KH1121 Organic Chemistry 9.0 credits

Organisk kemi

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for KH1121 valid from Spring 2013

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B and English corresponding to English A. For students who received/will receive their final school grades after 31 December 2009, there is an additional entry requirement for mathematics as follows: documented proficiency in mathematics corresponding to Mathematics A.

And the specific requirements of mathematics, physics and chemistry corresponding to Mathematics D, Physics B and Chemistry A, as well as 10 university credits (hp) in chemistry.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student will be able to:

- describe organic compounds with different structural representations.
- describe structure and properties for common functional groups.
- use stereo chemical concepts.
- use the IUPAC nomenclature system for uncomplicated structures with common functional groups.
- understand relationships between structure and reactivity.
- use curved arrows for describing electron flow in organic reactions.
- describe important reactions and their mechanisms.
- suggest syntheses and synthetic strategies for uncomplicated target molecules.
- use the chemical literature for risk analysis and experimental methods.
- apply experimental methods for synthesis, purification, separation and identification of organic compounds.
- plan and analyze risks for and supervise uncomplicated experimental procedures.

Course contents

Structure and reactivity of organic compounds. Bonding conditions, reactive sites and reaction mechanisms, reaction types and synthetic methods. Practical synthetic work based on the theoretical parts of the course.

Course literature

Hart H., Craine L. E., Hart D.J., Hadad C.M., Organic Chemistry – A short Course, 12th Ed, Houghton Mifflin, 2007.

Examination

- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F
- TEN1 - Written examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Passed examination (TEN1; 6 cr.).
Passed lab sessions (LAB1; 3 cr.)

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.