

Course Description: Neuro 402 Systemic Neurosciences

6 ECTS

Contact Person: Prof. Dr. Oliva Masseck

Offer: winter semester

Assessment of module: written examination

Related Courses

- - Comparative Neuroanatomy (Prof. Olivia Masseck)
 - Cognitive Neurophysiology (Prof. Andreas Kreiter)

Learning contents

Comparative Neuroanatomy Module 402 a (O. Masseck)

These lectures introduce into the functional organisation of the vertebrate nervous system, including comparative and evolutionary aspects. The relation between structure and function of brains will be explained on the cellular level and on the level of different functional systems. In the practical course, you will study vertebrate brains, using microscopic tissue sections and models of the brain. As a learning outcome, you will gain a sound knowledge of the cerebral architecture of the vertebrates. You will be able to use technical terms, anatomical atlases and allocate structures to the parts of the brain.

Cognitive Neurophysiology, Module 402 b (A. Kreiter)

This lecture gives an introduction into the neurophysiology of cognitive processes, exemplarily focusing on the visual system as a model system. The detailed circuitry of the visual system, the functional properties of its neurons as well as the system's functional compartmentization and integrative mechanisms will be discussed in detail. A particular emphasis will be placed on the experimental approaches and methods applied to clarify the relations between cognitive processes, the underlying neuronal mechanisms and the significance of preliminary findings.