AE1801 Environmental Soil Chemistry 4.0 credits

Miljö- och markkemi

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

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

Establishment

Course syllabus for AE1801 valid from Autumn 2012

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

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.

Disposition

The course is partly designed as a project in which the chemical properties of a soil is investigated and evaluated.

Specific prerequisites

2 years of academic studies in the field of Energy and Environment, course KA1020 Fundamental Chemistry, 7,5 credits, or courses with similar content.

Course literature

Gustafsson, J.P., Jacks, G., Simonsson, M., Nilsson, I. 2008. Mark och vattenkemi. Teori.

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.

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.