bio605 - Molecular Genetics and Cell Biology

Module label: Molecular Genetics and Cell Biology
Module code: bio605
Credit points: 12.0 KP
Workload: 360 h
Used in course of study:
- Master's Programme Biology > Background Modules
- Master's Programme Neuroscience > Background Modules

Contact person
Module responsibility:
- John Neidhardt

Authorized examiners:
- John Neidhardt
- Karl-Wilhelm Koch
- Kathrin Thedieck

Module counseling:
- Karl-Wilhelm Koch
- Kathrin Thedieck

Entry requirements
Skills to be acquired in this module:
++ deepened biological expertise
++ deepened knowledge of biological working methods
+ data analysis skills
++ interdisciplinary thinking
+ critical and analytical thinking
+ independent searching and knowledge of scientific literature
+ data presentation and discussion in German and English (written and spoken)
+ teamwork
+ ethics and professional behaviour
+ project and time management

Addressing students with an emphasis on molecular biology, molecular genetics, cell biology, and neurobiology

Module contents
Lecture: To improve knowledge in molecular genetics, molecular biology and cell biology in correlation with human diseases.
Exercise: Learn to transfer the theoretical knowledge to experiments. Gaining methodological knowledge in molecular genetics, cell biology and therapeutical approaches. Initial training on how to perform research projects.
Subjects of the lecture and seminar: Molecular bases of neurodegenerative diseases, structure and function of DNA/RNA/proteins/membranes, cytoskeleton, cell cycle, programmed cell death, cells in the social structure.
Exercises: Learning current methods of molecular biology and human genetics; high throughput technologies, introduction to cell cultivation techniques.

Reader's advisory
Textbooks of Cell Biology

Links
http://www.uni-oldenburg.de/humangenetik/

Language of instruction
English

Duration (semesters)
1 Semester

Module frequency

Module capacity
15

Reference text
associated with bio900

Modulart
Wahlpflicht / Elective

Lern-/Lehrform / Type of program
Vorkenntnisse / Previous knowledge

Examination
Time of examination
Type of examination
Final exam of module
written examination (70 %), paper(s) presentation 30 %;
not graded: signed lab protocols, regular active participation is required for the module to be passed.

Course type
Comment
SWS
Frequency
Workload attendance
Lecture
2.00
WiSe
28 h
Seminar
1.00
WiSe
14 h

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<tr>
<th>Course type</th>
<th>Comment</th>
<th>SWS</th>
<th>Frequency</th>
<th>Workload attendance</th>
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<tbody>
<tr>
<td>Exercises</td>
<td></td>
<td>5.00</td>
<td>WiSe</td>
<td>70 h</td>
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*Total time of attendance for the module* 112 h