussed with the individual responsible for the educational programme, as well as with incoming students at the start of the next course.

Required Reading and Additional Study Material

Scientific reports and articles.