



# KD2400 Bioactive Molecules 6.0 credits

Bioaktiva molekyler

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

## Establishment

Course syllabus for KD2400 valid from Autumn 2011

## 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.

## Language of instruction

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

## Intended learning outcomes

After the course the student should be able to:

- Give examples of important areas where bioactive compounds are involved
- give examples of the diversity in structure and bioactivity
- follow the general route how to identify bioactive molecules
- practically use the main instruments for identifying molecules
- practically use main methods to test bioactivity
- understand the evolutionary and molecular background for bioactivity (selected cases)
- evaluate the importance of doses in relation to bioactivity

## Course contents

- Methods how to determine bioactivity
- Chemical, pharmacological, biological tools for determining bioactive molecules
- The wide structural range of bioactive molecules
- Natural products as an important area for new lead compounds in the development of new drugs
- Selected mechanisms of bioactivity, e.g. electrophysiology, ion channels,
- Applications in pharmacology, chemical ecology, environmental toxicology, atmospheric chemistry

## Disposition

Lectures and laboratory work.

## Course literature

To be announced at the latest three weeks before the course starts.  
Handouts

## Examination

- PRO1 - Project Work, 1.0 credits, grading scale: P, F
- TEN1 - Examination, 3.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 1.5 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.

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

## Other requirements for final grade

Project work (PRO1; 1 credits)

Examination (TEN1; 3.5 credits)

Laboratory work (LAB1; 1.5 credits)

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.