

Title: Plant Disease Epidemiology– From Theory to Applications

Syllabus approved: Oct-07-2020

Credits: 4.5 HEC

Subject: Biology, Plant pathology

Language: English

Prerequisites:

Applicants must be admitted to graduate studies for a doctor within the biological sciences. Priority will be given to doctor students associated with the SLU Graduate School in Organism Biology.

Objectives:

The course aims to provide students opportunity to understand concepts, principles, state-of-the-art methodology, and research orientations within the area of plant disease epidemiology. After the course, the students should have reached a higher standard of applying available tools to study epidemiological processes and manage plant diseases. The course will also offer the students opportunities of linking to the research community within the area.

Content:

The course is organized into four topics ranging from principles, concepts and methodology of plant disease epidemiology to population genetics of plant pathogens, disease ecology and disease mitigations in agricultural, forestry or natural ecosystem. The principle, concepts and methodology will be complemented by in-depth research examples from an international team of scientists working in fundamental and applied research. The student will be required to read selected literature before and during the course period.

Examination:

The following mandatory activities are require for successful completion of the course: i) active participation in the lecture and discussion of the entire course; ii) write a two-page report on what the student has learned during the course; and iii) write a description (1-2 pages) on how the concepts and technologies outlined in the course are related to the students' field of research.

Literature:

16 scientific publications within the subject areas of the lectures provided by the teacher

Learning outcomes:

- Understand the principles and concepts of plant disease epidemiology.
- Become familiar with state-of-the art technologies and analysis methods to study plant disease epidemiology.
- Be able to apply the knowledge to study plant disease epidemiology supporting for future food production and ecological sustainability.