mar621 - Profile Module Techniques in light microscopy and electron microscopy

Module label: Profile Module Techniques in light microscopy and electron microscopy
Module code: mar621
Credit points: 6.0 KP
Workload: 180 h
Used in course of study: Master's Programme Microbiology > Mastermodule
Contact person: Erhard Rhiel

Entry requirements: none

Skills to be acquired in this module:
- The basics/theory of scanning electron microscopy (SEM) and transmission electron microscopy (TEM)
- Different sample preparation methods for SEM
- To operate our scanning electron microscope
- To operate our critical point drying device
- To perform sputter coating
- To perform negative staining TEM
- To operate our transmission electron microscope
- To perform immuno-labelling for light microscopy

Module contents:
The profile module “Techniques in light microscopy and electron microscopy” runs over a period of 10 days, distributed over three weeks. On the first day, seminars will introduce into the theory, i.e. of SEM and TEM. The remaining 9 days are for practice. The main topics of the course are: basic principles and functioning of light and electron microscopes, sample preparation, fixation, low temperature SEM, low vacuum SEM, negative staining TEM, and immuno-labelling for light microscopy.

Reader’s advisory:
will be announced

Links:
Language of instruction: English
Duration (semesters): 1 Semester
Module frequency: Jährlich
Module capacity: Unlimited
Reference text: 6 CP | SE; PR | 1. or 3. FS | Rhiel
Modullevel: ---
Modulart: je nach Studiengang Pflicht oder Wahlpflicht
Lern-/Lehrform / Type of program:
Lecture (1 CP), seminar (1 CP) & practical course (4 CP)
Seminar and laboratory work, at three days for three weeks

Vorkenntnisse / Previous knowledge:

Examination:
Time of examination: after delivery of the two course assessments
Type of examination: One assessment of examination: (seminar presentation, poster).
Active participation (Active and documented participation in practical courses (labs, exercises, seminars, field trips) and courses. These include e.g. the delivery of exercises, writing a lab report or seminar presentations according to the advice of the course supervisor.)

Course type:
Seminar: 1.00
Practical: 4.00
Total time of attendance for the module: 70 h

Workload attendance:
Seminar: 14 h
Practical: 56 h