Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

KE4011.1 Chemistry for Ecosystem studies, 15.0 credits

Ekosystemens kemiska grunder

The course is given as course independent of study programme

Syllabus discontinued 13 November 2007

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

18 June 2003

The version applies to students admitted from spring 2003 to autumn 2008

The version is not a module version

Subjects

Chemistry/Soil science

Education cycle

First cycle

Modules

Title	Code	Credits
Single module	0101	15.0

Advanced study in the main field

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

Particular competence according to the demands for the MSc in forestry program student.

Objectives

The objective of the course is to give the student fundamental knowledge in inorganic, organic and biochemistry necessary for a deeper understanding of more complex subjects such as forest and soil ecology, biology and plant physiology. An important goal is to enhance the "chemical thinking" of the student. Emphasis is placed on the understanding of chemical equilibria of importance for soils and waters and to solve chemical equilibrium problems.

Content

The course covers basics in general, inorganic and organic chemistry as well as in biochemistry. The first half of the course (5 weeks) focuses on chemical equilibria in soils and natural waters. Lectures, problem-solving exercises, laboratory work and laboratory seminars are combined to give the student fundamental knowledge required for further studies of the biology, ecology and chemistry of soils. Laboratory work and exercises cover equilibrium reactions of solubility, complex formation, acid-base and redox chemistry.
The second half of the course (5 weeks) covers organic chemistry and biochemistry with emphasis on the structure of wood and molecular structures, functions and organisation of the living cell. This part of the course gives the required basis for further studies in plant physiology, biology and wood and pulp production.

Implementation

Lectures ca 100 h
Laboratory work ca 100 h (compulsory)
Seminars ca 40 h
Excursions ca 10 h (compulsory)

Examination

Requirements for examination

Written examination, laboratory reports.

Passed examination and laboratory work. Presence at compulsory elements.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Forest Ecology and Management
Cooperating departments:
Department of Forest Genetics and Plant Physiology

Supplementary Information

Finalized by: Programnämnden skog och mark
Replacement course: KE4005