



Kursplan

för forskarkurs

Advanced Organic Chemistry

Advanced Organic Chemistry

15.0 Högskolepoäng

15.0 ECTS credits

Kurskod:

KO40002

Gäller från:

VT 2020

Institution

Institutionen för organisk kemi

Förkunskapskrav och andra villkor för tillträde till programmet

Admitted to PhD studies

Lärandemål

After completion of the course the student should be able to:

- Analyze, explain and solve advanced organic-chemical problems based on a mechanistic mindset
- Propose selective synthesis methods to produce everything from simple to more complex organic compounds
- Predict the stereochemical outcome in stereoselective reactions
- Plan multi-stage syntheses of more complex organic compounds
- Search for synthesis routes and references in databases, and to handle references and bibliometric data.
- Read and understand organic chemical primary literature.

Innehåll

This course in advanced organic chemistry emphasize on the most important aspects of reactivity within the field of organic synthesis. The students will gain a deeper mechanistic understanding of organic reactions as well as a broader knowledge regarding organic reactivity. The ability to control the reactivity and the selectivity of a particular transformation is a central pillar in modern synthetic organic chemistry, and these aspects are thoroughly discussed in this course. In particular, methods for controlling the chemo-, regio- and enantioselectivity are highlighted. Important specific topics covered in this course include:

- Selective carbonyl reactions
- Oxidations and reductions
- Organometallic reagents
- Pericyclic reactions
- Multi-step synthesis
- Protecting group strategies

Obligatoriska moment

Participation in lectures and seminars is compulsory. In the event of special circumstances, the examiner may, after consultation with the teacher concerned, grant a student exemption from the obligation to participate in certain compulsory instruction.

Examinationsformer

The course is examined as follows:

Knowledge assessment takes the form of a written exam and participation in seminars.

The course and examination language is English.

Grading (passed or failed) is related to the intended learning outcomes.

Grading criteria are handed out at the start of the course.

Students who receive a failing grade on a regular examination are allowed to retake the examination as long as the course is still given. The number of examination opportunities is not limited. Other mandatory course elements are equated with examinations. A student who has failed the examination twice is entitled to have another examiner appointed, unless there are special reasons to the contrary. Such requests should be made to the department board.

The course has at least two examination occasions per year when the course is given.

Arbetsform

Instruction (in English) consists of lectures and seminars.