

Introduction to fluorescence imaging for the analysis of living cells

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- The course will be given entirely online
 - recorded video lectures (ca. 2-hour each week) available every week from Tuesdays
 - live Q&A sessions with Prof. Chatton every week on Fridays from 11:30 -12:00
- Lectures will be given in English
- Validation of 1 ECTS credit for students of the local doctoral schools (FBM and LNDS) upon successful course completion

Topics per week; from:

4 January 2022 : Basics of transmitted light and fluorescence microscopy

11 January 2022 : Confocal microscopy

18 January 2022 : Modes of image formation, acquisition, signal sampling

25 January 2022 : Dynamic recording of cellular functions by fluorescence imaging.

Intracellular ion imaging and cellular signaling.
Issues related to imaging of living cells

1 February 2022 : Other optical applications (proposed topics):

Fluorescence recovery after photobleaching (FRAP), photoactivation - optogenetics, multiphoton microscopy, fluorescence resonance energy transfer (FRET), optical contrasting methods (phase contrast, DIC), super-resolution microscopy

Registration: register before January 3, 2022 via the link <https://tinyurl.com/FluorescenceImaging>

→ Admission to the course is free and open to anyone interested

Course materials:

- available on <https://moodle2.unil.ch>
- log in with your institutional address (UNIL, CHUV, EPFL)
- click on "Faculté de Biologie et de Médecine" > "Ecole doctorale / doctoral school" > "Lemanic Neuroscience Doctoral School"
- course materials will be stored under "Introduction to Fluorescence Imaging for the Analysis of Living Cells"
- the login password will be sent to registered participants the day before course start. Please contact Ulrike.toepel@unil.ch in case of problems.