



LUND
UNIVERSITY

Faculty of Science

BIOR86, Biology: Limnology and Marine Ecology - Organisms and Habitats, 15 credits

*Biologi: Limnologi och marinekologi - organismer och habitat, 15
högskolepoäng*

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2020-06-04 to be valid from 2020-06-04, autumn semester 2021.

General Information

The course is an optional second-cycle course for a degree of Bachelor or Master of Science in Biology.

Language of instruction: English

Main field of studies

Biology

Depth of study relative to the degree requirements

A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is that the student should acquire an overall view on organisms and abiotic preconditions in aquatic systems from source to sea.

Knowledge and understanding

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

- describe structure and function of aquatic ecosystems
- give an account of aquatic organism groups and their role in aquatic ecosystems
- account for sampling methodology and the most common chemical and physical analytical methods in aquatic systems
- explain differences and similarities between fresh water and marine systems

Competence and skills

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

- acquire, analyze and critically interpret aquatic data
- use relevant literature to identify aquatic organisms
- identify a number of the most common aquatic organisms in Swedish waters
- conduct sampling of water chemistry, microorganisms as well as plant and animal groups in different aquatic environments, including different fishing methods
- carry out and independently compile basic aquatic projects
- present an aquatic project in written and oral form and receive and give feedback on others' projects

Judgement and approach

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

- value his/her knowledge in aquatic ecology and relate these to research and professional work
- reflect critically on human impact on aquatic organisms and ecosystems

Course content

The course consists of three modules, two theoretical parts (written examination and individual project) of 7.5 credits together, and a practical part of 7.5 credits (field exercises, laboratory sessions, species knowledge exam).

The first part of the course includes the physical and chemical properties of water, species in the different organism groups and relationships in and between populations and their environment. Effects of human impact on aquatic ecosystems are discussed.

During the second part of the course field trips to different aquatic habitats typical for southern Sweden are conducted, where the relationships between abiotic conditions and the adaptations of organisms are studied. Samples for analysis of water chemistry, microorganisms as well as plant and animal communities are collected and analyzed in the laboratory. During the practical work (carried out in project groups) the students acquire experience of the most important field and laboratory methods and knowledge of the characteristics of different aquatic environments.

During the final part of the course the students carry out an individual project. The assignment is to define a subject, search for scientific literature, write a report, give an oral presentation and receive and give feedback to fellow students.

Course design

The teaching consists of lectures, laboratory sessions, field exercises, seminars, group exercises and project work. Participation in laboratory sessions, field exercises, seminars, group exercises and project work and thereby integrated components are compulsory.

Assessment

Examination takes place in the form of written exams on species knowledge during the course, a written examination and through compulsory components. For students who have not passed the regular examination, an additional examination in close connection to this 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.

Grades on module Theory 7.5 credits (written examination and individual project) are Fail, Pass, Pass with distinction. Grades on module Practicals 7.5 credits (field exercises, laboratory sessions, species knowledge exam) are Fail and Pass.

To pass the entire course, approved written examinations, approved project reports and active participation in all compulsory components are required. The final grade is decided through a weighing of the results of the written examination and the individual project.

Entry requirements

For admission to the course, 90 credits scientific studies including knowledge equivalent to BIOC10 Ecology 15 credits is required. English 6/English B.

Further information

The course may not be included in a degree together with BIOR44 Limnology and water management 15 credits, BIOR17 Limnology 15 credits or BIOR65 Marine Ecology 15 credits.

Subcourses in BIOR86, Biology: Limnology and Marine Ecology - Organisms and Habitats

Applies from H21

- 2101 Theory, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction
- 2102 Practicals, 7,5 hp
Grading scale: Fail, Pass