

BIO-659

Advanced Microscopy for Life Science

Seitz Arne

Cursus	Sem.	Type
Molecular Life Sciences		Opt.
Neuroscience		Opt.

Language of teaching	English
Credits	3
Session	
Exam	Oral presentation
Workload	90h
Hours	45
Lecture	15
Exercises	5
Practical work	25
Number of positions	16

Frequency

Every year

Remark

Every year in September. To register, contact EDMS Administration

Summary

For further information, please get in contact with the instructor or have a look on the following web-site:
<http://biop.epfl.ch/>

Content

- Basic optical principles
- Light microscopy, fluorescence microscopy
- Confocal microscopy
- Fluorescence Resonance Energy Transfer (FRET)
- Photobleaching, photoactivation techniques, Fluorescence Recovery after Photobleaching (FRAP)
- Structured Illumination microscopy
- Localization techniques (PALM, STORM)
- Stimulated emission depletion microscopy (STED)

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

Light-microscopy, live-cell imaging, high/super resolution light microscopy.

Assessment methods

Presentation

Resources

Websites

- <http://biop.epfl.ch/>