Prifysgol Wrecsam
Wrexham University

Module specification

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Refer to guidance notes for completion of each section of the specification.

Module Code	PSY777
Module Title	Cognitive and Biological Psychology
Level	7
Credit value	20
Faculty	Faculty of Social and Life Sciences
HECoS Code	100497
Cost Code	GAPS

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Psychology (conversion)	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	8.5 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**8.5** hrs
Placement / work based learning	0 hrs
Guided independent study	191.5 hrs
Module duration (total hours)	**200 hrs**

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Initial approval date	15th May 2024	
With effect from date	September 2024	
Date and details of revision		
Version number	1	

Module aims

This module mainly aims to develop students' ability to describe and evaluate current and classical theories relating to neuroscience from biological and cognitive perspectives. Physiology of the central nervous system and its evolution explaining human and animal behaviours, sleep and biological rhythms and pharmacology will be explored in this module. Another aim is to increase students' ability to evaluate current knowledge of information processing and related behavioural outcomes in humans. Relevant neuroscientific techniques used for research and assessments will also be introduced to students.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Critically discuss the biological underpinnings of behaviour.
2	Critically evaluate the key biological theories, concepts, and models
3	Critically evaluate the separate and the cooperative functions of different parts of the brain
4	Critically evaluate the key cognitive theories, concepts, and models
5	Critically reflect on the application of key methodological approaches to study behavioural and cognitive neuroscience (e.g. ERP, fMRI, brain stimulation)
6.	Critically discuss the cognitive processes influencing behaviour.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

1. A portfolio of assessments focusing on the area of biological psychology which is equivalent to 2000-word (e.g., 10 minute Power point presentation, 5 minute Podcast on a given topic, short answers, class tests).

2. A 2000-word critical appraisal of given publication or experiments for cognitive psychology.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 3, 5	Portfolio	50%
2	3, 4, 5, 6	Written Assignment	50%

Derogations

None

Learning and Teaching Strategies

A variety of teaching and learning strategies will be adopted in this module including lectures, tutorials, case studies, workshops, and directed and self-directed learning. The University's Active Learning Framework (ALF) is embedded with asynchronous and synchronous teaching, which supports the blended learning nature of this module. Students will also learn by engaging in remote discussions via forums on the VLE (Moodle), accessing webinars/presentations/recorded lectures shared by the module leader, and completing independent reading into the topic.

Indicative Syllabus Outline

- Neuroanatomy, lateralisation, and brain mapping
- Neurons, neurotransmission and communication
- Genes and evolution
- Brain development and plasticity
- Sensory systems, motor control and movement
- Memory, attention, learning and amnesia
- Perception, Object and face recognition, neuroaesthetics
- Problem solving and Decision making
- Consciousness, Thinking, Reasoning and Cognitive control
- Language
- Neuropsychology of sleep and biological rhythms
- Neuropsychology of emotion, motivation, stress and health
- Techniques in neuroscience

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

For Biological psychology perspective:

Barnes, J. (2013). *Essential biological psychology*. Sage.

For Cognitive psychology perspective:

Eysenck, M. W., & Brysbaert, M. (2023). *Fundamentals of cognition*. (4th ed.). Routledge.

Other indicative reading

Andrewes, D. (2016). *Neuropsychology: From theory to practice.* (2nd ed.). Routledge.

Baddeley, A., Eysenck, M. W., & Anderson, M. C. (2020). *Memory* (3rd ed.). Psychology Press.

British Psychological Society. (2021). *BPS code of ethics and conduct*. BPS.

Carlson, N. R. & Birkett, M. (2022). *Physiology of behaviour* (13th ed.). Allyn & Bacon.

Dawkins, R. (2016). *The selfish gene: 40th anniversary edition* Oxford University Press.

Gilhooly, K, Lyddy, F., Pollick, F., & Buratti, S. (2021). *Cognitive psychology* (2nd ed.).

Harley, T. J. (2013). *The psychology of language: From data to theory* (4th ed.). Psychology Press.

Ward, J. (2020). *The student's guide to cognitive neuroscience* (4th ed.). Psychology Press.

Workman, L., & Reader, W. (2021). *Evolutionary psychology: An introduction.* (4th ed.). Wiley.

Journals

Journal of Neuropsychology

Neuropsychology

Neuroscience

Cognitive Neuropsychology

Biological Psychology

British Journal of Clinical Psychology