



LUND
UNIVERSITY

Faculty of Science

BIOR65, Biology: Marine Ecology, 15 credits

Biologi: Marinekologi, 15 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2010-11-24 to be valid from 2010-11-24, spring semester 2011.

General Information

The course is an elective course for advanced studies for a Bachelor of Science or Master's degree (120 credits) 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

Knowledge and understanding

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

- describe and analyse the structure, function and dynamics of benthic and pelagic marine ecosystems
- describe and account for effects of human influence on marine ecosystems locally and globally
- account for different sampling- and analytical methods in marine ecology

Competence and skills

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

- use sampling- and analytical methods in marine ecology
- apply the scientific process; analyse a problem, formulate hypotheses, and independently design experiments and field surveys
- compile and evaluate results of experiments and field surveys
- present research results orally and in writing

Judgement and approach

The student should be able to on completion of the course:

- discuss the importance of human influence on marine ecosystems
- interpret and evaluate scientific information

Course content

The course presents the structure and function of different marine ecosystems (mainly Swedish, but also the oceans, the deep sea, and the coral reefs are included). The flow of energy and nutrients between land, air, fresh water, and marine environments, and human influence are also included.

One week of field studies is included in the course, where a comparison is made between the ecosystems of the Baltic Sea and the West Coast of Sweden. The field surveys are planned in advance by different groups preparing sampling and analyses of the pelagic system, the zonation of macroalgae and associated fauna, the hard-bottom fauna, the soft-bottom fauna, and the fish communities. After the field part, additional analyses take place in the laboratory. The groups present and discuss their results orally. In addition, each group presents the results in writing with emphasis on the comparison of structure and function between the different ecosystems.

The course includes a field survey in northern Öresund, where the benthic fauna together with abiotic variables are sampled and described. This study is presented in seminars.

Finally, an individual project is carried out during the course. The task is to select a well-defined subject, search for scientific literature, write a report, and give an oral presentation. At the presentations receiving and giving feedback to the fellow students is included.

Course design

The teaching consists of lectures, seminars, group discussions, fieldwork, laboratory work, and written and oral presentations. All parts except the lectures are compulsory.

Assessment

The examination takes place in writing in the form of an examination that includes 50 % of the final grade. The remaining part of the grade consists of an assessment of the achievements during seminars, group assignments, and the individual project.

For students who have not passed the regular examination, an additional examination in close connection to this is offered.

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.

To pass the course, the student should have participated in all compulsory parts of the course.

The final grade is decided through a joining of the results of the parts that are included in the examination.

Entry requirements

For admission to the course, 90 credits of studies in natural sciences are required including knowledge equivalent to BIOC02 Ecology 15 credits, and English B.

Further information

The course may not be included in a higher degree together with BIOR12 Marine Biology 15 credits.

Subcourses in BIOR65, Biology: Marine Ecology

Applies from H13

- 1011 Theory, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction
- 1012 Exercises and Assignments, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction

Applies from H10

- 1001 Marine Ecology, 15,0 hp
Grading scale: Fail, Pass, Pass with distinction