

## Liverpool John Moores University

Title: Cognitive Neuroscience  
Status: Definitive  
Code: **7102BRAIN** (126657)  
Version Start Date: 01-08-2021

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

Team	Leader
Samantha Brooks	Y
Davide Bruno	
Susannah Walker	
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**Academic Level:** FHEQ7      **Credit Value:** 20      **Total Delivered Hours:** 44

**Total Learning Hours:** 200      **Private Study:** 156

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	28
Seminar	14

**Grading Basis:** 50 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	1 hour for seen question, 1 hour for short answer questions	60	2
Presentation	Present	The student will be required to critically review a paper previously discussed in a seminar - 20 minutes (15talk + 5 questions)	40	

<b>Competency</b>	Practice
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## Aims

*To provide an understanding of advanced and state-of-the-art topics in cognitive neuroscience, within the context of healthy and disordered brain structure and function.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Scrutinise past and current literature in the field of cognitive neuroscience (e.g. neural systems associated with attention, perception, memory, language, cognitive control and working memory)
- 2 Critically evaluate current research methods in the field of cognitive neuroscience
- 3 Understand and critically assess how the different cognitive systems function in health and mental/neurodegenerative disorders
- 4 Synthesize and communicate neuroscientific information in a clear and concise manner

## Learning Outcomes of Assessments

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

EXAM	1	2	3	
PRESENTATION	1	2	3	4

Practice

## Outline Syllabus

*This module focuses on state-of-the-art and recent advanced cognitive neuroscience research, based on the framework of the National Institute of Health (NIH) Research Domain Criteria (RDoC). Specifically, the module will examine the RDoC Cognitive Systems domain, which includes attention, perception, memory, language, cognitive control and executive functions such as working memory. Cognitive neuroscientific research typically examines these areas from the perspective of genes, neurotransmitter molecules, cells, brain circuitry, neurophysiology, cognitive-behavioural interaction, subjective self-report and objective neuropsychological task performance. The module will consider these innovative areas of cognitive neuroscience from the perspectives of health, mental disorder and neurodegenerative disease.*

## Learning Activities

The module will help students to develop a critical thinking style, using a problem-solving approach to research studies and topics. Exploration of research topics will occur in a series of theoretical and clinical lectures, with corresponding, student led, seminars designed to facilitate practice in critical analysis and problem solving of

various factors introduced by different research papers. Seminars will also give students the opportunity to practice presenting various research articles in preparation for their assessments.

## **Notes**

This second semester module builds on the knowledge of neuroanatomy and methodological design and analysis acquired in the Current Methods in Brain and Behaviour module delivered in semester 1, allowing students to apply their knowledge to critically evaluate the cognitive neuroscience literature and in health and in a range of mental health and neurodegenerative disorders.

Students will be encouraged to use their knowledge to debate contemporary issues in the field - eg Categorical versus transdiagnostic perspectives.