

BIO-603(MS)

**Practical - Manley Lab**

Manley Suliana

Cursus	Sem.	Type
Molecular Life Sciences		Obl.

Language of teaching	English
Credits	1
Session	
Exam	Project report
Workload	30h
<b>Hours</b>	<b>24</b>
Courses	2
TP	22
<b>Number of positions</b>	<b>3</b>

**Frequency**

Every year

**Remark**

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 eukaryotic 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>