

PNS0039 Light and confocal microscopy, 3.0 credits

Syllabus approved: 2008-11-25

Subject: Biology

Education level: level

Marking scale: Pass / Failed

Prerequisites:

No special requirements. The course is primarily aimed for PhD students within the SLU Graduate School in Organism Biology but will be open for all interested students/researchers.

Objective:

After the course the students should have the theoretical and practical knowledge needed to perform microscopical analysis of biological specimens with conventional light, fluorescence, and confocal microscopy. They should also be able to use digital image processing and analysis on the images acquired in the microscopes.

Content

Introduction to basic optical theory as well as the practical application of the theory for both conventional light microscopy and fluorescence microscopy; general histological specimen preparation techniques; specific localisation techniques such as immunohistochemistry and in situ hybridisation. Photomicrography with analogue and digital cameras; Digital image processing. The course will be predominantly practical with most time spent on work with own samples. Lectures introducing the necessary theory on each aspect will precede the practicals.

Literature:

Additional information

This course is given as a postgraduate course within the SLU Graduate School in Organism Biology and has been developed together with Stefan Gunnarsson, Uppsala University. Maximum 20 students. There is no tuition fee.

Responsible department

[Department of Plant Biology and Forest Genetics](#)

Location

Uppsala