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Applied population genetics in plant disease epidemiology, 2.5 ECTS

March 1st - 17th 2023

When and how can population genetic tools be applied in epidemiology?

If you are working with pathogenic microorganisms, this course will help you understand how evolution affects the life cycles and shape pathogen populations. The course will provide you with theoretical background in population genetics and practical experience in how to apply data analysis tools during practical exercises.

The course starts with a theoretical block online, followed by a three day session with practical exercises at SLU Ultuna or online.

The course is organized by the research school Organism biology and given in collaboration with SLUBI.

Register to the course by sending an email to anna.berlin@slu.se at the latest February 20th.

Objectives

Population genetics is an important tool to understand the life cycles of microorganisms causing diseases in plants and is an important part of plant disease epidemiology. The aim of this course is to equip students with knowledge and tools to carry out a population genetic study in any pathosystem. After this course, the you will be able to:

- Discuss population genetic theory and how it can be applied when studying disease causing organisms.
- Design sampling strategies to address a given problem and set up an experiment for molecular-based population biological analysis to answer epidemiological questions.
- Apply methods and analytical tools available in population genetics.

Schedule

March 1st	Course introduction and lectures made available online
March 6th	Online discussion seminar (half day)
March 10th	Online discussion seminar (half day)
March 13th – 15th	Data analysis workshop at Ultuna/online

Entry requirements

The course is open for PhD students, postdocs and researchers within biology or related sciences.

Questions? Contact the course leader:

Anna Berlin, anna.berlin@slu.se
Dept. Forest mycology and plant pathology
The course is supported by research school Organism Biology