Organic Chemistry 1

Programme course

6 credits

Organisk kemi 1

NKEA06

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
G1X

Course offered for
- Chemical Biology, M Sc in Engineering
- Engineering Biology, M Sc in Engineering
- Chemical Analysis Engineering, B Sc in Engineering
- Chemistry - Molecular Design, Bachelor's Programme

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
General Chemistry

Intended learning outcomes
The course will give fundamental knowledge of organic chemistry. After completed course the student must be able to:
- Identify different functional groups in organic chemistry
- Give name to organic compounds
- Describe the structure and properties of organic molecules
- Account for common reaction types and transformations
- Describe some different basic reaction mechanisms
- Utilize elementary organic chemical laboratory technique

Course content

- Nomenclature
- Structure and physical properties of most common substances representing different functional groups
- Basic reactions and transformations
- Simple reaction mechanisms
- Stereochemistry
- Conversion of molecules synthetic or in biological systems
- Common natural products
- Handling of chemicals and safety risks
- Synthetic procedures and principles of purification

Teaching and working methods

Theoretical aspects are daily presented in lectures. Problem solving is studied during lessons. In the laboratory the students are trained in organic chemical laboratory techniques in relation to the theoretical part of the course.
Special laboratory facilities are needed.

Examination

LAB1	Laboratory work	1.5 credits	U, G
TEN1	Written examination	4.5 credits	U, 3, 4, 5

The problems in the written examination tests how well the student has reached the learning goals. To pass the laboratory course the student must attend and be active in the laboratory classes and hand in written reports.

Grades

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

Other information

Supplementary courses: Organic chemistry 2, Biochemistry 1.

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Magdalena Svensson

Examiner

Annika Niklasson

Education components

Preliminary scheduled hours: 58 h
Recommended self-study hours: 102 h

Course literature

McMurry; Fundamentals of Organic Chemistry. Kompendium och laborationsmaterial från institutionen.

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.