

BIO-695

Image Processing for Life Science

Burri Olivier, Chiaruttini Nicolas, Guet Romain, Seitz Arne

Cursus	Sem.	Type
Computational and Quantitative Biology		Opt.
Molecular Life Sciences		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Written & Oral
Workload	60h
Hours	42
Courses	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 yearly from Sept./October 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>