

PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	MRes Functional Neuroimaging (Level 7)
Name and title of any exit qualification(s)	N/A
Awarding Body	University of London
Teaching Institution(s)	Birkbeck, University of London
Home School/other teaching departments	School of Psychological Sciences
Location of delivery	Central London
Language of delivery and assessment	English
Mode of study, length of study and normal start month	Full-time (1 year) Part-time (2 years) September
Professional, statutory or regulatory body	N/A
QAA subject benchmark group(s) Higher Education Credit Framework for England	N/A
Birkbeck Course Code	TMRFNEUR_C
HECoS Code	100497 101381
Start date of programme	Autumn 2011
Date of programme approval	Summer 2011
Date of last programme amendment approval	June 2014
Valid for academic entry year	2023-24
Programme Director	TBC
Date of last revision to document	June 2014

Admissions requirements

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.

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.

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..

Course aims

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:

- 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

The course also aims to provide students with:

- research experience through an extended supervised research project.

Distinctive Features:

- 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.

Course structure

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.

Level	Module Code	Module Title	Credit	Comp Core/ Option	Likely teaching term(s)
Full-time – 1 year					
7	PSYC077H7	Advanced Quantitative Methods	15	Core	T1
7	PSYC062H7	Generic Research Skills	15	Core	T1
7	PSYC026H7	Structure and Measurement of the Human Brain	15	Core	T2
7	PSYC007H7	Neuroimaging Methods	15	Core	T1
7	PSYC024Q7	MRes Research Dissertation	120	Core	T1-3
Part-time – 2 years					
Year 1					
7	PSYC077H7	Advanced Quantitative Methods	15	Core	T1
7	PSYC026H7	Structure and Measurement of the Human Brain	15	Core	T2
7	PSYC007H7	Neuroimaging Methods	15	Core	T1
Year 2					
7	PSYC062H7	Generic Research Skills	15	Core	T1
7	PSYC024Q7	MRes Research Dissertation	120	Core	T1-3

Core: Module must be taken and passed by student

Compulsory: Module must be taken but can be considered for compensated credit (see CAS regulations paragraph 24)

Option: Student can choose to take this module

How you will learn

Your learning and teaching is organised to help you meet the learning outcomes (below) of the course. As a student, we expect you to be an active learner and to take responsibility for your learning, engaging with all of the material and sessions arranged for you.

Each course is divided into modules. You will find information on the virtual learning site (Moodle, see Academic Support below) about each of your modules, what to expect, the work you need to prepare, links to reading lists, information about how and when you will be assessed.

Your learning for this course will be organised around the activities outlined below.

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.

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.

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.

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.

How we will assess you

The course will use a variety of assessment methods. Assessment is used to enhance your learning rather than simply to test it. For most of the modules associated with this course, your assessment will be through the following types of assessment.

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.

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.

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.

Learning outcomes (what you can expect to achieve)

'Learning outcomes' indicate what you should be able to know or do at the end of your course. Providing them helps you to understand what your teachers will expect and also the learning requirements upon which you will be assessed.

At the end of this course, you should be able to:

Subject Specific:

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

Intellectual:

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
 - presenting and critiquing an argument
 - reviewing and assimilating existing topic-specific literature and formulating a research question
14. An ability to apply research methodologies to wider work/life situations
15. The ability to formulate and test hypotheses
16. An ability to study a problem in-depth
17. Logical thinking (e.g. in relation to hypothesis testing)
18. Evaluation skills

Practical:

19. Enhanced essay and report writing
20. Enhanced numeracy in relation to understanding numerical data relevant to their domain to research
21. General IT skills (use of web browsers, email, Word, PowerPoint, EndNote)
22. Subject specific IT skills (e.g. familiarity with SPSS, E-Prime, & specialist neuroimaging software)
23. Ability to conduct literature reviews using electronic search tools, electronic journals and databases (PsycInfo)
24. Ability to summarise and assess contemporary research succinctly

25. An ability to apply a functional neuroimaging research method to specific research questions
26. Data collection and analysis skills
27. Ability to present data in a meaningful way, and to transform it into different presentational formats
28. Planning and organisational skills

Personal and Social:

29. Ability to work independently
30. To effectively plan and organise a substantive, medium-term, project
31. Time management skills
32. To communicate effectively through both written reports and verbal presentations
33. An enhanced ability to appreciate (and formulate) a structured argument
34. An understanding of the relevance of scientific research as reported in the media to everyday questions
35. An increased awareness of ethical issues and ethical practice
36. The ability to manage self-directed learning activities

Careers and further study

Graduates can pursue career paths in psychology, education, human resources and management. Possible professions may include:

- psychologist
- further education lecturer
- human resources officer
- advertising account planner
- researcher.

Birkbeck offers a range of careers support to its students. You can find out more on [the careers pages of our website](#).

Academic regulations and course management

Birkbeck's academic regulations are contained in its [Common Award Scheme Regulations](#) and Policies published by year of application on the Birkbeck website.

You will have access to a course handbook on Moodle and this will outline how your course is managed, including who to contact if you have any questions about your module or course.

Support for your study

Your learning at Birkbeck is supported by your teaching team and other resources and people in the College there to help you with your study. Birkbeck uses a virtual learning environment called Moodle and each course has a dedicated Moodle page and there are further Moodle sites for each of your modules. This will include your course handbook.

Birkbeck will introduce you to the Library and IT support, how to access materials online, including using Moodle, and provide you with an orientation which includes an online Moodle module to guide you through all of the support available. You will also be allocated a personal tutor and provided with information about learning support offered within your School and by the College.

[Please check our website for more information about student support services](#). This covers the whole of your time as a student with us including learning support and support for your wellbeing.

Quality and standards at Birkbeck

Birkbeck's courses are subject to our quality assurance procedures. This means that new courses must follow our design principles and meet the requirements of our academic regulations. Each new course or module is subject to a course approval process where the proposal is scrutinised by subject specialists, quality professionals and external representatives to ensure that it will offer an excellent student experience and meet the expectation of regulatory and other professional bodies.

You will be invited to participate in an online survey for each module you take. We take these surveys seriously and they are considered by the course team to develop both modules and the overall courses. Please take the time to complete any surveys you are sent as a student.

We conduct an annual process of reviewing our portfolio of courses which analyses student achievement, equality data and includes an action plan for each department to identify ongoing enhancements to our education, including changes made as a result of student feedback.

Our periodic review process is a regular check (usually every four years) on the courses by department with a specialist team including students.

Each course will have an external examiner associated with it who produces an annual report and any recommendations. Students can read the most recent external examiner reports on the course Moodle pages. Our courses are all subject to Birkbeck Baseline Standards for our Moodle module information. This supports the accessibility of our education including expectations of what information is provided online for students.

The information in this programme specification has been approved by the College's Academic Board and every effort has been made to ensure the accuracy of the information it contains.

Programme specifications are reviewed periodically. If any changes are made to courses, including core and/or compulsory modules, the relevant department is required to provide a revised programme specification. Students will be notified of any changes via Moodle.

[Further information](#) about specifications and an archive of programme specifications for the College's courses is available online.

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