

## **COURSE SPECIFICATION**

<b>Academic School/Department:</b>	Psychology
<b>Programme:</b>	Psychology Computer Science
<b>Level:</b>	6
<b>Module Title:</b>	Brain and Cognition
<b>Module Code:</b>	PSY 6103
<b>Total Hours:</b>	160
Timetabled Hours:	45
Guided Learning Hours:	15
Independent Learning Hours:	100
<b>Credits:</b>	16 UK CATS credits 8 ECTS credits 4 US credits

### **Course Description:**

The course aims to explain cognitive processes and behaviour in terms of their underlying brain mechanisms. Cognition is an exciting and rapidly developing field of research that straddles the traditional disciplines of psychology and biology. Cognitive psychologists and neuroscientists take the view that knowledge about the fundamental mechanisms of the nervous system can lead to a deeper understanding of complex mental processes such as vision, attention, language, development, emotion and executive functions. The course will emphasise the importance of combining information from cognitive experimental designs, epidemiologic studies, neuroimaging, and clinical neuropsychological approaches to understand cognitive processes.

### **Prerequisites:**

GEP 4180

### **Aims and Objectives:**

This course is designed to provide an overview of current cognitive psychology and neuroscience topics and serve as an introduction to a burgeoning field of research. Lectures will introduce topics in

cognition such as current trends and methodologies, neuroethics, vision, consciousness, attention, executive functions, brain development, and language. Students are expected to develop a sound understanding of strength and limitations in theory and methodology.

### **Programme Outcomes:**

Psychology: 6Aiii, 6Aiv, 6Bi, 6Bii, 6Ci, 6Cii, 6Civ, 6Dii

Computer Science: A2, A3, B7, C2, C3, C4

A detailed list of the programme outcomes is found in the Programme Specification. This is maintained by Registry and found at: <https://www.richmond.ac.uk/programme-and-course-specifications/>

### **Learning Outcomes:**

- Demonstrate an understanding of cognition as an interdisciplinary field
- Appreciate the connections between the theories and their applications in experimentation and to be able to critically evaluate these
- Gain an insight into the ways in which different methodologies are used best when specific phenomena are examined
- Demonstrate the ability to formulate a line of argument relating to the major studies/theories in this area

### **Indicative Content:**

- Brain Structure and Development
- Brain lesions
- Vision and Attention
- Speech perception and comprehension
- Executive functions
- Social Cognition and Emotion

### **Assessment:**

This course conforms to the University Assessment Norms approved at Academic Board and located at: <https://www.richmond.ac.uk/university-policies/>

### **Teaching Methodology:**

The course material will be covered in the following ways:

- I. Lecture presentations with the key concepts
- II. Group discussions on journal articles and important questions on the topics discussed
- III. Supervision meetings
- IV. Internet sites related to psychology
- V. Intra-net access to lecture notes and reading material

### ***Indicative Texts***

Gazzaniga, M.S. (2013). *Cognitive Neuroscience: The Biology of the Mind*. New York, NY [u.a.]: Norton.

Purves, D. (2013). *Principles of Cognitive Neuroscience*. Sunderland, Mass.: Sinauer.

Ward, J. (2019). *The Student's Guide to Cognitive Neuroscience*. Hove, East Sussex; New York: Psychology Press.

### ***Journals/Additional Texts***

### ***Web Sites***

See syllabus for complete reading list

## Change Log for this CSD:

Nature of Change	Date Approved & Approval Body (School or AB)	Change Actioned by Registry Services
Revision – annual update	May 2023	
Total Hours Updated	April 2024	