KH1400 Water Chemistry 7.5 credits

Vattenkemi

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

Establishment

Course syllabus for KH1400 valid from Spring 2011

Grading scale

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

Education cycle

First cycle

Main field of study

Chemistry and Chemical Engineering, Technology

Specific prerequisites

Completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B and English corresponding to English A. For students who received/will receive their final school grades after 31 December 2009, there is an additional entry requirement for mathematics as follows: documented proficiency in mathematics corresponding to Mathematics A.

And the specific requirements of mathematics, physics and chemistry corresponding to Mathematics D, Physics B and Chemistry A.

Language of instruction

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

Intended learning outcomes

The course gives a basic understanding of the chemical procedures in the aquatic environment and applications to natural waters and chemical technical systems.

After having completed the course, the students will be able to:

- Describe chemical processes in aquatic environments
- Apply mathematical models to treat transport, equilibrium and kinetics
- Describe the chemistry of the atmosphere
- List the most important soil processes
- Plan and execute a water chemistry project, including theoretical aspects and the practical performance
- Summarize the water chemistry for a separate field
- Deliver a report with high demands on time keeping, transparency and structure

Course contents

- The chemical tools for work in water chemistry
- An overview concepts and theories in water chemistry
- Experience of practical field and laboratory work
- Experience of work within one area of water and water treatment such as tap water, waste sewage, natural resources, agricultural environment

Course literature

Aquatic Environmental Chemistry, Howard A G, Oxford University Press (1998)

Mäta vatten, Byden S, Larsson A-M, Olsson M, Göteborgs universitet (2003)

Examination

- INL1 - Home Assignment, 1.5 credits, grading scale: P, F
- PRO1 - Projekt Work, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- INL2 - Home Assignment, 1.5 credits, grading scale: P, F
- TEM1 - Theme, 1.5 credits, grading scale: P, 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

Project work (PRO1;3 cr)
Theme (TEM1;1,5 cr)
Home assignements (INL1;1,5 cr, INL2;1,5 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.