BB1030 Microbiology 9.0 credits

Mikrobiologi

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

Establishment

The official course syllabus is valid from autumn semester 2026 as decided by the Director of First and Second Cycle Education. Decision date: 2026-04-07

Grading scale

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

Education cycle

First cycle

Main field of study

Biotechnology, Technology

Specific prerequisites

Intended learning outcomes

- Describe our common microorganisms with respect to:
- structure and growth
- occurrence in nature
- identification techniques
- basic taxonomy
- interactions and harmful effects on other living organisms

- Select and apply methods for controlling microbial growth
- Describe examples of how microbial activity affects the environment, humans, and society
- Give an in-depth description of societal factors that have led to widespread development of antimicrobial resistance and strategies to counteract this
- Give an in-depth explanation of how microorganisms are used as tools and producers in science and industry

Course contents

The microbiology course deals with microorganisms, i.e. bacteria, viruses, protozoa, algae, and fungi that occur naturally in the body and in the environment, as well as those that we use as tools for various processes (in medicine, food production, technology, etc.). You will, for example, learn why fruits and berries keep better in sugar solution, what resistant bacteria actually are, and how biological water purification works. In the course, you will study the taxonomy, morphology, and physiology of microorganisms. A major focus is placed on the bacterial cell, its genetics, nutritional requirements, and growth, as well as how sterile techniques, disinfection, and antibiotics work to control growth. In the section on infectious diseases, you will learn about disease mechanisms such as toxins and how bacteria avoid the body's immune response.

Examination

- TENB - Written exam, 5.5 credits, grading scale: A, B, C, D, E, FX, F
- PROA - Advanced study, 0.5 credits, grading scale: P, F
- LABA - 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.

Other requirements for final grade

Passed examination (TENA; 5,5 credits, grading scale A-F), passed laboratory exercises (LABA; 3 credits, grading scale Pass/Fail) and passed group exercise (PROA; 0.5 credits, grading scale Pass/Fail)

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.