

Title of module

Advanced Practical in the Focal Point Programme:
"Molecular Medicine" VZ: 185881
"Molecular Cardiology"

Credit points

7.5
(of 15)

Available in semester(s)

2

Hours per week

9

Compact course



Lecturer(s)

W. Linke and teaching assistants

Teaching methods

A five-week all-day practical lab course with a compulsory seminar presentation.
Please note: A second Advanced Practical will have to be performed in the same semester to earn the full complement of 15 credits

Evaluation of learning progress

Active participation, feedback during independently performed experiments, project discussions with the supervisor

Mode of examination

Assessment of experimental skills during the practical (50%), a written project report (40%), and a seminar presentation of experimental results (10%).

Learning objectives

In the context of the group's research focus, the students can improve their expertise in cell and molecular biological as well as biochemical and physiological experimental techniques. A small project will be assigned to the student, which he/she works on under the supervision of an experienced scientist.

Soft skills

Writing a report for a research study (with feedback);
Presenting research results with PowerPoint (with feedback);
Improve use of specific scientific vocabulary;
Learn principles for assuring data integrity

Contents of module

Students will participate with a small experimental project in a research study within the frames of the research interests of the group: Cytoskeletal protein function in myocardial cells during health and disease.

Hands-on experience with molecular, biochemical, cell biological or physiological techniques.

At least two of the following methods learned:

- A) Cell culture and immunofluorescence;
- B) Mechanical analysis of cardiac cells;
- C) Protein gel electrophoresis and Western Blotting;
- D) PCR and agarose gel electrophoresis.