Image Processing for Life Science

Burri Olivier, Chiaruttini Nicolas, Guiet Romain, Seitz Arne

Cursus
Molecular Life Sciences


Type

Language: English
Credits: 2
Session: Written & Oral
Exam: Written & Oral
Workload: 60h
Hours: 42
Lecture: 14
Exercises: 28
Number of positions: 16

Frequency
Every year

Remark
This course is open to max. 16 students. To register, contact EDMS program administrator.

Summary
Registration details will be announced via email. It takes place from September to December & intends to teach image processing with a strong emphasis of applications in life sciences. The idea is to enable the participants to solve image processing questions via workflows independently.

Content
Over the last decades, the images arising from microscopes in Life Sciences went from being a qualitative support of scientific evidence to a quantitative resource.
To obtain good quality data from digital images, be it from a photograph of a Western blot, a TEM slice or a multi-channel confocal time-lapse stack, scientists must understand the underlying processes leading to the extracted information. Of similar importance is the software used to obtain the data.

Note
Please do not register by yourself to this course, this will be done by the EDMS program administrator once you'll be selected by the course organizer (upon motivation letter)!

Keywords
Biology, Image Processing, Microscopy, ImageJ, FIJI, Macros, Data, Segmentation, Filtering Visualisation Open so

Assessment methods
Continuous
Multiple

Resources
Websites
• http://phd.epfl.ch/edms/coursebook