

List of elective modules with optional courses 2023/24

update: 1.8.23

Elective Module Subject Area A: Basic Neuroscience

- **A5** Clock Mechanisms in Mammalian Neurons and Neuroendocrine Cells (FB16) [Maronde](#)
- **A7** Neurobiology of the Nematode *Caenorhabditis elegans* (FB14) [Gottschalk](#)
- **A9** Dopaminergic Neurons in schizophrenia mouse models (FB16 & FB12) [Diamantopoulou/Röper/Schneider](#)
- **A10** Neurophysiology and Behaviour (FB 15) [Grünewald](#)
- **A12** The Neuro-Vascular Interface (FB 16) [Liebner](#)
- **A14** Genetics and Epigenetics of Neurogenesis and Gliogenesis (FB 16) [Schulte](#)
- **A15** Recording neuronal activity in freely behaving animals (FB 16) [Sigurdsson](#)
- **A17** Auditory Function and Dysfunction: Behavior and Physiology (FB 15) [Gaese](#)
- **A18** Information Processing in the Central Auditory System (FB 15) [Gaese](#)
- **A19** Neuronal basis of acoustic communication in mammals (FB 15) [Hechavarria](#)
- **A21** Cellular, molecular and systemic Neurobiology in mouse and zebrafish (FB15) [Kirchmaier/Acker-Palmer](#)
- **A22** Optogenetics and calcium-recordings in freely behaving animals (FB16) [Duvarci](#)
- **A23** Cellular and molecular mechanisms in neurovascular disorders (FB15) [Hefendehl](#)
- **A24** Deciphering brain activity during natural behaviour in real time (ESI/FB15) [Havenith/Schölvinck](#)
- **A25** Neuroscience of Navigation and Self-Motion (ESI/FB15) [Laurens](#)
- **A26** Analysis of Social Networks (MPIBR/FB15) [Barker](#)
- **A27** Instinctive Behaviour Circuits (MPIBR/FB15) [Stempel](#)

Elective Module Subject Area B: Clinical Neuroscience

- **B2** Physiology and Pharmacology of Inflammatory Reactions (FB 16) [Niederberger](#)
- **B4** Plasticity in Hippocampus – Morphology, Physiology, and Clinical Relevance (FB16) [Radic/Jungenitz/Deller](#)
- **B6** Brain Damage and Neuroprotection (FB16) [Kögel/Rami](#)
- **B7** Clinical Paediatric Neurology (FB16) [Kieslich](#)
- **B8** Clinical Neuroimaging (FB16) [Weidauer \(Hattingen, Polkowski\)](#)
- **B9** Clinical Auditory Neuroscience (FB 16) [Baumann](#)
- **B10** Experimental and Translational Psychiatry (FB16) [Slattery](#)
- **B11** Neurobiological human cell models (FB 16) [Chiocchetti](#)
- **B12** Neuroimaging Biomarkers in Psychiatry (FB 16) [Ecker](#)
- **B13** Translational Neuro-Oncology Research (FB 16) [Hau](#)

Elective Module Subject Area C: Cognitive and Computational Neuroscience

- **C1** Modern non-invasive Methods in Human Cognition research (FB16) [Kaiser](#)
- **C4** Virtual Hippocampus – Introduction to Computational Neuroscience (FB 16) [Jedlicka](#)
- **C7** Cognitive Neuroscience – Higher Cognitive Functions (FB05) [Fiebach](#)
- **C8** Systems Neuroscience – Sensorimotor and Cognitive Networks (FB 16) [Kell](#)
- **C10** Computational Neuroanatomy – quantitative analysis and modelling (ESI/FB16) [Cuntz](#)
- **C11** Computational Modeling of Neuronal Plasticity (FIAS/FB 15) [Triesch](#)
- **C15** Developmental Cognitive Neuroscience (FB05) [Shing](#)
- **C16** Cognitive and perceptual processes in the human brain (ESI) [Rademaker](#)

Elective Module Subject Area D: Applied Neuroscience

- **D1** Behavioural Biology in Zoos (FB15) [Dierkes](#)