1. **Title of the module**

PSYC8050 (SP850): Advanced Cognitive (Neuroscience) Methods in Practice

1. **School or partner institution which will be responsible for management of the module**

School of Psychology

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

20 credits (10 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Autumn or Spring

1. **Prerequisite and co-requisite modules**

None

1. **The programmes of study to which the module contributes**

MSc in Cognitive Psychology/ Neuropsychology; MSc in Research Methods in Psychology

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**

8.1 Develop knowledge and understanding of structures and functions of the human brain and how they can be measured successfully using behavioural methods, eye-tracking and event-related brain potentials

8.2 Show key intellectual skills by critically evaluating the role of cognitive neuroscience techniques for examining explicit human behaviour and the underlying cognitive mechanisms

8.3 Develop a sound understanding of how results from the different cognitive neuroscience techniques relate to/ complement each other (including temporal sensitivity and spatial resolution)

8.4 Develop the ability to evaluate through written analysis and interpretation the contributions made by the different approaches and research methods that are used in cognitive neuroscience

1. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**

9.1 Familiar with a broad range of advanced research methods relevant to cognitive (neuro)psychology

9.2 Capable of independently planning a research study and familiar with the appropriate statistical techniques for analysing the results

9.3 Critique (i.e. evaluate the strengths and weaknesses of) the research methods and evaluate their relevance to specific research questions

9.4 Competently disseminate their work to an audience

9.5 Demonstrate the ability to express opinions, argue rationally and engage in critical thinking both orally and in the written form

1. **A synopsis of the curriculum**

This module will provide students with theoretical instruction and practical experience in some key advanced research methods appropriate for scientific research in cognitive (neuro)psychology. The study of cognitive processes and the temporal nature of brain activity will feature highly in this module.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

* Carreiras, M., & Clifton, C.E. (2004). The on-line study of sentence comprehension: Eyetracking, ERP and beyond. Psychology Press, USA.
* Rayner, K. (1998). Eye movements in reading and information processing: 20 years of research. Psychological Bulletin, 124, 372-422.
* Handy, T.C. (2004). Event-related potentials: A methods handbook. MIT Press.
* Luck, S. J., & Kappenman, E. S. (2012). The Oxford Handbook of Event-Related Potential Components. Oxford University Press, USA.
* Luck, S. (2014). An introduction to the Event-related potential technique. MIT Press.
* Huettel, S.A., Song, W.A., & McCarty, G. (2009). Functional Magnetic Resonance Imaging. 2nd ed., Sinauer.
* Poldrack, R.A., Mumford, J.A., & Nichols, T. E. (2011). Handbook of Functional MRI Data Analysis, CUP.
* Field, A., & Hole, G. (2008). How to design and report experiments. Sage Publications ltd.
* Ward, J. (2012). The Students Guide to Cognitive Neuroscience. Hove: Psychology Press.

1. **Learning and teaching methods**

Total contact hours: 25

Private study hours: 175

Total study hours: 200

1. **Assessment methods**
   1. Main assessment methods

Poster presentation A1 size; guideline of 1,000 words but not prescriptive 20%

Essay 3,000 words 80%

13.2 Reassessment methods

Like for Like.

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |
| Private Study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Lecture/Seminars | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |
| Poster presentation | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Essay (3,000 words) | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

This module covers worldwide expertise on the subject matter, and encourages students to review content from a breadth of sources, both domestic and international.

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**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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Revised FSO Jan 2018