AE2103 Environmental Aquatic Chemistry 7.5 credits

Environmental Aquatic Chemistry

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

Establishment

Course syllabus for AE2103 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

The Built Environment

Specific prerequisites

Material and water chemistry or an equivalent course that includes basic water chemistry

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 on soils and water systems.
- Estimate the environmental fate of pollutants from basic information and to evaluate the risk for harmful effects.
- Interpret analytical measurements of metals and organic pollutants in different media.

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Course contents

Chemical properties of soils, sediments, groundwaters and surface waters. Aquatic chemical reactions and chemical equilibrium modelling. The influence of watershed processes on pollutant behaviour. Partitioning between solid, dissolved and gaseous phases. Metals and trace elements. Organic pollutants in the environment. Methods for chemical analyses of dissolved substances. Risk assessment methodology.

Course literature

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

Complementary literature to be announced on the webpage one month before the start of the course.

Examination

- ÖVN1 - Assignment, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 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.

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

Other requirements for final grade

Written examination (TEN1; 4.5 cr)
Report from project and laboratory course (ÖVN1; 3 cr).

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.