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

Contact person:
- Jutta Kretzberg
- 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 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
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<thead>
<tr>
<th>Module frequency</th>
<th>jährlich</th>
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<td>Module capacity</td>
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Reference text

- 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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<th>MM (Mastermodul)</th>
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<th>Lern-/Lehrform / Type of program</th>
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<td>Vorkenntnisse / Previous knowledge</td>
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<tr>
<td>Final exam of module</td>
<td>within 2 months after completion of experimental work</td>
<td>Internship report</td>
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<tr>
<td>Seminar</td>
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<td>Projektorientiertes Modul</td>
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Total time of attendance for the module: 140 h