



# Syllabus

for course at advanced level

**Molecular Cell Biology**

**Molekylär cellbiologi**

**15.0 Higher Education**

**Credits**

**15.0 ECTS credits**

<b>Course code:</b>	BL7046
<b>Valid from:</b>	Autumn 2015
<b>Date of approval:</b>	2015-08-21
<b>Department</b>	Department of Biology Education
<b>Main field:</b>	Biology
<b>Specialisation:</b>	A1N - Second cycle, has only 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 knowledge equivalent to a Bachelor's degree in Molecular Biology. Swedish upper secondary school course English B/English 6 or equivalent.

## Course structure

Examination code	Name	Higher Education Credits
HELA	Molecular Cell Biology	15

## Course content

The course covers ultra structural organisation of eukaryotic cells, cell motility, cell-cell communication, cell cycle regulation, gene expression, and differentiation. Laboratory exercises illustrate different cell biological techniques, such as cell culture techniques, fluorescence microscopy, the fractionation of macromolecules, and analyses, such as gel electrophoresis and western blot.

## Learning outcomes

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

- know and account for the macro molecular organisation of eukaryotic cells and account for some molecular mechanisms of fundamental importance for the cellular life process
- apply several established techniques within the field
- plan and perform experiments in the form of projects, and critically examine, compile, and present results obtained
- critically examine literature within the research field and subsequently compile and present in a scientific manner.

## Education

The education consists of lectures, seminars and laboratory project work.

Participation in lectures, seminars and laboratory project work as well as 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 oral presentations.

If the instruction is in English, the examination may also be conducted in English.

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:

• participation in all compulsory education

e. Students who fail an ordinary examination are entitled to sit additional examinations as long as the course is offered. There is no restriction on the number of examinations. Examinations also include other obligatory elements of the course. Students who have passed an examination may not resit it in order to achieve a higher grade. Students who have failed on two occasions are entitled to request the

appointment of a different examiner for the next examination. Any such request must be made to the departmental board.

The course has at least two examinations (if required: for each element) for each academic year in the years in which instruction is provided. Intervening years include at least one examination.

f. Students awarded the grade Fx are given the opportunity to improve their grade to E. The examiner decides the supplementary assignments to be performed and the pass mark criteria. The supplementary assignments will take place before the next examination session.

### **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 course Molecular Cell Biology 15 hp (BL8019) or the equivalent.

### **Misc**

The course is part of the Master's Programme in Biology and Molecular Life Sciences, but can also be read as a separate course.

### **Required reading**

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