Environmental Chemistry

Programme course

6 credits

Miljökemi

TFKE47

Valid from: 2017 Spring semester

Determined by
Board of Studies for Chemistry, Biology and Biotechnology

Date determined
2017-01-25

Main field of study
Chemical Engineering, Chemistry

Course level
First cycle

Advancement level
G2X

Course offered for
- Chemical Analysis Engineering, B Sc in Engineering
- Chemistry

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Inorganic Chemistry and Organic chemistry (or equivalent)

Intended learning outcomes
The course aims at giving the student a chemical understanding of the background and consequences of different chemical pollutants the biosphere, the hydrosphere and the atmosphere. After successfully completed course the course, participant will be able to:

- understand the chemical processes behind important environmental problems and how they have occured
- give chemical explaination to acid rain, ozon depletion, global warming, and the spread of toxic chemical pollutants on a global scale
- analyze effects of different chemical pollutants effect on plants and animals
- discuss the actions taken to restrict major environmental problems
- understand, judge and to predict effects of different chemical on health and environment
- reflect over ethical dilemmas in related to environmental chemistry questions.

Course content
Chemistry of the ozone layer, air pollutants, green house effects and global warming and their environmental consequences. The nature of different toxic organic compounds and heavy metals polluted natural waters and treatment of wastewater. Further, to give an orientation waste elimination, substainable development in the environmental area.

Teaching and working methods
Lectures, seminars.
The course runs over the entire spring semester.

Examination

PRA1	Project	2 credits	U, G
TEN1	Written Examination	4 credits	U, 3, 4, 5

To pass the project assignment, oral and written presentation are mandatory.

Grades
Four-grade scale, LiU, U, 3, 4, 5

Department
Institutionen för fysik, kemi och biologi

Director of Studies or equivalent
Magdalena Svensson

Examiner
Henrik Pedersen

Education components
Preliminary scheduled hours: 36 h
Recommended self-study hours: 124 h

Course literature
Colin Baird: Environmental Chemistry 5th edition

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.