PS403 Biological Psychology (5 ECTS)

Module Coordinator: Ms. Anne Marie Keane

Description

This module will provide students with a good understanding of the biopsychological basis of behaviour. The structure and functions of the nervous system are reviewed, along with its modes of communication and the nature of the interaction of drugs with these systems. It will also examine the biopsychological basis of schizophrenia and of sleep, the higher level cognitive function of memory, and the health effects of long-term stress.

Module objectives

- To introduce the relation between the nervous system and behaviour – and more specifically between brain and cognition – to thus encourage a biological perspective on psychological function
- To introduce the concept of localized *or* modular brain function and to then develop the contrasting but nonetheless key concept of distributed brain function with reference to complex disorders of the brain e.g. schizophrenia
- To impart to students the distinct roles and contributions of the various brain systems that collectively mediate higher level cognitive functions (e.g., memory)
- To encourage students to think in a critically evaluative way about empirical research in the biological psychology field

Learning outcomes

Upon completion of this module, students will be able to:

- Describe the structure and functions of the nervous system, in particular the brain, and elaborate on the deficits that may ensue as a result of brain damage
- Discuss the modes of communication within the nervous system and the nature of the interaction of drugs with these systems
- Explain the diathesis-stress model of schizophrenia and provide an evaluative account of current theory and research in relation to the biochemical and structural abnormalities associated with this disorder
- Provide an evaluative account of the role and contribution of the various brain systems that collectively mediate memory

- Describe the psychobiology of the stress response and demonstrate the impact of long- term stress on the brain and in the development of illness

Basic Reading

Breedlove, S.M. & Watson, N.V. (2013). *Biological Psychology: An Introduction to Behavioral, Cognitive and Clinical neuroscience*, 7th edition. Sunderland, Massachusetts: Sinauer Associates, Inc.
Additional topic-related reading lists are provided during the course.

Evaluation

One essay/assignment due during week 9 (Credit: 30% of final grade).
One two-hour examination at the end of Semester 1 (credit: 70% of final grade).