



AE1801 Environmental Soil Chemistry 4.0 credits

Miljö- och markkemi

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The official course syllabus is valid from Autumn 2024. The decision is made by Director of First and Second Cycle Education: A-2024-0696. Date: 2024-03-22

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic knowledge of chemistry and environmental effects corresponding to the content of the courses:

AL1351 Energy, Environment and Sustainable development (4.5 credits)

MJ1508 Ecology and Environmental Effects (7.5 credits)

CK1020 Fundamental chemistry (6 credits)

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completion of the course, the students should be able to:

- understand chemical processes in soils and sediments, and the factors affecting the runoff quality.
- assess the mobility of various contaminants in soils and waters.
- plan sampling, interpret chemical analyses.

Course contents

- Soils in Sweden and soil chemical properties.
- Adsorption of substances to particle surfaces.
- Contaminants (metals and organic pollutants) in soils and waters.
- Redox processes in soils and waters.
- Models for simulation of the behaviour of substances in soil and water.
- Acidification and eutrophication, assessment of environmental status.

Examination

- PRO1 - Project Assignment, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written Examination, 2.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.