Department of Biology Education

Stockholm University

Syllabus

for course at advanced level

Frontiers in Life Science 2
Kunskapsfronten inom livsvetenskaperna 2

1.0 Higher Education Credits
1.0 ECTS credits

Course code:	BL7049
Valid from:	Spring 2016
Date of approval:	2016-01-18
Department	Department of Biology Education
Main field:	Biology
Specialisation:	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 including or in addition a minimum of 10 credits in Mathemathics and a minimum of 20 credits Life scince (for example cell biology, biochemistry, microbiology or molecular biology). Swedish upper secondary school course English 6/B.

Course structure

Examination code	Name	Higher Education Credits
HELA	Frontiers in Life Science 2	1

Course content

The course deals with scientific questions in the field of molecular life sciences with focus on how methodology contributes to the analysis of complex research questions. Leading scientists in different fields will present the results of their research and will illustrate the use of different methodological approaches. There are many new concepts to consider in the fast developing field of molecular life sciences, such as the consequences of the “omics” era and the complexity of biological phenomena. Research questions often require the use of several advanced methods that build on cutting-edge technology.
The seminars and lectures will cover molecular life sciences including cell biology, genomics, RNA biology, physiology, neurobiology, developmental biology, immunology and cancer biology.

Learning outcomes

It is expected that the student after taking the course will be able to
• understand how research presentations are structured and how research results are presented in the research community
• be able to assimilate research information from oral research presentations and show a certain capacity to critical analysis of scientific data in molecular life sciences
• understand the use of techniques that are used in molecular life sciences, including modern "high throughput" methods
• discuss the use of different methods in molecular biology research

Education

The education consists of lectures and seminars.

Participation in seminars 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: Written presentation.

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

b. Grading is carried out according to a two-point scale related to learning objectives: pass or fail

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

d. The grade pass 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 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 for each academic year in the years in which instruction is provided. Intervening years include at least one examination.

f. There is no facility to improve the grade Fx to a pass grade in this course.

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 Molecular Techniques in Life Sciences.

Required reading

The literature is based on scientific publications and reports in the relevant subject found by students in literature searches and literature distributed by the course leader.