Methods of Cognitive and Behavioral Neuroscience

In these courses, the PhD students acquire deeper knowledge about the techniques used in the different research fields of cognitive and behavioral neuroscience. Students can choose from a variety of offers to acquire individually required methods skills. Courses range from one week lab rotations to four week method courses.
Here you find a list of current offers:

Method Courses

- **Neurophysiology** (Pape/Pantev)
- **Genes, Hormones and Behaviour** (Sachser, Kaiser, Lewejohann)

Lab Rotations

- **Psychophysics of human movement perception and visuomotor interactions** (de Lussanet)
- **Function and evolution of the brain** (de Lussanet)
- **Measurement of eye movements** (Lappe)
- **Techniques for stereoscopic presentation** (Schreiber)
- **Experimental paradigms for social interaction** (Liepelt)
- **Clinical psychiatry with a focus on psychotic disorders** (Lencer)

The lab rotation clinical psychiatry will offer the possibility to gain insight into the clinical manifestation of psychotic disorders that present with a range of neurocognitive disturbances, perceptual deficits such as hallucinations and delusions, thought disorders and impairments in emotion regulation. Students will get an overview over different treatment strategies (e.g. medication, psychotherapy). Depending on the student's interests different contents of the lab rotation will be offered that will be discussed on an individual basis prior to the rotation. The minimum duration should be 2 weeks but can be extended up to four weeks.
All conversations and examinations of patients will be performed in German.

- **Measures of Human Fear Reactions** (Straube)
- **Analysis of fMRI data - from raw data to z-maps** (Schubotz)
- **Mice to men** (Faber/Pfleiderer)
- **ACDC in Immunology - Electrophysiology of immune cells** (Meuth)
- **Human Electroencephalography** (Zwitserlood)

Assistance in recording and analysis of EEG data from cognitive experiments (typically language or face processing). Possibility to learn about the basic neurophysiological, physical and technical backgrounds of the method. Analysis typically focuses on ERPs but may include spectral analysis and independent component analysis (ICA). Software: ASA, EEGLAB/ERPLAB.

Interested students should select relevant courses together with their PhD committee, and approach the OCC member responsible for the course they are interested in.

One week course or lab rotation: 2 ECTS
Four weeks courses: 5 ECTS
Minimum ECTS in 3 years: 5 ECTS