

Module specification

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Module Code	PSY518
Module Title	Cognitive and Behavioural Neuroscience
Level	5
Credit value	20
Faculty	Social and Life Sciences
HECoS Code	100497
Cost Code	GAPS
Pre-requisite module	None

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
BSc (Hons) Psychology	Core
BSc (Hons) Psychology with Foundation Year	Core
BSc (Hons) Criminal Psychology	Core

Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	0 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	30 hrs
Placement hours	0 hrs
Guided independent study hours	170 hrs
Module duration (Total hours)	200 hrs

Module aims

This module will acquaint students with current and classical theories relating to neuroscience from biological and cognitive perspectives. It will develop their ability to evaluate these theories and evidence base. 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. 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 evaluate the biological underpinnings of behaviour, focusing on separate and the cooperative functions of different parts of the brain.
2	Critically discuss the key biological theories, concepts, and models to appraise current research.
3	Evaluate the application of key methodological approaches that are used to understand the influence of cognitive processes on 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.

Assessment 1:

A portfolio of assessments focusing on the area of cognitive psychology which is equivalent to 1500-word (e.g., 10-minute power point presentation, mini-presentation, 5-minute Podcast on a given topic, short answers, class tests).

Assessment 2:

A 2500-word critical essay on a given topic in biological psychology.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	3	Portfolio	1500 words	40	N/A
2	1,2	Written Assignment	2500 words	60	N/A

Derogations

None.

Learning and Teaching Strategies

A range of different learning and teaching strategies will be utilised in this module, including lectures, seminars, group, and individual activities, directed and self-directed learning, and tutorials. Module content will include pre-recorded asynchronous online content that will

inform synchronous sessions. This will allow students time to reflect on and further develop their knowledge ahead of consolidating learning through group workshops and/or seminars. Students will gain experience through experimental and biological tasks that relate to the topic area, which may be provided online or physically in the classroom.

All learning and teaching methods are supported by the University's virtual learning environment, Moodle, where students will be able to access clear and timely information to support the delivery of content such as videos, links to relevant online information, discussion forums, and pre-recorded lectures.

The University's Active Learning Framework (ALF) is embedded within the module to achieve optimal accessibility, inclusivity, and flexibility in terms of teaching and learning. This is in line with the principles of Universal Design for Learning (UDL). A learning blend is used that combines synchronous and asynchronous digitally enabled learning with best use of online opportunities and on-campus spaces and facilities.

Welsh Elements

Students can present their work, access forms, resources, email correspondence, placement support and personal tutorials in Welsh.

Indicative Syllabus Outline

- Neuroanatomy, lateralisation, and brain mapping
- Neurons, neurotransmission, and communication
- Brain development and plasticity
- Sensory systems, motor control and movement
- Attention and performance
- Perception, object, and face processing
- Neuropsychology of sleep and biological rhythms
- Neuropsychology of emotion, motivation, stress, and health
- Techniques in neuroscience
- Considerations of ethics and diversity in relation to this topic

Indicative Bibliography

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

Essential Reads:

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

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.
- 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.)* McGraw-Hill.
- Ward, J. (2020). *The student's guide to cognitive neuroscience (4th ed.)*. UK 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

Administrative Information

For office use only	
Initial approval date	15th May 2024
With effect from date	September 2024
Date and details of revision	July 2025 – updated Indicative Syllabus 03/03/26 - Revalidated
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