

# PS111-30 Brain & Behaviour

**22/23**

**Department**

Psychology

**Level**

Undergraduate Level 1

**Module leader**

Friederike Schlaghecken

**Credit value**

30

**Module duration**

24 weeks

**Assessment**

40% coursework, 60% exam

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

This module will introduce the biological and methodological basis of current approaches to perception, action, attention, emotion, language, learning, memory, and psychological disorders

[Module web page](#)

### Module aims

Taken together, PS111 (Brain and Behaviour) and PS112 (Psychology in Context) will provide a general introduction to Psychology designed to support work in the second and third years of the Psychology Honours Degree. The module has 4 sections. It presents a basic introduction to the structure and function of nervous system, an understanding of how organisms detect and respond to stimulation, develops an understanding of how learning, memory, language, emotion and goal-directed action are rooted in the brain and introduces contemporary psychological and biological approaches to mental illness.

### Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

## Section 1: Biological basis of behaviour

1. Why psychobiology? / Nervous System I: Overall Structure
2. Nervous System II: The Forebrain / Neuron: Structure & Intracellular Signal Transmission
3. Chemical Synapse: Signal Transmission Between Neurons / Neurotransmitter Pathways and Neuro-Plasticity
4. Brain Development / Learning & Memory
5. Injury & Rehabilitation / Feedback & outlook

## Section 2. Perception, action & learning

1. Sensing and Responding 1: Stimulus-elicited behaviour
2. Sensing and Responding 2: Complexity of reflex action
3. Behaviour change & learning 1: Habituation and sensitization
4. Behaviour change & learning 2: Pavlovian learning and conditioning
5. Behaviour change & learning 3: Process and mechanism in Pavlovian learning

## Section 3. Neuropsychology of learning, memory, language & emotion

1. Memory, Memory Loss and Unlearning
2. Learning from Consequences and Acquiring Skills
3. The Frontal Lobes: Voluntary Behaviour and Emotion
4. Fear, Emotion & the Brain
5. Hemispheric Specialization & Language

## Section 4. Psychopathology

1. Historical overview and theoretical perspectives on psychological dysfunction
2. Mood disorders
3. Anxiety disorders
4. Schizophrenia
5. Personality disorders

## Revision

1. Revision Section 1
2. Revision Section 2
3. Revision Section 3
4. Revision Section 4

## Learning outcomes

By the end of the module, students should be able to:

- Describe in general terms the anatomical and functional organisation of the nervous system.
- Describe in general terms how neurochemical processes provide the basis of nervous system function.
- Understand in general terms the brain as a continually adapting system at the macro- (developmental) and the micro-level (learning, memory, rehabilitation).

- Understand in general terms how learning, memory, language, emotion, and goal-directed action are rooted in the structure and function of the brain.
- Understand how memory can be lost and learning can be undone.
- Understand how organisms detect and respond to stimulation, how their responses are changed by experience, and the neural processes and circuits that underly these capacities.
- Understand in general terms the links between reflexiv, conditioned, habitual, and voluntary (goal-directed) behaviour.
- Describe the classical theories of emotion and of the emotional brain.
- Understand Pavlovian threat conditioning and what it tells us about the neural basis of emotion.
- Describe the cortical areas associated with language and how these relate to language disorders such as aphasia.
- Understand contemporary psychological and biological approaches to mental illness and place these in a historical context.
- Understand the types of symptoms seen in anxiety, depressive and psychotic conditions, the biological dysfunction underlying these conditions, and the main treatment approaches.

## Indicative reading list

Bear, M. F., Connors, B. W., and Paradiso, M. A. (2016). Neuroscience: Exploring the Brain. Lippincott Williams and Wilkins

Tresilian, J. (2012). Sensorimotor control and learning: an introduction to the behavioral neuroscience of action. Palgrave Macmillan

Kring, A. M., Johnson, S. L., Davison, J. C., & Neale, J. M. (2017). Abnormal psychology: the science and treatment of psychological disorders. John Wiley

[View reading list on Talis Aspire](#)

## Subject specific skills

Describe in general terms the anatomical and functional organisation of the nervous system.  
Describe in general terms how neurochemical processes provide the basis of nervous system function.

Understand in general terms the brain as a continually adapting system at the macro- (developmental) and the micro-level (learning, memory, rehabilitation).

Understand in general terms how learning, memory, language, emotion, and goal-directed action are rooted in the structure and function of the brain.

Understand what personality disorders are, their possible causes, symptoms, and associated life difficulties

Understand how memory can be lost and learning can be undone.

Understand how organisms detect and respond to stimulation, how their responses are changed by experience, and the neural processes and circuits that underly these capacities.

Understand in general terms the links between reflexiv, conditioned, habitual, and voluntary (goal-directed) behaviour.

Describe the classical theories of emotion and of the emotional brain.

Understand Pavlovian threat conditioning and what it tells us about the neural basis of emotion. Describe the cortical areas associated with language and how these relate to language disorders such as aphasia.

Understand contemporary psychological and biological approaches to mental illness and place these in a historical context.

Understand the types of symptoms seen in anxiety, depressive and psychotic conditions, the biological dysfunction underlying these conditions, and the main treatment approaches.

## **Transferable skills**

Apply a biologically informed perspective to theory and research in psychology.

Apply a biologically informed perspective to study skills.

Apply a biologically informed perspective to mental health and well-being.

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## **Study**

### **Study time**

<b>Type</b>	<b>Required</b>
Lectures	68 sessions of 1 hour (23%)
Private study	232 hours (77%)
Total	300 hours

### **Private study description**

232 hours guided private study

### **Costs**

No further costs have been identified for this module.

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### **Assessment**

You do not need to pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

### **Assessment group D6**

	<b>Weighting</b>	<b>Study time</b>	<b>Eligible for self-certification</b>
<b>Assessment component</b>			
Online Test 1 Open for 48 hours	5%		No
Reassessment component is the same			
<b>Assessment component</b>			
Written Assignment Written assignment(s) covering one of the 4 subsections (student's choice)	20%		Yes (extension)
Reassessment component is the same			
<b>Assessment component</b>			
Online Test 2 Open for 48 hours	5%		No
Reassessment component is the same			
<b>Assessment component</b>			
Online Test 3 Open for 48 hours	5%		No
Reassessment component is the same			
<b>Assessment component</b>			
Online test 4 Open for 48 hours	5%		No

**Weighting      Study time      Eligible for self-certification**

Reassessment component is the same

Assessment component

Online Examination      60%      No  
~Platforms - AEP

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- Online examination: No Answerbook required

Reassessment component is the same

### **Feedback on assessment**

Formative : Academic guidance form for assessed work; Feedback & Revision lectures  
Summative: Moodle / Quizbuilder (for online tests), Tabula

[Past exam papers for PS111](#)

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## **Availability**

### **Post-requisite modules**

If you pass this module, you can take:

- PS346-15 Perspectives in Clinical and Counselling Psychology

## **Courses**

This module is Core optional for:

- Year 1 of UPHA-VL78 BA in Philosophy with Psychology
- Year 1 of UIPA-C8L8 Undergraduate Psychology and Global Sustainable Development

This module is Optional for:

- Year 1 of UPHA-VL78 BA in Philosophy with Psychology
- Year 1 of UBSA-3 Undergraduate Biological Sciences
- Year 1 of UBSA-C1B9 Undergraduate Biomedical Science
- Year 1 of ULFA-C1A3 Undergraduate Biomedical Science (MBio)