



KD2401 Bioactive Molecules 7.5 credits

Bioaktiva molekyler

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

Establishment

Course syllabus for KD2401 valid from Spring 2013

Grading scale

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

Education cycle

Second cycle

Main field of study

Biotechnology, Chemical Science and Engineering

Specific prerequisites

Admission requirements for programme students at KTH:

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 6 university credits (hp) in computer science or corresponding.

Admission requirements for independent students:

75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding. Documented proficiency in English corresponding to English B.

Basic level organic chemistry, analytical chemistry

Language of instruction

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

Intended learning outcomes

The aim of the course is to introduce students to natural products and their importance for the control of pest organisms with focus on sustainable agriculture, forestry and pharmacology, using modern chemical and biological methods to isolate and identify the natural products.

Course contents

Course in bioactive molecules, including their chemical characterization and mechanisms of action. The aim of the course is to work with natural products and give students experience in practical use of preparative and analytical separation methods including GC-MS and LC and LC-MS. Bioactivity of fractions obtained will be tested on various organisms such as insects and microbes.

Course literature

Drugs of Natural Origin: A Treatise of Pharmacognosy, 2010 av Gunnar Samuleson och Lars Bohlin

Handouts from lectures

Examination

- SEM1 - Seminars, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, 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.

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

Individual seminars and examination

Other requirements for final grade

- LAB1 - Laboratory Work, 3,0 credits, grade scale: P, F
- SEM1 - Seminars, 1.5 credits, grade scale: P, F
- TEN1 - Examination, 3.0 credits, grade scale: A, B, C, D, E, FX, F

All presentations within the project work and all laboratory work is mandatory.

The final grade will be the same as for the 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.