



**LUND**  
UNIVERSITY

Faculty of Science

## **BIOB10, Biology: Botany and Zoology, 15 credits**

*Biologi: Botanik och zoologi, 15 högskolepoäng*

First Cycle / Grundnivå

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### **Details of approval**

The syllabus was approved by Study programmes board, Faculty of Science on 2018-08-17 to be valid from 2018-08-17, spring semester 2019.

### **General Information**

The course is a compulsory first-cycle course for a degree of Bachelor of Science in Biology.

*Language of instruction:* Swedish

*Main field of studies*

Biology

*Depth of study relative to the degree requirements*

G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

### **Learning outcomes**

The overall aim of the course is that student should understand and can account for organism world's systematic subdivision plants' and animals' adaptations life cycles and evolution as well as plants' structure and life processes.

### **Knowledge and understanding**

On completion of the course the student shall be able to:

- describe the evolution, organizational levels and morphology of eukaryotes
- describe the basic types of life cycles as well as their occurrence in the organism world
- account for basic reproductive biology including different forms of sexual and asexual reproduction
- account for biological diversity and systematics among eukaryotes with a focus on phylogenetic relationships, adaptations and economically important groups

- explain the morphology and life processes of higher plants
- describe how the morphology of plants and life processes are influenced by abiotic and biotic factors

### **Competence and skills**

On completion of the course the student shall be able to:

- seek information in biological databases
- apply his/her knowledge to answer zoological and botanical questions
- carry out simple phylogenetic analyses
- master basic methods for zoological/botanical laboratory work, including microscopy
- carry out dissections of invertebrate animals
- communicate zoological/botanical knowledge orally and in the form of a scientific poster
- carry out a shorter project with a specialisation in a well defined subject area within organism biology

### **Judgement and approach**

On completion of the course the student shall be able to:

- evaluate and critically review acquired information and knowledge
- present scientifically based arguments about evolution and GMO

### **Course content**

The eukaryotic organism world is studied from an evolutionary and functional perspective:

- life forms, organizational levels and morphology
- systematics, classification and phylogeny based on structural and molecular data
- the species concept and evolutionary processes
- biological variation and adaptations
- life cycles and reproductive biology
- economically important organisms (including cultivated plants)
- morphology and function of higher plants
- regulation of the growth and development of plants
- photosynthesis, metabolism, uptake and transport of water and nutrients, as well as the interplay between the plant and the environment
- methods and applications in plant biotechnology

During the course a number of zoological and botanical laboratory sessions and exercises, including dissections of invertebrate animals, are carried out.

## Course design

The teaching consists of lectures, laboratory sessions, group work and a project with poster making. Participation in laboratory sessions, group work, project work, poster presentation, as well as associated parts, is compulsory.

## Assessment

Examination takes place in writing in the form of examinations during the course as well as through compulsory parts. For students who have not passed the regular examination, an additional examination in close connection to the end of the course is offered.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## Grades

Marking scale: Fail, Pass, Pass with distinction.

For practical components grading scale Failed, Passed is used.

For a grade of Pass on the whole course, the student must have passed the exams and compulsory parts. The final grade is decided through a weighing of the results on the written examinations.

## Entry requirements

For admission to course is required knowledge equivalent to MOBA01 Cell biology, 15 credits/BIOA10 Cell and microbiology, 15 credits, as well as BIOA01 Genetics and microbiology, 15 credits/BIOA11 Genetics and evolution, 15 credits.

## Further information

The course may not be included in a degree together with BIOB01 Botany 12 credits, or BIOB02 Zoology, 12 credits.

## Subcourses in BIOB10, Biology: Botany and Zoology

Applies from V19

- 1901 Laboratory Work and Assignments, 3,5 hp  
Grading scale: Fail, Pass
- 1902 Plant and Animal Systematics, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction
- 1903 Plant Physiology, 4,0 hp  
Grading scale: Fail, Pass, Pass with distinction