COURSE DETAIL

APPLIED INSECT ECOLOGY AND BIOLOGICAL CONTROL
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Environmental Studies
UCEAP Course Number 141
UCEAP Course Suffix
UCEAP Official Title APPLIED INSECT ECOLOGY AND BIOLOGICAL CONTROL
UCEAP Transcript Title INSECT ECOLOGY
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
Management of pests requires an ecologically based knowledge and understanding of their biology, lifecycle, and their interaction with host plants and their natural enemies. Also, climate and cropping practices affect these dynamics and the resulting management strategy. The course focuses on management of insects and mites on plants with a special focus on how to apply insect ecological methods and biological control. Topics covered: applied insect-plant ecology and the influence of abiotic factors and agricultural practices on crop pest and their natural enemies; monitoring and forecasting methodologies and management strategies; natural enemy groups: predators, parasitoids, microorganisms, nematodes and their ecology, life cycles, and mechanisms of action in relation to their prey/host; methods for isolation and selection of biological control organisms, available commercial biocontrol organisms; prevention of attacks and manipulation of pest insects and their natural enemies through rotation and choice of crop, functional biodiversity, cropping system; cases of practical application within agriculture, horticulture, forestry, husbandry, urban environment and other managed landscapes; ethical aspects, public acceptance, legislation and risk assessment; In the experimental part of the course, students perform and report a limited set of experiments related to biological control. The options may vary from year to year. Examples are: insect prey and insect predator interactions; the effect of temperature/diet/host plant on insect herbivore or predator; bio-assays using microorganisms for biological control; behavior of insect pests to insect pathogens. Discussion of experiments in relation to relevant literature are included in the students' short experimental reports. The teaching and learning methods include lectures, theoretical exercises with discussion of original scientific literature with emphasis on conceptual elements, biology of involved organisms and case studies of practical application, as well as a short theoretical group project.

Language(s) of Instruction
English

Host Institution Course Number
NPLK18001U

Host Institution Course Title

APPLIED INSECT ECOLOGY AND BIOLOGICAL CONTROL

Host Institution Course Details

Host Institution Campus
Science

Host Institution Faculty

Host Institution Degree

Host Institution Department
Plant and Environmental Sciences

Course Last Reviewed

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