Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

KE0025.1 General and Organic Chemistry, 15.0 credits

Allmän och organisk kemi

The course is given Agriculture Programme (admission before 1 July 2007), Biotechnology Programme, Natural Resources Programme and Natural Resources Programme - Biology and Soil Science and as course independent of study programme

Syllabus discontinued 14 March 2022

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

3 January 2003

The version applies to students admitted from spring 2003

The version is not a module version

Subjects

Chemistry

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

Biology (B), Chemistry (B), Physics (A), Mathematics (D), Swedish (B) and English (A) from Upper Secondary School.

Objectives

Having completed the course, the student will:
-know and be able to apply the general chemistry laws and concepts needed in subsequent studies of biological and soil sciences
-know names, formulas and properties of the most important natural inorganic and organic compounds, as well as their reactions.
-have acquired 1) enough experimental skills to be able to participate in the more advanced courses in chemistry and courses in biochemistry, physiology, and soil science 2) written and oral reporting skills.
-know some basic experimental techniques used in chemistry, have acquired some practical skills regarding work in a chemistry laboratory, and have acquired some skills regarding how to report and present chemical results both in written and in oral form.

Content

General Chemistry
Stochiometry, the periodic system, the chemical bond, nuclear reactions, chemical equilibrium, solubility, complex formation, protolysis, redox processes, chemical energetics, ion-exchange processes, titration, spectrophotometry.
Organic Chemistry
Reactions, occurrence, stereochemistry, physical, chemical, and

spectroscopic properties of the following classes of compounds: Aliphatic and aromatic hydrocarbons, halogen compounds, alcohols, phenols, thiols, ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines, and amides.

Implementation

General Chemistry
-Lectures approx. 33 h
-Seminars and tutorials approx. 40 h
-Theoretical exercises approx. 10 h
-Laboratory exercises approx. 26 h (compulsory)
Organic Chemistry
-Lectures approx. 40 h
-Seminars, theoretical exercises and tutorials approx. 30 h
-Laboratory exercises approx. 35 tim (compulsory)

Examination

Requirements for examination

Assessment of results is by periodical reporting of compulsory exercises, and by written exams.

Passed as defined above under Examination.

- 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.

Transitional regulations

• Exams: At least three retake sessions (renewed exams) must be offered within two years of the decision to cancel the course.
• Compulsory elements: At least one opportunity for a retake session must be offered within two years of the decision to cancel the course.

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 Molecular Sciences

Supplementary Information

Finalized by: Programnämnden för agronomprogrammet