



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

# SLUkurs

## Syllabus

**PFG0027 Fluorescence and Electron Microscopy, 3.0 credits**

## Syllabus approved

2007-07-06

## Subjects

Biology

## 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

The course is for PhD students with a background in plant cell biology.

## Objective, including learning outcomes

During this course, the participants should acquire knowledge about theory, methods and strategies used in fluorescence microscopy, fluorescence stereomicroscopy, confocal laser scanning microscopy and transmission electron microscopy.

## **Content**

The course will cover fluorescence microscopy, fluorescence stereomicroscopy, confocal laser scanning microscopy, fluorescent markers and probes, immunolabelling and detection, fluorescent proteins and their applications. Furthermore for the transmission electron microscopy part will also include sample preparation and immunolabelling. The course will include practical exercises using the different techniques discussed in the lectures.

## **Requirements for examination**

Participation in lectures and practical exercises

## **Additional information**

Due to practical limitations on the microscopes the participants will be set to 12 students. Therefore, applicants should send in a one page description of their research projects and for what exactly they would use these techniques (maximum one side) to Markus Grebe markus.grebe@genfys.slu.se until the 1st of September 2007, Umeå Plant Science Centre, Dept. of Plant Physiology, Umeå University. In case of more than 12 applications, course participants will be selected based on their project description. Lectures will anyway be open.

### **Course Organiser**

Markus Grebe, UPSC, Department of Forest genetics and Plant Physiology, SLU  
Michael Melzer, Department of Molecular Cell Biology, IPK, Gatersleben, Germany

### **Teachers**

- Yohann Boutte, UPSC, Department of Forest genetics and Plant Physiology, SLU Umeå
- Ulla Sundberg (Leica),
- Markus Grebe, UPSC, Department of Forest genetics and Plant Physiology, SLU
- Michael Melzer, Department of Molecular Cell Biology, IPK, Gatersleben, Germany

## **Responsible department**

Department of Forest Genetics and Plant Physiology