CE2385 Selective organic synthesis, theory 7.5 credits

Selektiv organisk syntes, teori

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 CE2385 valid from Autumn 2023

Grading scale

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

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering,Chemistry and Chemical Engineering

Specific prerequisites

Bachelor's degree in engineering or in sciences including 75 credits in chemistry or chemical engineering of which at least 15 credits in organic chemistry. English B/6.

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 should be able to:

- Explain basic chemo-, regio-, and stereoselective concepts and apply these in synthesis, as well as construct reactions pathways of complex organic compounds using retrosynthetic analysis.
- Analyze and summarize literature in the field of organic chemistry.

Course contents

- Fundamental concepts in chemo-, regio-, and stereoselectivity
- Synthetic strategy and principles for selective, in particular stereoselective, chemical transformations
- Transition metal catalysis
- Frontier orbital-controlled reactions
- Retrosynthetic analysis
- Advanced organic synthesis

Examination

- PRO1 - Project, 1.0 credits, grading scale: P, F
- TEN1 - Written exam, 6.5 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.

The final grade will be the same as for the written examination.

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.