neu440 - Visual Neuroscience

Module label Visual Neuroscience
Module code neu440
Credit points 15.0 KP
Workload 450 h
Used in course of study • Master's Programme Neuroscience > Research Modules
Contact person

Module responsibility
  • Ulrike Janssen-Bienhold
Authorized examiners
  • Alle hier genannten
Module counseling
  • Karin Dedek
  • Martin Greschner

Entry requirements attendance in pre-meeting, priority is given to students who attended neu140 BM Neurophysiology and / or neu150 BM Neuroanatomy
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 + During the module the students acquire advanced theoretical knowledge of the molecular and cellular characteristics of retinal circuits and physiology.
  + Students learn to plan and perform a research project independently (includes: literature research and usage of data banks (PUBMED, Gene Bank, Expasy etc.)
  + Students are introduced to scientific writing / have to write a scientific report.
  + Students acquire advanced skills in data analysis (including statistics, computational neuroscience, image analysis)
  + The module can serve the purpose of preparing for a Master's thesis.

Module contents 1. Independent performance of an individual research project in small groups. Dates are individually arranged with the respective supervisor. Available project topics will be presented in the pre-meeting. Methods include:
  Option 1: Molecular Neuroscience
  Option 2: Neuroanatomy
  Option 3: Neurophysiology
  2. Participation in the "Journal club" seminar, including presentation of the project and the results obtained.

Reader's advisory + http://webvision.med.utah.edu/ (H. Holb et al. (2016) The organization of the retina and visual system)
  + 20 to 30 selected original papers on vision research (depending on individual project)

Links

Language of instruction English
Duration (semesters) 1 Semester
Module frequency halbjährlich
Module capacity unlimited
Reference text Regular active participation and presentation(s) within the scope of the seminar are required to pass the module. Furthermore, participation in a joint poster presentation of concurrent research modules is required to pass the module.

Modullevel MM (Mastermodul)
Modulart Wahlpflicht

Lern-/Lehrform / Type of program

Vorkenntnisse / Previous knowledge

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<th>Internship report</th>
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Course type

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