**neu540 - Neural Basis of Perception**

**Module label**
Neural Basis of Perception

**Module code**
zeu540

**Credit points**
15.0 KP

**Workload**
450 h

**Used in course of study**
- Master's Programme Neuroscience > Research Modules

**Contact person**

**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 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
Module frequency: jährlich
Module capacity: unlimited

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.

<table>
<thead>
<tr>
<th>Modulelevel</th>
<th>MM (Mastermodul)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modular</td>
<td>Wahlpflicht</td>
</tr>
</tbody>
</table>

Lern-/Lehrform / Type of program

<table>
<thead>
<tr>
<th>Examination</th>
<th>Time of examination</th>
<th>Type of examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final exam of module</td>
<td>within 2 months after completion of experimental work</td>
<td>Internship report</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course type</th>
<th>Comment</th>
<th>SWS</th>
<th>Frequency</th>
<th>Workload attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
<td>1.00</td>
<td></td>
<td>14 h</td>
</tr>
<tr>
<td>Seminar</td>
<td></td>
<td>1.00</td>
<td></td>
<td>14 h</td>
</tr>
<tr>
<td>Projektorientiertes Modul</td>
<td></td>
<td>8.00</td>
<td></td>
<td>WiSe</td>
</tr>
</tbody>
</table>

Total time of attendance for the module: 140 h