Department of Biology Education

Stockholm University

Syllabus

for course at first level

Physiology
Fysiologi

15.0 Higher Education Credits
15.0 ECTS credits

Course code:	BL2026
Valid from:	Autumn 2018
Date of approval:	2018-10-01
Department	Department of Biology Education
Main field:	Biology
Specialisation:	G1N - First cycle, has only upper-secondary level 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 basic eligibility and knowledge equivalent to Swedish upper secondary school courses Biology B, Chemistry B and Mathematics C.

Course structure

Examination code	Name	Higher Education Credits
DEL1	Plant Physiology: Theory	3
DEL2	Plant Physiology: Laboratory Exercises	3
DEL3	Animal Physiology: Theory	4.5
DEL4	Animal Physiology: Laboratory Exercises	4.5

Course content

a. The course covers the physiology of plants and animals. b. The course includes the following elements:
1. Plant physiology: theory, 3 hp. The functional anatomy of roots, stems and leaves, photosynthesis, respiration, nitrogen metabolism, mineral nutrition physiology, water turnover and transport of substances. Growth and differentiation. Plant hormones. Symbiosis. The influence of environmental factors and pathogens on higher plants (vascular plants, trachyophytes). The adaptation of plants to the environment.
2. Plant physiology: laboratory exercises, 3 hp.
3. Animal Physiology; theory, 4.5 hp. The structure and function of the nervous system and of sensory organs, endocrinology, temperature regulation, reproduction, excretion, respiration, circulation, digestion and nutrition, the structure and physiology of muscle, the composition of the skeleton and immunology.
4. Animal physiology: laboratory exercises, 4.5 hp.

Learning outcomes

It is expected that the student after taking the course will be able to : describe the relation between structure and function at the level of cells, tissues, organs and organisms; describe the most important physiological processes at the level of cells, tissues and organs; perform physiological studies of and experiments on biological material.

Education

The education consists of lectures, laboratory exercises, demonstrations, tutorial of preparations, group work,

seminars, work with study questions as well as written and oral presentations.
Participation in laboratory exercises, demonstrations, tutorial of preparations, group work, seminars, work with study questions, written as well as oral presentations 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 for element 1 and 3 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 2 and 4
•approved laboratory exercises
•approved written and 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.

Limitations

The course can not be included in a degree together with the courses Biology 45 p (BI1100), Plant Phsyiology 4 p (BIA 180), Animal Physiology 6 p (BIA 150), Immunology 1 p (BIA140), Animal and Plant Biology in the Biology-Earth Sciences Programme 10 p (BI2140), Animal and Plant Biology, Without Experimental Animals, in the Biology-Earth Sciences Programme 10 p (BI2150), Biology 40 p (BI1880), Physiology 10 p (BI2270), Animal and Plant Biology 10 p (BI2060), Animal and Plant Biology, Without Experimental Animals 10 p (BI2070), Physiology 15 hp (BL2009), Physiology, Without Experimental Animals 15 hp (BL2010) and (BL2017) or the equivalents.

Misc

The course is a component of the Bachelor's Programmes in Biology-Earth 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.