

C8201 Cognition & Neuropsychology

20 credits

Class Leader: Professor James Thomson (GH 663)

Aims:

The course aims to introduce students to two key areas of modern psychology by means of an integrated class designed to reveal how our understanding of higher mental functions has been enhanced through theoretical and experimental studies of normal human cognition on the one hand and neuropsychological studies of how cognitive functions may be damaged as a result of brain lesions on the other.

The course will begin by providing a historical and conceptual overview of thinking in the field. It will then focus on the core psychological functions of perception, language, attention, memory, and executive functioning. It will provide students with theoretical perspectives on each of these functions together with accounts of the empirical evidence that support them. It will then explore studies of brain-damaged individuals and show how this enhances our understanding of each psychological function.

The class provides a solid introduction to two of the core areas of contemporary psychology, providing students with the necessary platform for progression to the department's Third Year classes on Cognition and Psychobiology. For students not progressing with psychology, it will provide an important grounding in key areas of modern psychology which will ensure they are able to communicate intelligently with psychologists on a range of psychological issues, and to think about such issues in an informed manner that goes well beyond common sense.

Learning Outcomes:

Cognitive skills

- i. ability to understand and interpret theoretical ideas in cognitive neuropsychology.
- ii. ability to relate empirical findings to theory.
- iii. ability to critically evaluate conflicting or contradictory research findings.

Knowledge and understanding

- iv. comprehension of key concepts and theoretical perspectives in cognition and neuropsychology.
- v. knowledge of major empirical studies and key case studies in neuropsychology.
- vi. understanding of underlying methodological approaches such as the experimental method; clinical method; single case studies; double dissociation; neuropsychological testing.

Practical skills

- vii. computer and information technology skills involved in data input, analysis and presentation.
- viii. statistical analysis and data interpretation.
- ix. psychological report writing.
- x. bibliographic techniques and library searches.
- xi. communication and teamwork skills through peer collaboration group work.
- xii. time management and organisational skills. Skills for autonomous learning.

Place in course:

This level 2 class builds on topics introduced as part of C8105 Psychology 1a and C8106 Psychology 1b. It provides a platform for the level 3 classes in Cognition and Psychobiology.

Teaching hours:

There will be two lectures per week, one practical class and two online wikis.

Assessment:

The assessment comprises a practical report (33%) and a two-hour examination (67%).

The University requires students to attend lectures, seminars, tutorials and practicals regularly, and to perform satisfactorily in the associated work. Students who fail to attend or who do not take part in groupwork or who have not submitted any required pieces of coursework by two weeks following their respective deadlines may be excluded from the degree examination.

Reading:**Recommended Text**

Gazzaniga, M.S., Ivry, R.B., & Mangun, G.R. Cognitive Neuroscience: the Biology of the Mind (3rd Edition). Norton, 2009.

Other Useful Books

Eysenck, M.W and Keane, M.T Cognitive Psychology: a Student's Handbook (6th Edition). Psychology Press Ltd., 2010.

Kolb, B. and Whishaw, I. Fundamentals of Human Neuropsychology (6th Edition). Freeman, 2008.

Martin, G.N. Human Neuropsychology (2nd Edition). Prentice-Hall, 2006.

Banich, M. Cognitive Neuroscience and Neuropsychology. Houghton Mifflin, Boston, 2004.

Heilman, K.M. and Valenstein, E. Clinical Neuropsychology (4rd Edition). Oxford, 2003.

Young, A.W. and Ellis, A. E. Human Cognitive Neuropsychology (2nd Edition). LEA, 1996.

Banich, M.T. Neuropsychology. Houghton Mifflin, 1997.

Posner, M.I. & Raichke, N.E. Images of Mind. Scientific American, 1997.

McCarthy, R.A. & Warrington, E.K. Cognitive Neuropsychology: a Clinical Introduction. Academic, 1990