

# Syllabus

for course at first level

**Developmental Biology  
Utvecklingsbiologi**

**7.5 Higher Education  
Credits  
7.5 ECTS credits**

|                          |                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------|
| <b>Course code:</b>      | BL4009                                                                                   |
| <b>Valid from:</b>       | Autumn 2008                                                                              |
| <b>Date of approval:</b> | 2007-05-14                                                                               |
| <b>Department</b>        | Department of Biology Education                                                          |
| <b>Subject</b>           | Biology                                                                                  |
| <b>Specialisation:</b>   | 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

Admittance to the course requires knowledge equivalent to a minimum of 120 credits in Science, including a minimum of 60 credits in Biology. (Three credits corresponds to approximately two weeks full-time studies).

## Course structure

| Examination code | Name                  | Higher Education Credits |
|------------------|-----------------------|--------------------------|
| 4009             | Developmental Biology | 7.5                      |

## Course content

The course covers basic methods and concepts in the field of developmental biology with a particular focus on the molecular and cellular mechanisms used to form and pattern animal and plant embryos. The theoretical part of the course covers the following topics: model organisms, developmental genetics, cell differentiation, pattern formation, morphogenesis, organogenesis, as well as evolution and development. Methodologies to study and manipulate embryo development are covered both theoretically and practically. Medical and biotechnological applications such as stem cell biology, transgenic organisms and links to cancerogenesis will be discussed.

## Learning outcomes

It is expected that the student after taking the course will have:

- Acquired knowledge of molecular developmental biology in a wide sense
- Be aware of modern methods and research areas in the field of developmental biology, and their applications in medical science

## Education

The education consists of lectures, laboratory exercises, group work and/or 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.