



PG-7901: Form & Function of Nervous System (FNF)

Lecture Based Module

Credit weighting: 5 ECTS Co-ordinator: Dr. E. Jimenez

This module will deal with the structure and function of the nervous system. Lectures will focus on gross anatomy and functions of the central and peripheral nervous systems; ventricles and CSF; vasculature of the brain; ion channels; synaptic transmission; sensory, motor and limbic systems; plasticity, memory and learning.

This module will be delivered in a 2-3 week block in September and October 2025

Details of the module

Introduction

Neurophysiology I

Neurophysiology II

Synaptic Transmission

Synaptic Plasticity

Cerebrospinal fluid and Blood

CNS

PNS

ANS

Somatosensory System

Motor System I

Motor System II - Cerebellum

Motor System III - Basal Ganglia

Thalamus

Hypothalamus

Olfaction

Hearing & Equilibrium

Gustation

The Visual System I

The Visual System II

Reading/Learning Resources

- Neuroscience (5th edition) by D. Purves et al. (2012)
- Neuroscience: Exploring the brain (3rd edition) by M.F. Bear, B. Connors, M. Paradiso (2006)
- Principles of Neural Science, Fifth Edition (Principles of Neural Science (Kandel)) 5th Edition by Eric R. Kandel (Editor), James H. Schwartz (Editor), Thomas M. Jessell (Editor), Steven A. Siegelbaum (Editor), A. J. Hudspeth (Editor)

Learning Outcomes

On successful completion of this module students should be able to:

- Name the main structures of the nervous system and to explain their developmental origin
- Explain the basic concepts of excitability and neurotransmission
- Explain the basis of the most common neurological disorders
- Detail the main functional subsystems of the central nervous system
- Discuss the main concepts of homeostasis and learning theories.

Assessment (100%): MCQ+SAQ Paper