



AE2101 Environmental Dynamics/ Chemical Processes 7.5 credits

Environmental Dynamics/Chemical Processes

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 AE2101 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

At least three years of academic studies including 35 credit basic courses in physics, chemistry, mathematics and earth sciences.

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 the chemical effects of important environmental pollutants and greenhouse gases on soils, waters and sediments.
- Evaluate the environmental fate of pollutants with geochemical models.

Course contents

Essential elements in environmental geochemistry for applications in environmental sciences. Thermodynamics and chemical equilibrium. The influence of weathering and natural organic matter on pollutant behaviour. Partitioning between solid, dissolved and gaseous phases. Aquatic chemistry. Use of geochemical models for speciation and simulations. Effects of global change. Global and local element cycles. Assessment for water quality.

Course literature

- Gustafsson, J.P., Jacks, G., Simonsson, M. & Nilsson, I. 2006. Soil and water chemistry.
- Exercise and laboratory manual.

Examination

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercise on Chemical, 4.5 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.

Other requirements for final grade

Written examination (TEN1; 3c)
Exercises (OVN1; 4.5c).

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.