



LTH

FACULTY OF
ENGINEERING

Course syllabus

Mikrobiologi Microbiology

KMBA01, 7,5 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED B/K

Date of Decision: 2023-04-18

General Information

Main field: Technology.

Compulsory for: B2

Language of instruction: The course will be given in Swedish

Aim

The objectives of this course are:

- To provide an understanding of fundamental microbiology including cell physiology, genetics and industrial uses of microorganisms.
- To provide practical experience of handling microorganisms, which also serves to illustrate aspects of the theory.
- To provide a platform for more advanced courses.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

Comprehend microbial genetics and physiology and have knowledge of the role of microorganisms in industry.

Competences and skills

For a passing grade the student must

Obtain practical experience of handling microorganisms, which also serves to illustrate essential aspects of the theory.

Obtain written skills to document and report experimental work in written labreports.

Contents

The course introduces the student to the fascinating world of living cells, in particular bacteria, their genetics and physiology. The course covers the following subjects; the three domains of life i.e. Eubacteria, Archaea and Eucarya, cell structures, microbial growth, sterilisation, antibiotics, microbial metabolism, taxonomy, genetic material, microbial genetics, viruses, the roll of microorganisms in ecosystems and industrial microbiology. The laboratory exercises will illustrate theoretical aspects of the course and introduce the students to microbial laboratory techniques such as aseptic handling of microorganisms.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: Written examination and written laboratory reports. A voluntary written test based on half the course material is included in the assessment.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Examination.

Credits: 4,5. **Grading scale:** TH. **Assessment:** Written examination.

Code: 0217. **Name:** Practical.

Credits: 3. **Grading scale:** UG. **Assessment:** Written laboratory reports.

Admission

The number of participants is limited to: No

The course overlaps following course/s: KMB060, KMB015

Reading list

- Joanne Willey, Kathleen Sandman, Wood Dorothy: Prescott's Microbiology, Eleventh Edition. McGraw-Hill Higher Education, 2019, ISBN: 978-1-260-57002-1.
- Laboratory manual.

Contact and other information

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Course homepage: <http://www.tmb.lth.se>