

Psychobiology and Neuroscience

Module Code:	PSY7012-B
Academic Year:	2018-19
Credit Rating:	20
School:	School of Social Sciences
Subject Area:	Psychology
FHEQ Level:	FHEQ Level 7 (Masters)

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	22
Laboratory	6
Directed Study	172

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 2 (Feb - May)

Module Aims

This module will examine the psychobiological control of functions such as consciousness, locomotion, emotion, pain, eating, sleep and reproductive behaviour. You will investigate the role of biology in pathologies such as eating disorders, autistic spectrum disorder, anxiety, schizophrenia, substance abuse amongst other neurological disorders such as epilepsy and traumatic brain injury. The module explores how our knowledge of the structure and function of the nervous system has given rise to current biological/pharmacological treatments of psychiatric and degenerative pathologies.

Outline Syllabus

- History of psychobiology and cognitive neuroscience.
- Biological approaches to personality development and individual difference.
- Anatomy and physiology of the nervous system.
- Rods and cones, spectral sensitivity, introduction to colour vision.
- Neural communication and psychopharmacology.
- Research techniques used in the field of Cognitive Neuroscience.
- Psychiatric disorders (Depression, Anxiety and Schizophrenia) and their biological/pharmacological treatments.
- Role of hormones on the control of brain function and the control of the `master` gland (pituitary) by brain mechanisms.
- Neurodegenerative diseases (Alzheimer, Parkinson).

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1
 - a) describe some basic brain mechanisms involved in a number of biological functions;
 - b) identify and describe the functional architecture of complex brain circuits, which link to behavioural output;
 - c) identify the uses and limitations of research techniques used in Psychobiology and Neuroscience;
 - d) understand how the nervous and endocrine systems are involved in various pathologies such as depression, obesity and drug abuse;
 - e) understand how degeneration of the brain affects normal functioning.
- 2
 - a) understand the organisation of a research article and how to use research articles to support learning;
 - b) identify the advantages and disadvantages of using human and animal models for Psychobiology and Neuroscience research;
 - c) understand the actions of drugs and their importance in developing treatments for dysfunctional behaviours.
- 3
 - a) demonstrate good analytical skills;
 - b) use IT skills to seek out current literature related to the course lectures and tutorials;
 - c) develop critical thinking skills when reading scientific literature.

Learning, Teaching and Assessment Strategy

Lectures will present overviews of topics and current issues in behavioural neuroscience, particularly how biological mechanisms influence behaviour (LO1 a-e). A 3D Brain app, animations, demonstrations and videos of the connections between normal brain circuitry and dysfunction will be illustrated (LO1 a-e). Seminars will be used to explore current up to date literature and to clarify topics covered in class (LO2 a-c, LO3 a-c). Directed study for this module requires students to carry out independent reading relevant to the topics covered in lectures. The exam will assess all Learning Outcomes.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - closed book	Examination - unseen. 1.5 hours. This will test knowledge and understanding of concepts and theories.	1.5 hours	50%	No
Summative	Coursework	1500 word assignment. To show ability to identify and describe mental disorders in neurodegenerative diseases.	-1500 words	50%	Yes

Legacy Code (if applicable)

SY-7012D

Reading List

To view Reading List, please go to [rebus:list](#).