

Programme Specification

1	Awarding body	University of London				
2	Teaching Institution	Birkbeck College				
3	Programme Title(s)	MRes Functional Neuroimaging				
4	Programme Code(s)	TMRFNEUR_C				
5	UCAS code	N/A				
6	Home Department	Psychological Sciences				
7	Exit Award(s)	N/A				
8	Duration of Study (number of years)	1 year (full-time); 2 years (part-time)				
9	Mode of Study	FT	x	PT	x	DL
10	Level of Award (FHEQ)	7				
11	Other teaching depts or institution	N/A				
12	Professional, Statutory Regulatory Body(PSRB) details	N/A				
13	QAA Benchmark Group	N/A				

14	Programme Rationale & Aims
	<p>The course aims to provide students with a range of specific and generic transferable skills necessary for conducting research at PhD level within a major area of functional neuroimaging within psychology. These skills include:</p> <ul style="list-style-type: none"> • critically appreciating existing research and research methods • formulating research questions and hypotheses • conducting literature reviews • designing and reporting experiments using one functional neuroimaging method and • general and subject specific IT skills <p>The course also aims to provide students with:</p> <ul style="list-style-type: none"> • research experience through an extended supervised research project. <p>Distinctive Features:</p> <ul style="list-style-type: none"> • Combines Birkbeck's strengths in psychological neuroimaging research methods • Face-to-face teaching, with a part-time option • The majority of taught Masters emphasise the teaching of a range of research methods. In contrast, the current programme emphasises the research component, allowing students to experience in-depth focussed research comparable to that undertaken in a PhD programme. It is ideally suited for students who already have a range of research method skills but want to undertake a focussed research project of shorter duration than a full MPhil/PhD. This is unique in psychology within the University of London. • Particularly attractive to students wanting in-depth neuroimaging research experience but unable to commit to more than 1 year full-time or 2 years part-time study.

15	Entry Criteria
	<p>Candidates are normally expected to have a second-class honours degree (2:2) or above in psychology, neuroscience, medical imaging, biomedical engineering or a relevant discipline. Moreover, they will normally be expected to have already obtained a range of research methods skills relevant to research psychology through their prior training or work experience.</p> <p>It is expected that some students, especially non-UK students, may enter into the MRes programme with the intention of transferring into the MPhil/PhD programme prior to completing the MRes. Thus, the ability or potential to carry out in depth research, as well as the availability of suitable long-term supervision will be important considerations in deciding on admission.</p> <p>Students registered on the School of Psychology MPhil/PhD programme may apply to transfer into the MRes programme. Such students will need to have completed or show the potential to complete all of the required MRes modules.</p>
16	Learning Outcomes
	<p><i>On successful completion of this programme a student will be expected to have gained:</i></p> <p>Subject Specific:</p> <ol style="list-style-type: none"> 1. Practical knowledge of all phases of developing, conducting and reporting a research project 2. Understanding of conventions in psychological report writing and the purpose of each section within a research report 3. Understanding and being able to evaluate the logical flow of a scientific research project 4. Understanding the relation between research questions and research methodologies 5. An understanding of a range of research designs and the conditions under which each is appropriate 6. Familiarity with functional neuroimaging experimental and analytic software as relevant to their chosen domain of research 7. Knowledge of a range of statistical procedures, the conditions under which they may reasonably be applied, and how to interpret the results of the procedures as relevant to their chosen domain of research 8. An understanding of the benefits and limitations of a range of functional neuroimaging methods 9. An understanding of basic neural anatomy and the methods for mapping functional neural systems 10. Understanding the ethical guidelines of the British Psychological Society and ramifications of ethical practice <p>Intellectual:</p> <ol style="list-style-type: none"> 11. A critical appreciation of contemporary research and research methodologies in functional neuroimaging as relevant to their chosen domain of research 12. Understanding alternative ways of addressing a research question and how to advance reported research 13. Critical thinking skills in relation to <ul style="list-style-type: none"> • presenting and critiquing an argument • reviewing and assimilating existing topic-specific literature and formulating a research question

	<p>14. An ability to apply research methodologies to wider work/life situations</p> <p>15. The ability to formulate and test hypotheses</p> <p>16. An ability to study a problem in-depth</p> <p>17. Logical thinking (e.g. in relation to hypothesis testing)</p> <p>18. Evaluation skills</p> <p>Practical:</p> <p>19. Enhanced essay and report writing</p> <p>20. Enhanced numeracy in relation to understanding numerical data relevant to their domain to research</p> <p>21. General IT skills (use of web browsers, email, Word, PowerPoint, EndNote)</p> <p>22. Subject specific IT skills (e.g. familiarity with SPSS, E-Prime, & specialist neuroimaging software)</p> <p>23. Ability to conduct literature reviews using electronic search tools, electronic journals and databases (PsycInfo)</p> <p>24. Ability to summarise and assess contemporary research succinctly</p> <p>25. An ability to apply a functional neuroimaging research method to specific research questions</p> <p>26. Data collection and analysis skills</p> <p>27. Ability to present data in a meaningful way, and to transform it into different presentational formats</p> <p>28. Planning and organisational skills</p> <p>Personal and Social:</p> <p>29. Ability to work independently</p> <p>30. To effectively plan and organise a substantive, medium-term, project</p> <p>31. Time management skills</p> <p>32. To communicate effectively through both written reports and verbal presentations</p> <p>33. An enhanced ability to appreciate (and formulate) a structured argument</p> <p>34. An understanding of the relevance of scientific research as reported in the media to everyday questions</p> <p>35. An increased awareness of ethical issues and ethical practice</p> <p>36. The ability to manage self-directed learning activities</p>
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17	<p>Learning, teaching and assessment methods</p> <p>The course includes 3 lecture and seminar based modules, a tutorial and bibliographic-based module and a supervised project. The teaching styles are matched to the content. Teaching of the first 3 modules is in small class sizes (20-30) to encourage student participation. The last module involves individual tuition from the supervisor and course director tailored to the student’s domain of research.</p> <p>A first module (Generic Research Skills) involves small group learning. Students join the MSc in Psychological Research Methods and MPhil students in attending a lecture-based generic skills course.</p> <p>A second module (Advanced Quantitative Methods) features lectures with laboratory/practical sessions. These provide students with hands-on experience of using statistical software and practical experience of using quantitative methods in a relatively self-contained setting.</p>
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Two further modules (Structure and Measurement of the Human Brain, Methods in Neuroimaging) feature lecturing as well as guided discussion led by one member of academic staff. Students are encouraged to also contribute to the discussion. This provides students with an opportunity to question and understand the motivation for different methods when addressing different questions.

All modules involve self-directed learning in the form of self-paced reading and preparation for each of the sessions.

The supervised research project is carried out under the supervision of a member of academic staff with research interests in the area of the project. This provides students with access to a specialist in their project area who can provide expert advice on all aspects of the research. The project also ensures that taught skills are exercised within a constructive environment during the course.

Assessment procedures aim to ensure that students develop a small portfolio of work over the duration of the programme, and feedback on coursework required for some of the modules will encourage personal development.

The component modules employ a variety of assessment methods depending on the intended learning outcomes.

Assessment is as follows:

Generic Research Skills

One 10 minute presentation of dissertation background (literature review) and research question; The presentation is assessed jointly by the course coordinator and each student's supervisor. The presentation gives students the opportunity to demonstrate their ability to conduct a literature review and develop a research question. The module is marked on a pass/fail basis. If the presentation is judged to be inadequate, students are asked to submit a written report.

Structure and measurement of the human brain & Methods in neuroimaging

2000–2500 word essay marked according to the standard marking scheme outlined below.

Advanced Quantitative Methods

5 worksheets to be completed throughout the course. Worksheets are issued throughout the course at two weekly intervals. Each worksheet consists of a series of statistical problems relating to material covered in class, and worked answers must be submitted within two weeks of the worksheet being issued.

Supervised Dissertation

19000 - 21000 word research dissertation demonstrating initiative and creativity due during the first week of September in the year of registration (FT) or the first week of September in the second year of registration (PT). The dissertation is marked according to the standard marking scheme outlined below.

Marking scheme for essays, lab reports and dissertation (based on that currently used with MScs & MRes delivered by the Department):

0–50% (fail): The submitted work is only tangentially related to the question or research issue; The material presented is very basic or irrelevant; The work relies heavily on superficial or subjective statements without supporting evidence; Analyses presented are inadequate; The conclusions drawn are sketchy and reveal a failure to understand core concepts.

	<p>51–60% (pass): The submitted work address the question or research issue but lacks depth and/or evidence of an analytic approach; There is some coherence of structure; The work demonstrates basic familiarity with a range of relevant material or a good level of understanding of some material with important omissions; Analyses are appropriate and competent but limited; The conclusions drawn are appropriate but lack insight.</p> <p>61–70% (merit): The submitted work addresses the question or research issue in detail and shows evidence of a questioning and analytic approach; The structure is coherent and easy to follow; The work shows an ability to appreciate an extensive body of relevant knowledge and articulate key theories or concepts; The work demonstrates reading beyond the core material presented in lectures; The conclusions drawn are balanced and appropriate and reveal evidence of independent thought.</p> <p>71–100% (distinction): The submitted work fully explores the question or research issue and goes beyond what would be expected of something in the 61-70% range; The work shows substantial evidence of the student’s own insight and analysis and/or convincingly integrates material going beyond the core assigned reading; In the case of the research dissertation, the dissertation requires few modifications to be of a publishable standard in a peer reviewed journal.</p> <p>All submitted work (except for work sheets in the quantitative methods module which will only be moderated) will be marked with moderation and verified by the visiting examiner. Students will be issued with a candidate number for use with essays, lab reports and dissertations so that marking will, as far as possible, be blind.</p> <p>Assessment procedures will ensure that students develop a portfolio of work over the duration of the programme, and feedback on coursework required for some of the modules will encourage personal development.</p> <p>Grade of award and assessment procedures will be regulated in accordance with the College Common Awards Scheme.</p>
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18	Programme Description
	The MRes in Functional Neuroimaging comprises 4 core modules of 15 credits each, plus a 120 credit Dissertation, totalling 180 credits. The programme may be completed in one year of full-time study, or through part-time study over two years.

19	Programme Structure			
Full-Time programme – 1 year				
Year 1				
Level	Module Code	Module Title	Credits	Status*
7	PSYC077H7	Advanced Quantitative Methods	15	Core
7	PSYC062H7	Generic Research Skills	15	Core
7	PSYC026H7	Structure and Measurement of the Human Brain	15	Core
7	PSYC007H7	Methods in Neuroimaging	15	Core
7	PSYC024Q7	MRes Research Dissertation	120	Core

Part-Time programme – 2 years				
Year 1				
Level	Module Code	Module Title	Credits	Status*
7	PSYC077H7	Advanced Quantitative Methods	15	Core
7	PSYC026H7	Structure and Measurement of the Human Brain	15	Core
7	PSYC007H7	Methods in Neuroimaging	15	Core
Year 2				
7	PSYC062H7	Generic Research Skills	15	Core
7	PSYC024Q7	MRes Research Dissertation	120	Core

Status*

CORE – Module must be taken and passed by student; COMPULSORY – Module must be taken, mark can be reviewed at sub-exam board; OPTIONAL – Student can choose to take this module

²⁰	Programme Director	Fred Dick
²¹	Start Date (<i>term/year</i>)	Autumn 2011
²²	Date approved by TQEC	Spring 2011
²³	Date approved by Academic Board	Summer 2011
²⁴	Date(s) updated/amended	June 2014