Ecology, Second Course

Programme course

15 credits

Ekologi, fortsättning

NBIC29

Valid from: 2017 Spring semester

Determined by
Board of Studies for Chemistry, Biology and Biotechnology

Date determined
2017-01-25

Main field of study
Biology

Course level
First cycle

Advancement level
G2X

Course offered for
- Biology

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Basic level in Biology. Courses in Ecology and Faunistics and Floristics should be passed.

Intended learning outcomes
The aim of the course is that students should achieve a deeper theoretical and empirical knowledge of common ecosystems in Sweden, and of ecosystems in general. Focus is on inland waters and forest ecosystems. The students should learn about structures, processes, and mechanisms in ecosystems studied. Having successfully passed the course, the students should:

- Know about the most important factors that structure inland waters in Sweden and important interactions in and between populations in waters. The ecological processes that regulate species composition and influence nutrient dynamics in lakes and wetlands. Understand the influence of the terrestrial environment (the drainage area) on aquatic ecosystems.
- Understand which physical, chemical, and biological parameters that characterize different types of inland waters.
- Understand ecological theories, principles, and processes that are important in forests, e g population dynamics, plant-herbivore interactions, biogeochemistry, processes in the soil and vegetation
- How soil processes, climate and biological interactions, for instance between plants and herbivores, influence biodiversity and species structure of organism communities in forests and grasslands.
- Have a good knowledge in order to plan for sustainable forestry.

Course content

Physical and chemical environment in inland waters (standing and running) and how they interact with each other and with plants and animals. Interactions between organisms. Different lake types including those processes that lead to characteristic plants and animals for the waters. The development/succession of streams and lakes. The influence of catchment area to lakes and rivers.

Ecology and organisms of the soil, as well as vegetation and plant societies. The ecology of terrestrial organisms and ecological processes in forests are exemplified in the field and in the laboratory.

Teaching and working methods

Compulsory seminars, laboratory work, and field practice. Lectures. The students make group works (field/lab work, data analyzing, writing a report) during the course.

Examination

UPG3	Participating in seminars, field and laboratory work	3 credits	U, G
UPG2	Oral and written presentation of project work	6 credits	U, G
UPG1	Written exam	6 credits	U, G

Grades are given as 'Fail' or Pass'

Grades

Two-grade scale, U, G

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Agneta Johansson

Examiner

Anders Hargeby

Education components

Preliminary scheduled hours: 120 h
Recommended self-study hours: 280 h

Course literature

Brönmark, C & Hansson, L-A., 2005. The biology of lakes and ponds. 2:a upplagan. Biology of habitats. Oxford University Press. Oxford. ISBN: Häftad: 0198516126; Inbunden: 0198516134 Bardgett Richard 2005: The Biology of Soil. - Oxford University Press. Kompendier/artiklar

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.