neu220 - Neurosensory Science and Behaviour - Part B

Module label: Neurosensory Science and Behaviour - Part B
Module code: neu220
Credit points: 6.0 KP
Workload: 180 h

Used in course of study:
- Master's Programme Biology > Background Modules
- Master's Programme Neuroscience > Background Modules

Contact person:
Module responsibility:
- Christiane Margarete Thiel

Authorized examiners:
- Carsten Gießing
- Christiane Margarete Thiel

Module counseling:
- Carsten Gießing

Entry requirements:
Skills to be acquired in this module:
++) Neurosci. knowlg. + Expt. methods Independent research + Scient. literature + Social skills
++) Interdiscipl. knowlg. Maths/Stats/Progr. + Data present./disc. + Scientific English Ethics

Upon successful completion of this course, students:
- know the fundamentals of neurotransmission
- know the basic neural mechanisms underlying attention, learning, emotion, language and executive functions
- understand the relationship between disturbances in neurotransmitter systems, cognitive functions and psychiatric disease
- know the principles of drug treatment for psychiatric disorders
- have in-depth knowledge in selected areas of these topics
- are able to understand, explain and critically assess neuroscientific approaches in animals and humans
- are able to understand and critically assess published work in the area of cognitive neuroscience

Module contents:
The lecture "Introduction to Cognitive Neuroscience" gives a short introduction into neuroanatomy and cognitive neuroscience methods and then covers different cognitive functions.
Lecture topics:
- History of cognitive neuroscience
- Methods of cognitive neuroscience
- Attention
- Learning
- Emotion
- Language
- Executive functions.
The supervised excersise either deepens that knowledge by excersises or discussions of recent papers' talks on the respective topic covered during that week.
The lecture "Psychopharmacology" illustrates the connection between neurotransmitters and behaviour and its links to psychiatric disease.
The lecture contains several interactive parts to consolidate and critically evaluate the acquired knowledge.
Lecture topics:
- Introduction to Terms and Definitions in Drug Research
- Dopaminergic and Noradrenergic System
- Cholinergic and Serotonergic System
- GABAergic and Glutamatergic System
- Addiction
- Depression
- Schizophrenia
- Anxiety
- Alzheimer's Disease
- Reader's advisory:

Links:

Language of instruction: English
Duration (semesters): 1 Semester
Module frequency: jährlich
Module capacity: 30
Reference text: Course in the second half of the semester
Regular active participation is required to pass the module.

Modullevel: ---
Modulart: je nach Studiengang Pflicht oder Wahlpflicht

<table>
<thead>
<tr>
<th>Lern-/Lehrform / Type of program</th>
<th>Vorkenntnisse / Previous knowledge</th>
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</thead>
<tbody>
<tr>
<td>Examination</td>
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<tr>
<td>Final exam of module</td>
<td>Time of examination: as agreed, usually in the break after the winter term</td>
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<td>Type of examination: 100% written exam (content of the lectures)</td>
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<thead>
<tr>
<th>Course type</th>
<th>SWS</th>
<th>Frequency</th>
<th>Workload attendance</th>
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<tbody>
<tr>
<td>Lecture</td>
<td>3.00</td>
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<td>42 h</td>
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<tr>
<td>Exercises</td>
<td>1.00</td>
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<td>14 h</td>
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Total time of attendance for the module: 56 h