BIO-603(MS)  Practical - Manley Lab
Manley Suliana

Cursus  Sem.  Type
Approches moléculaires du vivant  Obl.

Language  English
Credits  1
Session  Project report
Exam  1
Workload  30h
Hours  24
Lecture  2
Practical work  22
Number of positions  3

Frequency
Every year

Remarque
Next time: January 2019

Summary
The students will acquire knowledge on the fundamental aspects of super-resolutions microscopy. Practical skills include preparation of samples of cells (either bacteria or eukarytic cell culture) for imaging, image acquisition, and data analysis.

Content
Theory: Lecture and readings on the fundamental aspects of super-resolution microscopy.
Practical part: Epifluorescence microscopy, super-resolution microscopy, sample preparation, image analysis.

Note
2 courses are mandatory to attend the course BIO-603(MS), see below required courses!
Note that while the course is open to all 1st year EPFL doctoral students, priority will be given to 1st & 2nd-year EDMS students, given that they are mandated to take three EDMS practical modules.
Note also that doctoral students from the Manley laboratory cannot take this course.
Access is limited to 4 students. Takes place every year in January.

Keywords
fluorescence
super-resolution (PALM, STORM, SIM)

Learning Prerequisites
Required courses
Biomicroscopy I and II (MICRO-561, MICRO-562), these 2 courses are mandatory to attend the course BIO-603(MS).

Learning Outcomes
By the end of the course, the student must be able to:
  • Explain the operating principles and important requirements and limitations of super-resolution microscopy

Assessment methods
Project report, oral presentation

Resources
Websites

• http://leb.epfl.ch