



Course syllabus

Faculty of Health and Life Sciences

Department of Biology and Environmental Science

4BI500 Fiskekologi, avancerad kurs, 7,5 högskolepoäng

Fish Ecology, Advanced Level, 7.5 credits

Main field of study

Biology

Subject Group

Biology

Level of classification

Second Level

Progression

A1N

Date of Ratification

Approved 2014-12-08

Revised 2019-03-13 by Faculty of Health and Life Sciences. Revision of Module, Objectives, Content, Examination, Course Evaluation, Type of instruction and Required Reading.

The course syllabus is valid from autumn semester 2019

Prerequisites

Bachelor's degree including Biology 60 credits, incl. Ecology 15 credits, or corresponding course qualifications.

Objectives

Students are upon completion of the course expected to be able to:

- account for habitat use over the life cycle in economically and ecologically important fish species in the Baltic Sea and its drainage basin;
- account for the importance of predation, competition, and trophic interactions for population dynamics;
- describe and provide examples of how fish populations are affected by climate changes;
- argue coherently about the influence of fish harvest and biomanipulations on populations and ecosystem functions;
- account for conservation and management issues related to fish;
- design, conduct, thoroughly analyze and report on laboratory experiment;
- perform standard fish ecology samplings and evaluate the results;
- plan and carry out studies individually, addressing issues in fish ecology, and communicate the results both orally and in text.

Content

The course is divided in two parts:

Module 1 Ecological theory 4 credits

- Life cycles and life history traits
- Behavioural ecology
- Migration, dispersal and distribution
- Populations, theory and practical applications
- Fish and climate change
- Anthropogenic impacts on the ecology and evolution of fish

Module 2 Project work and practical assignments 3.5 credits

- Field survey: standardized gill net fishing, fish diet, simple statistical methods, oral and written presentation
- Laboratory project: specify the research question and plan the project, collect and analyze data, explore results and draw conclusions, oral and written presentation

Type of Instruction

Lectures, seminars, field- and laboratory exercises and project reports. Individual term paper. The participation in seminars, practical exercises and assignments are mandatory.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail.

Examination of Part 1 is based on the term paper. Part 1 is assessed with the grades A, B, C, D, E, Fx or F.

Part 2 is examined by evaluation of laboratory- and field assignments, by oral and written presentations of project reports (field and laboratory). Part 2 is assessed with the grades U and G.

Final grade is determined by module 1 and is issued only when all parts have been approved.

Examination criteria to pass the course are defined by the expected learning outcomes.

Course Evaluation

During the implementation of the course or in close connection to the course a course evaluation is to be carried out. Result and analysis of the course evaluation is to be presented as feedback both to the students who have completed the course and to the students who are to participate on the course the next time it is offered. The course evaluation is to be carried out anonymously.

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Mandatory literature

Helfman, G.S. (2009). *The diversity of fishes: biology, evolution, and ecology*. (latest ed.) Oxford: Wiley-Blackwell.

Identification literature, scientific articles and a compendium with instructions for field- and laboratory assignments will be provided during the course.