



KD2390 Selective Organic Synthesis 9.0 credits

Selektiv organisk syntes

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 KD2390 valid from Autumn 2024

Decision to discontinue this course

The course will be discontinued at the end of Autumn 2023 according to school head decision: C-2023-1729. Decision date: 2023-10-11

Grading scale

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

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering

Specific prerequisites

At least 150 credits from grades 1, 2 and 3 of which at least 110 credits from years 1 and 2, and bachelor's work must be completed, within a programme that includes:

75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 9 university credits (hp) in computer science or corresponding.

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.
- Apply synthesis methodology to perform advanced organic synthesis.

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

- LAB1 - Laboratory Work, 2.5 credits, grading scale: P, F
- TEN1 - Examination, 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.

Other requirements for final grade

The final grade will be the same as for the examination

Transitional regulations

The students must contact the examiner for information about the laboratories.

Module (LAB1) – Laboratory modules can be completed on at least one and up to two occasions during the next two years (ie once a year or once every two years) after the course has been taught for the last time.

Module (TEN1) - Written exam is offered four times in the next two years (ie twice per year) after the course is given for the last time.

A new course with the course code CK2390 is being established, which will have the following module division from Autumn 2024

LAB1 - Laborations/Laborations, 2.5 credits, grading scale: P, F

TEN1 – Written exam/Written exam, 5 credits, grading scale: A, B, C, D, E, Fx, F

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.