Bio279 - Basic Concepts in Animal Physiology

Module label: Basic Concepts in Animal Physiology
Module code: bio279
Credit points: 6.0 KP
Workload: 180 h
Used in course of study:
- Master of Education Programme (Special Needs Education) Biology > Mastermodule
- Master's Programme Engineering Physics > Schwerpunkt: Biomedical Physics

Contact person
Module responsibility
- Dominik Heyers

Authorized examiners
- Dominik Heyers
- Christine Köppl
- Karin Dedek

Module counseling
- Christine Köppl
- Karin Dedek

Entry requirements
Skills to be acquired in this module
++ biological knowledge
++ knowledge of biological working methods
+ biologically relevant knowledge in the natural sciences and mathematics
+ statistics & scientific programming
++ abstract, logical, analytical thinking
+ deepened expertise in biological specialist field
++ independent learning and (research-based) working
+ teamwork

Basic knowledge on physiological processes and their underlying mechanisms with a focus on human physiology. Performing, analysing and documenting physiological experiments.

Module contents
The lecture (Vorlesung: 5.02.271 - Physiologie der Tiere und des Menschen) covers topics such as cell physiology, sensory physiology, neurophysiology, functions of the vegetative system, blood physiology/immune response, blood cycle, respiration and digestion. Emphasis will be on human physiology. In the following lab exercises, students get the opportunity to perform physiological experiments linking to topics from the lecture. By performing experiments on themselves and computer simulations students will gain insight into the underlying physiological principles.

Reader’s advisory
Klinke, Pape, Kurtz, Silbernagl: Physiologie, Aufl. 6, 2010
Schmidt, Lang, Heckmann: Physiologie des Menschen mit Pathophysiologie, Aufl. 31, 2011
(if available: Wehner, Gehring: Zoologie)

Links
Language of instruction: German
Duration (semesters): 1 Semester
Module frequency: jährlich
Module capacity: unlimited
Modulart: je nach Studiengang Pflicht oder Wahlpflicht

Examination
Time of examination: within a few weeks after the winter term lecture written exam (100%)
Type of examination: written exam

To qualify for the exam, the following additional requirements need to be met:
- regular participation in the laboratory experiments (no more than 1 day of absence)
- lab protocols for each experiment which have been accepted by the respective supervisors

A cumulative bonus can be obtained with good
lab protocols. The decision whether a given protocol deserves the bonus lies with the respective supervisor of each experiment. The bonus improves the exam mark by maximally two steps (0.7). The bonus is optional, an exam mark of 1.0 is achievable without a bonus. A bonus cannot be applied to pass a failed exam.

PLEASE NOTE:
Additional conditions regarding attendance and ungraded activities as determined by the persons responsible for the module will apply.

<table>
<thead>
<tr>
<th>Course type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWS</td>
<td>4.00</td>
</tr>
<tr>
<td>Frequency</td>
<td></td>
</tr>
<tr>
<td>Workload attendance</td>
<td>56 h</td>
</tr>
</tbody>
</table>