MSc in Cognitive Neuroscience
For students entering Part 1 in 2011/2

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	
Faculty:	Life Sciences Faculty
Programme length:	1 years
Date of specification:	05/Oct/2011
Programme Director:	Carien Van reekum
Programme Advisor:	
Board of Studies:	MSc Programmes in Psychology
Accreditation:	

Summary of programme aims
The purpose of the course is to prepare graduates in Psychology and allied disciplines for academic, clinical, educational, health, and research careers where knowledge of cognitive neuroscience is required or desirable. The course introduces students to topics on the neural and psychological underpinnings of human cognition and behaviour. Topics are covered in more depth, and with greater emphasis on current research, than is typically possible in the course of an undergraduate degree in psychology. Students are exposed to a variety of teaching methods, culminating in the completion of a piece of original research. It is intended that graduates of the course will go on to work in fields which require an understanding of how brain and cognitive function can be investigated in human and non-humans.

Students are required to operate at a more advanced level than in an Honours degree, with emphasis on the psychological issues which arise with particular prominence in this field of enquiry.

Transferable skills
By the end of the programme, students will have developed the following transferable skills:

- Ability to use computers for statistics, data analysis and communication
- Ability to use database / library resources;
- Sophisticated empirical skills in neuroscience techniques relevant to the study of cognition
- Writing skills: Writing of papers, abstraction of others' work from written and oral material, reviewing work of peers
- Ability to give oral presentations

Programme content
Compulsory modules

Code	*Module title*	*Credits*	*Level*
PYM0RT	Research Methods and Transferable Skills for Psychology	20	7
PYM0S1	Data Collection and Analysis 1	10	7
PYM0S2	Data Collection & Analysis 2	10	7
PYM0CG	Methods in Cognition	10	7
PYM0NS	Methods in Neuroscience	10	7
PYM2CS	Cognitive Neuroscience	10	7
PYM2CL	Clinical Neuropsychology	10	7
PYM0PP	Project Preparation	10	7
PYM0EP	Empirical Project (must be undertaken in a relevant field)	60	7

Optional modules
Modules (to make 180 credits in total) may be selected from a list such as the following:

PYM0CP	Methods in Clinical Psychology	10	7
PYM0DP	Methods in Developmental Psychology	10	7
PYM0QQ	Applying Qualitative Methods in Psychological Research	10	7
PYM1CD	Child Development	10	7
PYM3P1	Developmental Psychopathology	10	7

PYM3P2	Topics in Developmental Psychopathology	10	7
PYM0FM	fMRI Data Analysis	10	7
PYM0PL	Placement	20	7

Part-time or modular arrangements
The course may be undertaken over two years on a part-time basis. Selection of modules between the two years will be agreed between the student and the Board of Studies, at the commencement of the course. It is anticipated that students will normally complete at least 80 credits' worth of modules in Year 1. Modules must be assessed in the year that they are studied. The Empirical Project (PYM0EP) must be undertaken in Year 2. Modules must be stared and completed in a single academic year.

Progression requirements
Acceptance onto any module is conditional on the student having attempted all assessments set in previous modules. The Empirical Project will normally be the last piece of work to be submitted for assessment (by Dissertation).

Assessment and classification
Teaching is by a variety of methods, including lectures, small group seminars, web-based work-throughs, self-paced workshops, individual feedback on written work, and one-on-one supervision. Assessment mirrors this diversity of methods, with methods including written assignments and other coursework, computer program project, portfolio, unseen essay- and short notes examinations, open-book test, submission of practical reports, oral presentations, and submission of project dissertation.

The University's taught postgraduate marks classification is as follows:
Mark Interpretation
70 - 100% Distinction
60 - 69% Merit
50 - 59% Good standard (Pass)

Failing categories:
40 - 49% Work below threshold standard
0 - 39% Unsatisfactory Work

For Masters Degrees (180 credits)
Award of MSc degree will follow University of Reading published criteria (www.reading.ac.uk/internal/exams/Policies/exa-class.aspx); in addition, students must have marks not below 40 in modules PYM2CL and PYM2CS.

For PG Diplomas (120 credits: as MSc but without a Project)
Award of PG Diploma will follow University of Reading published criteria (www.reading.ac.uk/internal/exams/Policies/exa-class.aspx); in addition, students must have marks not below 40 in modules PYM2CL and PYM2CS.

Admission requirements
Entrants to this programme are normally required to have obtained an Honours degree in psychology or related discipline (e.g., cognitive science, linguistics, philosophy). Applicants should have gained, or expect to gain, a class mark of 2(1) or better (i.e., 60%+ [or international equivalent, e.g. B+ US letter grade]). Applicants holding 2(2) degrees may apply and each case will be considered on its own merits. Applicants whose academic qualifications do not meet these formal standards may in the first instance be admitted to the Diploma course; they may then transfer to MSc status subject to satisfactory performance in their first two terms. We discourage applications from holders of Third Class degrees.

Admissions Tutor: Dr. Aileen Ho

Support for students and their learning
University support for students and their learning falls into two categories. Learning support is provided by a wide array of services across the University, including: the University Library, the Student Employment, Experience and Careers Centre (SEECC), In-sessional English Support Programme, the Study Advice and

Mathematics Support Centre teams, IT Services and the Student Access to Independent Learning (S@il) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Personal Tutors, School Senior Tutors, the Students' Union, the Medical Practice and advisers in the Student Services Centre. The Student Services Centre is housed in the Carrington Building and offers advice on accommodation, careers, disability, finance, and wellbeing. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions and runs workshops and seminars on a range of topics. For more information see www.reading.ac.uk/student

Career prospects
Graduates will have good prospects in careers which involve the understanding of the neural basis of cognition, the effects of pathology on the human cognitive system, in a variety of academic, clinical, educational, health, and research fields. It is anticipated that approximately half of graduates will to into careers involving research (interpreted broadly). The remainder will be able to use skills and insights gained on the course in areas as diverse as health care, health policy, education, and counselling.

Opportunities for study abroad or for placements
Ample opportunity for first-hand research involvement is available to students on the course through volunteer placements in laboratories at the Department of Psychology and the Centre for Integrative Neuroscience and Neurodynamics (CINN), offering training and experience in state-of-the-art neuroimaging, psychophysiological and related techniques.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:	**Teaching/learning methods and strategies**
1. Advanced concepts, theories, and evidence in the core domains of: research methods, theoretical issues for psychologists, neural basis of behaviour, cognitive changes in human adults. 2. A broad variety of methods and approaches in the psychological understanding of cognition in adults, and its development throughout the lifespan. 3. Applications of psychological and neuropsychological understanding of the human cognitive system, and how it is affected by pathology . 4. Particular difficulties inherent in the psychological study of, and care of, adults with dementia and other insults to the cognitive system. 5. Ethical issues in the psychological study of clinical aspects of human cognition.	1-5 are covered in lectures and seminars. 2, 4 and 5 are further supported by practical experience, most notably in the completion of an empirical project. 1 and 2 are supported by the requirement to attend a number of departmental seminars given by visiting speakers, who are generally leaders in their field. *Assessment* 1-4 by coursework essays and seen examinations. 1, 3, 4, and 5 are assessed directly in the empirical project, and 2 is assessed indirectly (through the rationale for the methods actually deployed by the student). In all cases, students are expected to perform at a level above that required for undergraduate study.

Skills and other attributes

B. Intellectual skills - *able to:*	**Teaching/learning methods and strategies**
1. Use advanced (graduate level) evidence-based reasoning to argue or evaluate a claim about clinical aspects of cognitive psychology. 2. Apply multiple perspectives and levels of explanation to understand behaviour and cognition in human adults, their development	1-3, and 6, are explicated in seminars. 2 is supported by the requirement to coach undergraduate students in practical classes. 6 is supported by self-paced study using web-based teaching. Coursework essays give opportunity for formative

throughout the lifespan, and their study in disease or brain insult.
3. Critically evaluate the design and conduct of neuroscientific research into the human cognitive system, its development and disruption.
4. Write well-structured and well-argued essays.
5. Abstract complex orally presented material, at a level beyond the capabilities of most undergraduates.
6. Understand the theoretical and ethical frameworks in which psychological and neuroscientific research is conducted.

feedback.
Feedback to students on coursework in 'Methods' modules (one of which is compulsory) assists students in the deployment of their intellectual understanding to practical research related issues, supporting 1-4, and particularly 3.

Assessment
1-4 and 6 are assessed in coursework essays, and, in the case of 'Methods' modules (one of which is compulsory) other assignments (e.g., critical evaluation, methods literature search, and project planning), and seen examinations.
5 is assessed by students handing in a number of abstracts of departmental seminars.
6 is assessed throughout.

C. Practical skills - *able to:*

1. Perform advanced searches for information relevant to specific topics.
2. Choose and apply appropriate data analytic techniques.
3. Plan and carry out, with supervision, graduate level psychological research relevant to the understanding the human cognitive system.
4. Write up empirical research relevant to the understanding of the human cognitive system.
5. Make an application for ethical approval.

Teaching/learning methods and strategies

Dedicated seminars, practical classes, and exercises deliver 1 and 2.
A dedicated library and resources session supports 1.
3 and 4 are initially explicated as part of the compulsory module PYM0CG Methods in Cognition; they are then consolidated by direct supervision of a research project and associated dissertation.
Support for 5 is delivered by special seminar.

Assessment
1 and 2 are assessed by the requirement to undertake a project planning assignment.
1-5 are assessed in the main by the student undertaking an empirical research project relevant to the understanding of the human cognitive system, then writing this up as a dissertation.

D. Transferable skills - *able to:*

1. Communicate concisely or at length in writing.
2. Give oral presentations.
3. Work with a group.
4. Plan and implement a project.
5. Solve practical problems.
6. Use IT to write, to present information visually, to manage and analyse numeric data, to communicate, and to find information.
7. Manage time.
8. Condense complex orally delivered information.

Teaching/learning methods and strategies

Transferable skills are integrated in subject-based teaching. 1 is learned, with formative feedback, through essays and other written assignments.
2 is included in seminars.
3 forms a natural part of the modules PYM0S1 Data Collection and Analysis 1 and PYM0QQ, and is additionally a major component of the optional Methods courses viz. PYM0CP, Methods in Clinical Psychology; PYM0DP, Methods in Developmental Psychology.
4 and 5 are explicated in the compulsory modules PYM0CG Methods in Cognition, PYM0NS Methods in Neuroscience, and further consolidated by the supervised empirical project.
6 and 7 pervade all aspects of the course.
8 is supported by formative feedback on research seminars written up by the student.

Assessment
1, 2, 4, 6, and 8 are formally assessed as

coursework.
An adequate standard in 3, 5, and 7 is required to pass the course.

Please note - This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance process or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.