



# Syllabus

for course at first level

**Microbiology**  
**Mikrobiologi**

**6.0 Higher Education**  
**Credits**  
**6.0 ECTS credits**

<b>Course code:</b>	BL3003
<b>Valid from:</b>	Autumn 2007
<b>Date of approval:</b>	2006-09-11
<b>Department</b>	Department of Biology Education
<b>Subject</b>	Biology
<b>Specialisation:</b>	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

## Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University.

## Prerequisites and special admittance requirements

Admittance to the course requires basic eligibility, knowledge equivalent to Swedish upper secondary school course Biology B and 30 credits in Chemistry, including a minimum of 7,5 credits in Biochemistry. (Three credits corresponds to approximately two weeks full-time studies).

## Course structure

Examination code	Name	Higher Education Credits
3A03	Theory	3
3B03	Laboratory exercises	3

## Course content

- The course covers the structure, metabolism, growth requirements, and multiplication of prokaryotic cells. Sterile technique, phase contrast microscopy, and different staining methods. Replication, transcription, and translation. Gene control and the operon model. Plasmids and transposons. The structure and replication of viruses as well as lysogeny. Antibiotics and resistance mechanisms. Bacterial genetics including transformation, transduction, conjugation, and mapping of bacterial genomes. Microbial ecology.
- The course includes the following elements: Theory 3 hp, (Laboratory Exercises ) 3 hp

## Learning outcomes

It is expected that the student after taking the course will be able to:

- describe the structure, function, and genetics of prokaryotic cells and viruses
- use basic microbiological methods including sterile techniques

## Education

The education consists of lectures and laboratory exercises.

Participation in laboratory exercises and group education associated with this is compulsory. An examiner may rule that a student is not obliged to participate in certain compulsory education if there are special grounds for this after consultation with the relevant teacher.

## Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through: Written and/or oral examination

b. Grading is carried out according to a 7-point scale related to learning objectives:

A = Excellent

B = Very Good

C = Good

D = Satisfactory

E = Sufficient

Fx = Fail

F = Fail

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade of E is required to pass the course, together with:

- approved laboratory exercises
- participation in all compulsory education

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term “examination” here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

### **Interim**

Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

### **Limitations**

The course can not be included in a degree together with the courses Biology 45 p (BI1100), Microbiology 3 p (BI1120), Cell and Molecular Biology in the Biology-Earth Sciences Programme 7 p (BI1690), Cells, genes and populations 15 hp (BL2011), Biology 40 p (BI1880), Cell and Molecular Biology 10 p (BI2280), Prokaryotic Cell and Molecular Biology 4 p (BI2260) or the equivalents.

### **Misc**

The course is a component of the Bachelor's Programmes in Biology and Molecular Biology, and it can also be taken as an individual course.

### **Required reading**

Course literature is decided by the departmental board and is described in an appendix to the syllabus.