

Biomolecular Design

Programme course

6 credits

Biomolekylär design

NKED82

Valid from: 2017 Spring semester

Determined by

Board of Studies for Chemistry, Biology and
Biotechnology

Date determined

2017-01-25

Main field of study

Chemical Biology, Chemistry

Course level

Second cycle

Advancement level

A1X

Course offered for

- Protein Science, Master's programme
- Organic Synthesis and Medicinal Chemistry, Master's programme
- Chemical Biology

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Gene Technology, Protein Science

Intended learning outcomes

After the course, the student will:

- possess an extensive knowledge of the methods used in the modern design of biomolecules and biomimetics.
- master the concepts, methods and theories used in biomolecular design.
- be able to communicate problems, methods and results in the field.
- be able to discuss issues related to sustainable development and ethics from a biomolecular perspective.

Course content

The course covers, design-synthesis function of biomolecules and biomolecular systems. Examples of areas addressed in the course are synthetic receptors, combinatorial chemistry, chemical libraries, supramolecular chemistry, synkinetik, self-organized systems (self-assembly), self assembled monolayers, medicinal natural products, anti-freezing surfaces, artificial cell membranes, nano-chemistry to medical applications, catalytic peptides, conjugated derivatiserade oliotiofener as conformation-sensitive probes, for example, Protein folding.

Teaching and working methods

Instruction is given in the form of lectures, seminars. All classes are mandatory. The students oppose on each other at the oral presentation.

Examination

PRA1	Project, oral presentation	U, G	3 credits
PRA2	Project, written presentation	U, G	3 credits

Grades given are pass or fail.

Grades

Two-grade scale, U, G

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Magdalena Svensson

Examiner

Peter Konradsson

Education components

Preliminary scheduled hours: 48 h

Recommended self-study hours: 112 h

Course literature

Additional literature

Articles

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.