Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFS0064 Tree resistance to natural enemies: physiology, ecology and management, 4.5 credits

Syllabus approved

2010-12-15

Subjects

Biology

Education cycle

Third cycle

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

English

Prior knowledge

The main target group of the course is PhD students whose research is related to plant-animal or plant-pathogen interactions at cell, organism or landscape level, but the lectures are also open to other interested students and researchers.

Objective, including learning outcomes

The overall learning objective is to provide students with a deeper understanding of the multifaceted interactions between forest trees and their natural enemies (pathogens, invertebrates and herbivorous mammals) at different functional scales, ranging from cells and organisms to landscapes. This objective will be met by presenting students with the current advances in relevant scientific topics: the chemical basis of tree resistance, the way the chemical quality influences the animals' behavior and vice versa, how these interactions play out on a larger scale in the landscape, and what relevance this understanding has for forest management.

Content

The content of the course is divided into three parts: a) Biosynthesis of secondary plant chemicals (cellular level); b) Interaction between animals and plants from a damage-defense point of view (organism level); c) Large scale context and management of tree damages by natural enemies (stand and landscape level). The course culminates in an international workshop, where senior researchers and students discuss how all this knowledge may be used in modern forest management.

Requirements for examination

Using the theoretical information gained from the literature, lectures, the workshop and general discussions, the students will produce an assignment in the form of a report. Instructions for the assignment will be sent to each student in advance together with the course literature. The assignment (writing time estimated to 1 week) has to be delivered to the course leader by a given deadline a number of weeks after the course.

Additional information

The course is organized within the frameworks of the Research School Sustainable Management and Utilization of Forests (www.phd-forestry.se).

Responsible department

Department of Southern Swedish Forest Research Centre