



LUND
UNIVERSITY

Faculty of Science

BIOR69, Biology: Population and Community Ecology, 15 credits

Biologi: Populations- och samhällsekologi, 15 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2012-06-11 to be valid from 2012-06-12, autumn semester 2012.

General Information

The course is an elective course for advanced studies for a Bachelor of Science or Master's degree (120 credits) in biology. The course is also given as a separate course.

Language of instruction: English and Swedish
the course is given in English when necessary.

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 students should have acquired on completion of the course the following knowledge and skills:

Knowledge and understanding:

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

- describe how competition within and between species influence the distribution and density of individuals and how these processes influence the population dynamics
- describe how predation structures populations
- describe models that predict the dynamics of populations based on competition- and predation conditions

- describe processes and interactions that structure societies
- describe processes influencing biodiversity and how human activities influence such diversity
- explain how field observations and the experimental method can be used to test hypotheses about evolution and ecology, and which advantages and disadvantages these methods have

Skills and abilities:

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

- identify ecological problems, plan and carry out ecological studies, and analyse and present results
- search, read, critically evaluate, and summarise scientific papers
- use statistical tests and choose appropriate statistical method for a dataset
- search and evaluate scientific information
- present a scientific project orally and in writing.

Course content

Essential parts of the theories in population- and community ecology are discussed from an evolutionary point of view. The main parts of the course include processes at population level, such as predation and competition, and at community level, such as food web interactions and succession. Seminars will be linked to the theory elements, where scientific papers are discussed and with exercises to test hypotheses and process data from empirical studies. In an individual literature project, the student seeks information about an ecological topic and reads, summarises, and analyses the results. The ability to identify ecological problems and carry out studies is exercised during a one week regional field course, where students carry out one day projects in some selected ecosystems in south Sweden. The course is completed with a two week project, in which a smaller study of an ecological topic is planned, carried out, and analysed, and being presented orally and in writing.

Course design

the teaching consists of lectures, seminars, literature projects, field exercises, computer exercises, and projects. Participation in seminars, literature projects, exercises, projects and thereby other integrated teaching, is compulsory.

Assessment

Examination consists of two written examinations; one where the students should analyse and discuss given results from ecological studies, and one where a scientific discussion should be written based on a given set of results. The results of the two examinations are, together with the actions during other parts of the course, determining the final grade.

For students who have not passed the regular examination, 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 entire course, approved examinations, passed literature assignment, passed project report, and participation in all compulsory parts are required.

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.

Further information

The course may not be included in a higher degree together with BIOR13 Ecology? Advanced course 15 credits.

Subcourses in BIOR69, Biology: Population and Community Ecology

Applies from V14

- 1211 Theory, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction
- 1212 Exercises and Assignments, 7,5 hp
Grading scale: Fail, Pass

Applies from V12

- 1201 Population and Community Ecology, 15,0 hp
Grading scale: Fail, Pass, Pass with distinction