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| name of the module | Plant Cell Biology |
| start | Mid October and Mid February |
| duration | 5 weeks |
| location | Karlsruhe Institute of Technology, Botanical Institute |
| contact person | Peter Nick |
| ECTS (regular/max) | 8 |
| examination | <p>Rating of performance</p> <p>the performance is rated as examination of mixed type. In total 120 points can be raised. These are composed of</p> <ul style="list-style-type: none"> • a written test over 120 min on contents of the lecture maximally yielding 60 points. • group exercises (individual entry via Ilias) maximally yielding 18 points. • exercises on special topics accompanying the lecture maximally yielding 30 points. • a protocol on the practical project meeting scientific standards maximally yielding 8 points. • a project proposal following scientific criteria maximally yielding 4 points. • a presentation of the project which can improve the final mark by maximally a step of 0.3 <p>Successful participation in the practical project is a necessary condition for completion of the module. This is documented by a countersigned handover protocol. Success criteria are, in addition of regular presence, compliance with security rules, documentation of experiments and data, as well as handling of samples following good scientific practice. In case that the handover protocol is not accepted, due to violation of these criteria, the practical part is considered as not passed. This can be compensated by agreement of appropriate conditions that have to be met, before the practical part is accepted as successfully passed.</p> |
| graded | Yes, best grade 1.0, passed with 50% of scores |
| description of content (approx. ½ page) | <p>MFOR-V-1201: Plant Cell Biology – Methods and Concepts (Vorlesung)</p> <p>The course introduces into methods and concepts of modern plant-cell biology with a strong impact on development. The lecture covers methods such as fluorescence microscopy, fluorescent markers, quantitative image analysis, microtechniques and the conceptual framework for cell growth, division, differentiation, patterning, polarity and cytoskeleton and cell communication.</p> |

- Fluorescence Microscopy and Image Analysis
- Fluorescent Probes
- Micromethods and Molecular Techniques
- Plant Cytoskeleton
- Cellular Base of Plant Development

MFOR-P-1201: Research Projects in Plant Cell Biology

Students conduct small research projects on cell biological topics in the context of current research. They write up a report on their projects and present their results at the end of the block. Although they are intensively supervised, we expect a high degree of self-responsibility and self-organization. Goal is to acquire familiarity with current methodology, design and conception of scientific projects, competence in scientific documentation and presentation of scientific results.

Topics

come from current research projects and therefore change (see link below). General research fields are

- Chemical Engineering
- Cytoskeleton
- Cellular Base of Plant Development
- Fluorescence Microscopy
- Quantitative Image Analysis

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