psy230 - Neuromodulation of Cognition

Module label Neuromodulation of Cognition
Module code psy230
Credit points 6.0 KP
Workload 180 h
Used in course of study • Master's Programme Neurocognitive Psychology > Master module
Contact person Module responsibility
  • Jochem Rieger

Entry requirements Enrolment in Master's programme Neurocognitive Psychology. Neuroscience students can take part on request.
Skills to be acquired in this module Goals of module:
The aim of this module is to provide students with a theoretical background on how cognitive functions can be altered via neuromodulation.

Competencies:
++ Neuropsychological / neurophysiological knowledge
+ interdisciplinary knowledge & thinking
++ experimental methods
+ ethics / good scientific practice / professional behavior
+ critical & analytical thinking
+ scientific communication skills

Module contents Students will be introduced to the concepts of neuromodulation and the application of theoretical knowledge of neurophysiology to the modulation of cognitive functions.

Part 1: Neuromodulation of cognition (lecture)

• Neurotransmitter systems of cognition
• Neuropharmacological intervention
• Neuroenhancement
• Neurofeedback
• Neurostimulation

Part 2: Neurofeedback (seminar)

• Neurofeedback in control and therapy
• EEG-Neurofeedback
• EMG-Neurofeedback
• Transcranial magnetic stimulation
• Deep brain stimulation
• Patient safety

Reader’s advisory

• Demos J.N. (2005) Getting Started with Neurofeedback, Norton Professional Books

Links

Language of instruction English
Duration (semesters) 1 Semester
Module frequency The module will be offered every winter term.
Module capacity 15
Modulelevel MM (Mastermodul / Master module)
Modulart Wahlpflicht / Elective
Lern-/Lehrform / Type of program Part 1: lecture; Part 2: seminar
Vorkenntnisse / Previous knowledge

Examination Time of examination Type of examination
Final exam of module during winter term The module will be evaluated with an oral
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<td>presentation in the seminar. Bonus for oral contribution.</td>
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<th>Course type</th>
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<tr>
<td>Lecture</td>
<td>2.00</td>
<td>WiSe</td>
<td>28 h</td>
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<tr>
<td>Seminar</td>
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**Total time of attendance for the module**

56 h