Programme Specification

1 Awarding body          University of London
2 Teaching Institution    Birkbeck College
3 Programme Title(s)     MRes in Functional Neuroimaging
4 Programme Code(s)      TMRFNEUR_C
5 UCAS code (if applicable) 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)  Level 7

11 Other teaching depts or institution (or not applicable) N/A
12 Professional, Statutory Regulatory Body(PSRB) details (or not applicable) (include URL to PSRB) N/A
13 QAA Benchmark Group (or not applicable) N/A

14 Programme Rationale & 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 (overseas) students wanting in-depth neuroimaging research experience but unable to commit to more than 1 year full-time or 2 years part-time study.
### Entry Criteria

Candidates are normally expected to have an upper second-class honours degree in psychology, neuroscience, or a related 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.

---

### Learning Outcomes

**On successful completion of this programme a student will be expected to have gained:**

**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

---

**Learning, teaching and assessment methods**

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.

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.

51–60% (pass): The submitted work addresses 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.

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.

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.

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.

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.

Grade of award and assessment procedures will be regulated in accordance with the College Common Awards Scheme.

---

**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.

---

**Programme Structure**

**Full Time programme**

**Year 1**

<table>
<thead>
<tr>
<th>Level</th>
<th>Module Code</th>
<th>Module Title</th>
<th>Credits</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>PSYC077H7</td>
<td>Advanced Quantitative Methods</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC062H7</td>
<td>Generic Research Skills</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC026H7</td>
<td>Structure and Measurement of the Human Brain</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC007H7</td>
<td>Methods in Neuroimaging</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC024Q7</td>
<td>MRes Research Dissertation</td>
<td>120</td>
<td>Core</td>
</tr>
</tbody>
</table>

**Part Time programme**

**Year 1**

<table>
<thead>
<tr>
<th>Level</th>
<th>Module Code</th>
<th>Module Title</th>
<th>Credits</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>PSYC077H7</td>
<td>Advanced Quantitative Methods</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC026H7</td>
<td>Structure and Measurement of the Human Brain</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC007H7</td>
<td>Methods in Neuroimaging</td>
<td>15</td>
<td>Core</td>
</tr>
</tbody>
</table>
Year 2

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>PSYC062H7 Generic Research Skills</td>
<td>15</td>
<td>Core</td>
</tr>
<tr>
<td>7</td>
<td>PSYC024Q7 MRes Research Dissertation</td>
<td>120</td>
<td>Core</td>
</tr>
</tbody>
</table>

20 Regulations

- **Admissions**
  This programme adheres to the College Admissions Policy

- **Credit Transfer**
  Accredited Prior Learning will be considered in line with the College Policy on Accredited Prior Learning
  [http://www.bbk.ac.uk/mybirkbeck/services/rules/AccreditedPriorLearning.pdf](http://www.bbk.ac.uk/mybirkbeck/services/rules/AccreditedPriorLearning.pdf)

- **Programme Regulations**
  This programme adheres to the College Common Awards Scheme
  [http://www.bbk.ac.uk/mybirkbeck/services/rules/casregs.pdf](http://www.bbk.ac.uk/mybirkbeck/services/rules/casregs.pdf)

21 Student Support and Guidance

All Birkbeck students have access to a range of student support services, details can be found on our website here: [http://www.bbk.ac.uk/mybirkbeck/services/facilities](http://www.bbk.ac.uk/mybirkbeck/services/facilities)

22 Methods of Enhancing Quality and Standards

The College has rigorous procedures in place for the monitoring and enhancing its educational provision. This includes regular monitoring of programmes drawing on feedback from various sources including external examiner’s reports, student feedback, student achievement and progression data. In addition, departments are reviewed every four to five years through the internal review process that includes external input.

For more information please see the Academic Quality and Standards website [www.bbk.ac.uk/quality](http://www.bbk.ac.uk/quality)

23 Programme Director

Dr Fred Dick

24 Start Date (term/year)

Autumn 2011

25 Date approved by TQEC

Spring 2011

26 Date approved by Academic Board

Summer 2011

27 Date(s) updated/amended

June 2014