neu540 - Neural Basis of Perception

Module label: Neural Basis of Perception
Module code: neu540
Credit points: 15.0 KP
Workload: 450 h
Used in course of study: Master's Programme Neuroscience > Research Modules

Module responsibility
- Jutta Kretzberg

Authorized examiners
- Alle hier genannten

Module counseling
- Georg Martin Klump
- Henrik Mouritsen
- Michael Winklhofer

Entry requirements
attendance in pre-meeting, priority is given to students who attended at least one of the background modules listed as "recommended in combination with"

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

Students perform individual research projects to learn:
- planning, performing and analyzing experiments and / or simulations
- working with scientific background literature on the specific context of the project
- oral presentation and discussion of backgrounds and results in the lab seminar
- write a scientific report
- prepare and present a scientific poster

Module can serve as preparation for a Master's thesis.

Module contents
Introductory lecture and seminar (either blocked or parallel to lab work) plus 6 weeks of small-group lab projects, participating in the supervisor's ongoing research, and in the respective group seminar.

There are four options for the lab projects:
- Option 1: Navigation mechanisms in nocturnal bird migration (Mouritsen) comprises (i) lecture "Bird migration", (ii) participation in group seminar, and (iii) a laboratory project "Navigation mechanisms in nocturnal bird migration" (flexible timing); including participation in investigations of navigation mechanisms in migratory birds (project focussing on behavioural biology, molecular biology or neuroanatomy).
- Option 2: Invertebrate somatosensory system (Kretzberg), includes participation in group seminar, journal club and laboratory project (all flexible timing).
- Option 3: Central auditory mechanisms (Klump), includes introductory block course "Fundamentals of Auditory Physiology" (one week at start of winter semester), participation in group seminar and a laboratory project (flexible timing)
- Option 4: Magnetic field perception (Winklhofer), includes participation in group seminar, journal club and laboratory project (all flexible timing).

Reader's advisory

Links
Language of instruction: English
Duration (semesters): 1 Semester
Please note that different options have mandatory course components at different times.
Priority for admission is given to students who attended at least one of the background modules listed as "recommended in combination with"

Participation in a joint poster presentation of concurrent research modules is highly recommended.

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<tr>
<th>Module level</th>
<th>MM (Mastermodul)</th>
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<td>Modulart</td>
<td>Wahlpflicht</td>
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**Vorkenntnisse / Previous knowledge**

**Examination** | **Time of examination** | **Type of examination**
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Final exam of module | within 2 months after completion of experimental work | Internship report

<table>
<thead>
<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>Lecture</td>
<td></td>
<td>1.00</td>
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<tr>
<td>Seminar</td>
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<td>Projektorientiertes Modul</td>
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<td>WiSe</td>
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**Total time of attendance for the module**

140 h