



BB1050 Biotechnology 6.0 credits

Bioteknik

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 BB1050 valid from Autumn 2019

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After completion of the course the student shall have

Knowledge and understanding to:

- Explain the basic concepts of different types of cell structures and organization
- Explain basic concepts regarding structure and function of proteins and nucleic acids
- Describe common metabolic pathways in the cell

Course contents

The course aims to provide an introduction to theoretical knowledge in biochemistry and cell biology and an introduction to biotechnology. Much of the course focuses on the cell's macro-molecular and super-molecular systems.

The course consists of the following parts:

- Prokaryotic and eukaryotic cells' structure and organization
- Membranes' structure and function
- Nucleic acids' structure, biosynthesis and function in the cell's transference of information
- Protein structure, function and biosynthesis
- The most important (glycolysis, gluconeogenesis, citric acid cycle) metabolic pathways' structure, function, interaction and regulation
- Enzyme's catalytic function and roll in metabolism
- Energy transformation in biochemical reactions, oxidative phosphorylation, and photosynthesis
- Techniques for protein purification and characterization
- Technical applications of enzymes
- Genetic tools and applications

Examination

- TEN1 - Examination, 6.0 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

Examination (TEN1; 6,0 credits, grading scale A-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.