SYLLABUS

Environmental Chemistry 7.5 credits K0019K

Miljökemi

Course syllabus admitted: Autumn 2008 Sp 1 - Autumn 2018 Sp 2

DECISION
Course plan approved by the Department of Chemical Engineering and Geosciences, 2007-02-28.

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LULEÅ TEKNISKA UNIVERSITET

Environmental Chemistry 7.5 credits K0019K

Miljökemi

First cycle, K0019K

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Kemi	Chemistry

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and General admission. Basic knowledge in chemistry: Reaction formulas, stoichiometry. Thermochemistry. Introductory knowledge concerning atomic properties and chemical bonding.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Examiner

Lars Gunneriusson

Course Aim

After following the course, you should be able to
- Explain how the variation in the values of environmental variables affects the speciation on important substances and thereby their biological impact.
- perform basic equilibrium calculations.
- understand and explain the impact of present environmental changes as the raised concentrations of CO2, CFC and NOx in the atmosphere.
- understand the impact and decomposition paths of various biocides in nature.

Contents

The course is divided into three main parts:

1. The hydrosphere 2. The biosphere and the terrestrial environment 3. The atmosphere
Pollution of the worlds\' water resources is treated in the first part, as well as water chemistry and uses. The effects of organic compounds and heavy metals are studied in part two, together with the impact of chemical products in modern society. In the last part, atmospheric chemistry and the effects of anthropogenic emissions on the global climate and air quality are discussed.
Furthermore, a project study focused on a global or local environmental issue and a lab. exercise are included in the course.

Realization

Teaching consists of lectures, a laboratory exercise and a critical study of a current local or global environmental topic. Course participants are expected to actively contribute to discussions during the lectures. Attendance at the first lecture as well as the lab. exercise is compulsory.

Examination

Graded exam. Approved lab. exercises and report. Approved project work including presentation and report. Students who have failed an examination on five occasions will not be allowed further resits.

Remarks

Syllabus can be downloaded from the course room on Fronter.
The course is a part of the natural science section of the teacher programme.

Overlap

The course K0019K is equal to KGK043

Literature. Valid from Autumn 2007 Sp 1

Textbook: Will be announced at the course introduction.
Complementary literature within the course room in Classfronter

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Items/credits

Number	Type	Credits	Grade
0001	Written exam and theory	5.3	G U 3 4 5
0002	Project work	1.5	U G#
0003	Laboratory work	0.7	U G#

Last revised

Course plan approved by the Department of Chemical Engineering and Geosciences, 2007-02-28.

Syllabus established

Course plan approved by the Department of Chemical Engineering and Geosciences, 2007-02-28.