

## Liverpool John Moores University

Title: COGNITIVE NEUROSCIENCE  
Status: Definitive  
Code: **6011PSYSCI** (113686)  
Version Start Date: 01-08-2020

Owning School/Faculty: Psychology  
Teaching School/Faculty: Psychology

Team	Leader
Daniel Roberts	Y
Fiona Simmons	
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**Academic Level:** FHEQ6      **Credit Value:** 24      **Total Delivered Hours:** 50  
**Total Learning Hours:** 240      **Private Study:** 190

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	40
Seminar	8

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	exam	Written examination	40	2
Essay	essay 1	Essay 1500 words (Semester 1)	30	
Essay	essay 2	Essay 1500 words (Semester 2)	30	

### Aims

1. To examine the relationship between brain and behaviour.
2. To introduce the main methodologies of Cognitive Neuroscience, such as brain imaging, lesion studies, electrophysiological studies.

3. *To explore the role of Cognitive Neuropsychology within the wider field of Cognitive Neuroscience.*
4. *To examine how the use of different neuroscientific methodologies fosters the understanding of cognitive functions.*
5. *To examine the effects of different types of brain damage on psychological functioning.*
6. *To provide an introduction to neuropsychological assessment and rehabilitation of brain-damaged patients.*
7. *To examine several cognitive functions in greater detail, as for example perception, attention, memory, or executive functions.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Critically appraise the contribution of various neuroscientific methods to understanding cognitive functions.
- 2 Assess the usefulness of studying acquired cognitive disorders for our understanding of normal cognitive processes.
- 3 Critically evaluate the link between brain activity and cognitive functions.
- 4 Critically evaluate studies into cognitive functions of the brain.

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

EXAM	2	3	4
ESSAY 1	1	3	4
ESSAY 2	1	2	

## **Outline Syllabus**

- *Methods of Cognitive Neuroscience*
- *Neurotransmission and Neurotransmitters*
- *Object recognition - processes and impairments*
- *Attentional functions and dysfunctions*
- *Neuroscience of thinking and reasoning*
- *Executive functions and the frontal lobes*
- *Memory and memory disorders*
- *Neuroscience of language and reading*
- *Conceptual and historical issues of neuroscience*

## **Learning Activities**

1. attend lectures and seminars
2. complete directed reading

3. use web-based support material
4. web-based literature search
5. participate in online-discussions
6. essay preparation

## **Notes**

Cognitive Neuroscience addresses the question how the brain enables human cognition and behaviour by employing a variety of different methodologies. The module will examine how methodologies as for example lesion studies, functional brain imaging, electrophysiological studies and behavioural experiments contribute to our understanding of a variety of cognitive functions such as memory, attention and perception. It will encourage students to acknowledge the importance of considering converging evidence from a variety of sources to understand human cognitive functions. It further provides an appropriate conceptual and historical framework of cognitive neuroscience.