Department of Biology Education

Stockholm University

Syllabus

for course at advanced level

Molecular Processes in Eukaryotic Cells
Molekylära processer i eukaryota celler

7.5 Higher Education Credits
7.5 ECTS credits

Course code:	BL8025
Valid from:	Autumn 2008
Date of approval:	2007-08-28
Department	Department of Biology Education
Subject	Biology

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 30 credits in Chemistry, including Biochemistry 7,5 credits, and Cell and Molecular Biology 30 credits, Physiology 15 credits and additionally 15 credits in Molecular Life Sciences. (Three credits corresponds to approximately two weeks full-time studies). Swedish upper secondary school course English B or equivalent or one of the following tests. Cambridge CPE och CAE: Pass. IELTS : 6.0 (with no part of the test below 5.0). TOEFL (paper based): 550 (with minimum grade 4 on the written test part). TOEFL (computer based): 213. TOEFL (internet based): 79.

Course structure

Examination code	Name	Higher Education Credits
8A25	Theory and group discussions	5.5
8B25	Laboratory exercises	2

Course content

a. The course covers different processes at a molecular level in eukaryotic cells, and how these processes interact with one another. The course has its focus on processes that result in changes in the cell, changes that can be induced as a respons to external and internal signals. As an example, processes such as proliferation, differentaition, apoptosis, membrane fusion, gene regulation, and changes in cell metabolism will be discussed. The course will also deal with techniques and methods used in the field of molecular cell biology.
b. The course includes the following elements: Theory and group discussions 5,5 hp. Laboratory exercises 2 hp.

Learning outcomes

It is expected that the student after taking the course will be able to:
• Know and account for principles of the molecular mechanisms responsible for different changes within the cell.
• Critically examine literature within the field and present the findings in a scientific manner.
Practically and theoretically plan and perform experiments that deal with questions about the response to external and internal signals within the eukaryotic cell.

Education

The education consists of lectures, laboratory exercises, seminars and group discussions

Participation in laboratory exercises, seminars and group discussions 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 for element Theory and group discussions 5,5 hp 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:
•pass of element Laboratory exercises 2 hp
•approved written/oral presentations
•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.

Misc

The course is a component of the Master's Programme in Biology and Molecular Life Sciences, 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.