

Workshop

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| Title: | Microscopy in plant sciences |
| Date, duration: | On demand, 1 day or two half days |
| Location: | Institute of Plant Sciences, University of Bern, Altenbergrain 21, 3013 Bern |
| Lecturer(s): | Prof. Dr. Pauline Jullien (IPS) |
| Number of participants: | 1 – 4 students |
| Target audience: | Master and PhD students of the University of Bern. |
| Registration: | Send request to Prof. Pauline Jullien (pauline.jullien@ips.unibe.ch) |
| KSL: | 470963 |
| Reward: | 0.5 ECTS |
| Costs: | Free of costs for members of the University of Bern. Course costs for external participants: on request. PhD students enrolled in the Graduate School for Cellular and Biomedical Sciences (GCB) can apply for refund at the PhD program Cutting Edge Microscopy |
| Learning goals: | At the end of the workshop, the students will be familiar with fluorescent imaging of plant material and its peculiarities. The students will be able to quantify basic plant traits. |
| Description | Plants are sessile organisms and as such, they have to adapt their growth to the environment. As a consequence, plants can have different sizes, shapes, or colours under different growth conditions which can be quantified. Additionally, one other characteristic of plants is that they obtain their energy by Photosynthesis. This ability to fix light leads to specific issues when performing fluorescent imaging of plant tissue. |



Course structure:

The course will be divided into two topics and rely on the active participation of the student(s). One half-day will be focused on quantifying basic plant traits: We will take pictures of plant material such as seeds or leaves and quantify them using Image J. The second half-day will be focussed on fluorescent imaging of plant tissue. We will prepare photosynthetic and non-photosynthetic plant tissue and observe them using confocal microscopy. A brief introduction to each topic will be given prior to the start of the practical session. Discussion of the experimental design, observations, and data analysis will take place. Different plant tissue or trait can be analysed depending on student(s) interest and upon prior discussion.

Assessment:

To be determined