FSK3514 Super Resolution Microscopy 3.0 credits

Superupplösande mikroskopi

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FSK3514 valid from Autumn 2013

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

Registered PhD-student together with submission of research plan (ALM access form)

Download from www.scilifelab.se/facilities/alm/

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

Aquire extended knowhow on how all superresolution techniques work (SIM, STED, dSTORM, PALM) and how to apply them in biological research (pros & cons)

Course contents

Acquired hands-on experience regarding the superesolution techniques.

Present and critically discuss own scientific work and how to apply super resolution fluorescence microscopy in individual research projects.

Disposition

Take-home basic studies, lectures from experts in the field, experimental sessions

Course literature

Forskningsartiklar, föreläsningspresentationer

(Review articles, lecture materials/hand-outs)

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Grading scale: P/F

Other requirements for final grade

Written take-home assignment of writing a research plan (3-4 pages) where superresolution microscopy is applied to solve a relevant question based on the acquired knowledge during the course sessions

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.

- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.