

Ecological Applications in Agriculture, Forestry and Fisheries

Programme course

9 credits

Ekologiska tillämpningar inom de areella näringarna

NBID58

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

Second cycle

Advancement level

A1X

Course offered for

- Ecology and the Environment, Master's programme

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

120 ECTS including 90 ECTS in Biology and a second course in Ecology.

Intended learning outcomes

The course aims at developing an understanding of the ecological principles and processes that form the basis for production in forestry, agriculture and fisheries. The students will also gain knowledge about economic conditions and laws important for production systems, and about principles for sustainable use of ecosystem services.

When having successfully passed the course, the student should be able to:

- master basic ecological principles for biomass production within forestry, agriculture and fisheries, and how production is affected by changes in conditions.
- identify important economic, legislative and social factors that affect production systems in forestry, agriculture and fisheries.
- assess conflicting goals between production and other societal values (e.g. nature conservation).
- discuss environmental considerations in forestry, agriculture and fisheries with producers and other stakeholders.

Course content

Ecological principles for biomass production in forestry, agriculture and fisheries. Basic principles of business economics. Evaluation of both ecological and economic sustainability of production systems. Development of innovative, ecologically sustainable production systems by integrating ecological knowledge with economic realities.

Teaching and working methods

The course consists of several case studies in which representatives from forestry, agriculture and fisheries will formulate the problem. The students present their results from the case studies for the representatives from forestry, agriculture and fisheries, or e.g. as a role play of a realistic advisory situation. Introductory lectures and study visits will support the students in their work with the case studies. The students will work in groups that define the literature and analyze relevant data with support from a supervisor. The endpoint of each case is to provide decision support for producers.

Examination

UPG2	Written self evaluation	1.5 credits	U, 3, 4, 5
UPG1	Case studies and oral presentations	7.5 credits	U, 3, 4, 5

The final grade is decided by weighting the two grades with regard to the size of the two examination parts.

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Agneta Johansson

Examiner

Lars Westerberg

Course website and other links

Education components

Preliminary scheduled hours: 30 h

Recommended self-study hours: 210 h

Course literature

Litteraturen definieras gemensamt av studenter och lärare under kursens gång, och utgörs främst av primärvetenskaplig litteratur och rapporter.

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://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.