

Syllabus

for course at first level

Developmental Biology
Utvecklingsbiologi

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	BL4009
Valid from:	Autumn 2009
Date of approval:	2007-05-14
Changed:	2009-09-23
Department	Department of Biology Education
Main field:	Biology
Specialisation:	G2F - First cycle, has at least 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

For admission to the course, knowledge is required equivalent to 30 credits of chemistry, including 7,5 credits in biochemistry as well as 30 credits in cellular and molecular Biology.

Course structure

Examination code	Name	Higher Education Credits
4009	Developmental Biology	7.5

Course content

The course covers:

- The origin of developmental biology
- Different stages of the development of a fertilized egg
- Development in plants, vertebrates and insects
- Cell-cell communication
- Gene regulation and cell differentiation
- Cell migration and morphogenesis
- Organogenesis
- Relationship development-evolution
- Developmental genetics

Learning outcomes

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

- explain basic developmental biology concepts; these include cell differentiation, signaling, patterning and organogenesis.
- describe the molecular mechanisms that underlie different gene expression patterns in different cell types.
- compare different model organisms with respect to differences in their development.
- exemplify the importance of mutations for studying developmental biology.
- discern how evolution and development are tied together.

Education

The education consists of lectures, laboratory exercises, group work and seminars. Participation in laboratory exercises, group work, seminars 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
- approved group work
- 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 Bachelor's Programmes in 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.