Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

BIo355.1 Crop Production Science I - sustainability, plant stand ecology and crop physiology, 15.0 credits

Växtodlingslära I - resurshushållning, beståndsekologi och produktionsbiologi

The course is given as course independent of study programme

Syllabus discontinued 12 January 2007

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

28 October 2002

The version applies to students admitted from autumn 2003 to spring 2006

The version is not a module version

Subjects

Biology

Education cycle

First cycle

Modules

Title	Code	Credits
Single module	0101	15.0

Advanced study in the main field

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

The equivalent of: 20 Swedish University Credits (SUC) in Biology, including 5 SUC in Ecology, 5 SUC in Plant Physiology and 5 SUC in Botany. In addition, 5 SUC in Biogeophysics or equivalent is requested. Knowledge in Faunistic and Microbiology is recommended.

Objectives

After the course the students should have good knowledge regarding:
- Prerequisites for crop production in the Scandinavian countries.
- Characteristics and morphology of our most important cultivated and weedy species during establisment, growth and development.
- Plant stand ecology of arableland. Understanding of the interaction between environmental factors, cultivated plants, natural flora and fauna, and its effects on establisment, growth and development of the plant stand.
- Basic principles of organic and conventional farming.
- An overview knowledge regarding the environmental impact of different cultivation measures and crop production systems.

Content

The course is one of two closely linked courses in crop production science, namely Crop Production Science I and II - sustainability, plant stand ecology and crop physiology.
The course has a focus on work with living plant material. Lectures, laborations and Problem Based Learning (PBL) are related to greenhouse cultivation performed by the students. The cultivations are terminated with harvest and harvest product analysis in the second course.

Lectures are given on the effect of environmental factors and cultivation measures on the physiological processes, in the plant as well as in the plant stand. In addition, lectures deal with the ecological interactions between cultivated plants, crop pests and weeds, and the effect on these factors in different crop production systems. Based on lectures the students will simulate the growth process in the cultivations in a dynamic modeling laboration.

PBL-problems are related to the growth and development in the greenhouse cultivations and are presented at regular meetings in the greenhouse.

Laborations include species identification of plants and seeds, developmental stages, morphology and overwintering of cultivated plants, and physiological processes in the plant.

Implementation

Lectures approx. 60 h
Laborations approx. 30 h (compulsory)
PBL-work approx. 50 h (compulsory)
Study visits approx. 8 h
Exams/course evaluation approx. 5 h (compulsory)

Examination

Requirements for examination

Written and/or oral exams, and presentation of exercises.

Passed exam according to the above and approved presentations of exercises. Participation in compulsory items.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

The course is partly based on integrated PBL pedagogy and greenhouse cultivations.

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Crop Production Ecology

Supplementary Information

Finalized by: Programnämnden för agronomprogrammet
Biology Area: Other Biology Courses
Replacement course: BI0471