Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

BI1337.3 Microbiology, 7.5 credits

Mikrobiologi

The course is given Agriculture Programme - Food and Food Science (BSc)

Version 3 in Slukurs. No corresponding version in Ladok

Syllabus approved

26 November 2018

The version applies to students admitted from spring 2022

The version is a module version

Subjects

Biology

Education cycle

First cycle

Modules

Title	Code	Credits
Biology of microorganisms	0302	3.5
Interactions between microorganisms and humans	0303	1.5
Laboratory exercises	0304	2.5

Advanced study in the main field

First cycle, less than 60 credits from first-cycle courses as entry requirements (G1F)

Grading scale

5:Pass with Distinction, 4:Pass with Credit, 3:Pass, U:Fail

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

Basic knowledge in biochemistry or cell biology equivalent to 7.5 credits.

Objectives

The course shall provide understanding how microorganisms, primarily bacteria and fungi, are structured, grow and interact with the environment. The aim of the course is to provide basic knowledge and laboratory training in microbiology.

After completing the course the students should be able to:
- describe the function and structure of the prokaryotic cell
- explain the specific cell structure, physiology and genetics of fungi
- describe the procedure for isolation and characterisation of microorganisms
- briefly describe the classification of bacteria and fungi
- describe the microbial background to the social problems related to use of antibiotics
- use fundamental microbiological laboratory techniques

Content

The course mainly focuses on bacteria and fungi, but also protozoa and algae are presented. The course also gives fundamental knowledge concerning microbial metabolism. Laboratory exercises are an important course element.

In lectures and compulsory practicals the following topics are covered:
- methods for isolation and studies of micro-organisms
- the structure, physiology, energy metabolism, basic genetics and growth of bacterial cells
- the structure, physiology, genetics, metabolism and growth of fungi
- bacterial and fungal systematics and taxonomy
- an overview of algae and protozoa
- methods for control and disinfection of microorganisms
- antimicrobial substances and development of resistance

Formats and requirements for examination

Passed written exams and approved oral and written presentations of laboratory excersices. Approved participation in compulsory parts of the course.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

The courses Microbiology 7,5 credits and Microbiology and Immune Defense Mechanisms 10 credits cannot, due to overlapping course content, both be included in the degree.

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Molecular Sciences

Supplementary Information

Finalized by: Programnämnden för utbildning inom naturresurser och jordbruk (PN - NJ)

Biology Area: Microbiology
Course overlap: BI0856
Replacement course: BI1031