

Analytical Environmental Chemistry

Single subject and programme course

7.5 credits

Analytisk miljökemi

746G26

Valid from: 2010 Autumn semester

Determined by

The Quality Board at the Faculty of Arts
and Sciences

Date determined

2009-08-24

Main field of study

Environmental Science

Course level

First cycle

Advancement level

G2F

Course offered for

- Bachelor's Programme in Environmental Science

Entry requirements

A passing grade in courses comprising 105 HE credits in the two first years of the Environmental Science Programme, or the equivalent. A passing grade in the course Environmental Science B1, 30 HE credits (or equivalent) is required.

Intended learning outcomes

On completion of the course, the student should be able to:

- explain and use the most commonly used chemical and microbiological analytical techniques in environmental monitoring
- evaluate and critically review the possibilities and limitations of modern analytical techniques
- plan and carry out representative samplings and analyses of tests
- describe and analyse the principles that constitute the basis for quality assurance and accreditation of laboratories in the field of environmental analysis

Course content

The contents of the course consist of the theories behind, and practical application of, spectroscopic, chromatographic, wet-chemical, electrochemical and microbiological analytical techniques. Quality assurance procedures for chemical and biological analysis work constitute another part of the course. The importance of the sampling technique for the reliability of the analysis results is also an important part of the contents.

Teaching and working methods

This course utilises work in tutorial group, lectures, seminars, workshops, laboratory sessions and field studies. Additional resource sessions may be organised in the course. If necessary, the course may be taught in English. The students should also study independently.

Examination

The course is examined through individual oral presentations, individual written work, written work carried out in groups, oral group presentations and public discussion on another student's work. A passing grade in the course also requires active participation in tutorial group meetings, seminars, laboratory work and other practical parts.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men's and women's experience and knowledge is made visible and developed.

Department

Institutionen för Tema