Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PVS0142 Molecular infection biology, 3.0 credits

Syllabus approved

2016-12-20

Subjects

Pathobiology

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

PhD or MSc students in animal science, biology, veterinary medicine, food science, nutrition, nursing, medicine, infection biology or related subjects, or to a residency program in veterinary science

Objective, including learning outcomes

Objective:
After the course the students will be able to:

- Describe interactions between microorganisms as well as between microorganisms and its host.
- Describe the methods that can be used to study interactions between microorganisms as well as between microorganisms and its host
- Independently identify and formulate a question for the individual project, implement the project and present it orally.
- Demonstrate an ability to make ethical assessments as a part of the individual project.

Content

This course addresses molecular aspects of infection biology from a broad perspective, covering for example:
- Different microorganisms such as viruses, bacteria, parasites, fungi and archaea.
- Interactions between microorganisms and well as between microorganism and its host.
- Methods used to study these organism and interactions.
The course is tailored for a broad audience and will include translational aspects. The course is built up by lectures and seminars by invited speakers presenting their current research in molecular infection biology. The speakers will give a basic introduction to their field, present their own research and discuss that in the context of the field as a whole. Part of the lectures will be online videos. The lectures will cover e.g. virome, bacterial microbiome, parasites, polymicrobial interactions, the susceptibility and the response of the host to infections, and the molecular and physiological events leading to the clearance of microbes or a diseased state.
This course is given to show students how to take inspiration from several different disciplines and techniques and apply it to their own infection biology research. Students will be given examples of cutting edge technologies and how they are applied across a broad range of infection biology fields and encouraged to think about how these techniques can be translated to new applications.
The teaching and learning activities will be; lectures, group discussions, online videos, analyses of scientific papers and the preparation and presentation of an individual project.

Requirements for examination

In-course assessment on the basis of 1) active participation in discussions during lectures and exercises and 2) presentation of individual course projects.

Additional information

For application: www.slu.se/gs-vmas-courses

Responsible department

Department of Biomedical Sciences and Veterinary Public Health