PROGRAMME SPECIFICATION

Name, title and level of final qualification(s)	**MSc/MA Educational Neuroscience** (Level 7)
Name and title of any exit qualification(s)	PG Dip, PG Cert Educational Neuroscience
Awarding Body	University of London
Teaching Institution(s)	Birkbeck, University of London UCL- Institute of Education
Home School/other teaching departments	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 year) October
Professional, statutory or regulatory body	N/A
QAA subject benchmark group(s) Higher Education Credit Framework for England	
Birkbeck Course Code	TMSEDNRO_C, TMAEDNRO_C
HECoS Code	(100953) child psychology (100952) developmental psychology (101381) cognitive neuroscience (100496) educational psychology
Start date of programme	Autumn 2011
Date of programme approval	Summer 2011
Date of last programme amendment approval	November 2022
Valid for academic entry year	**2024-25**
Date of last revision to document	27/08/2024

Admissions requirements

Candidates are normally expected to have a second-class honours degree (2:2) or above in psychology, social science, cognitive science, speech/communication science, neuroscience or related disciplines. A strong understanding of research methods and statistics is expected for the MSc programme.

Applicants with a good undergraduate or postgraduate degree in education but no previous background in psychology or science will be required to complete the Certificate of Higher Education in Psychology (which covers psychology, neuroscience, and research methods) or equivalent before starting the MSc/MA Educational Neuroscience.

Ideally students should have a background in both cognitive neuroscience and education.

Applications are reviewed on their individual merits and your professional qualifications and/or relevant work experience will be taken into consideration positively. We actively support and encourage applications from mature learners.

Course aims

Educational Neuroscience is an emerging field of research, which combines approaches from psychology, cognitive neuroscience, and education, to explore the interactions between biological processes and education and generate, via basic and applied research, a new transdisciplinary account of learning and teaching capable of informing education.

The aims of the MSc/MA in Educational Neuroscience programme, reflecting Birkbeck's mission, is to provide the highest quality research training in this field and make available the results of the research taking place at Birkbeck and collaborating institutions within the Centre for Educational Neuroscience.

This programme offers a detailed introduction to the methods and findings in the field of Educational Neuroscience that will enable students from a variety of backgrounds to appraise these findings and to carry out independent research projects appropriately, or to apply these new findings critically in their professional lives.

The methods include biological, experimental, neuroimaging and genetic approaches to understanding learning and development within an educational context. The results cover the following broad areas: brain and cognitive development; genetics of development; gene x environment interactions; cognitive development and education; methods for neuroimaging; developmental disorders; literacy and language development.

The programme is designed to be accessible for graduates from a range of disciplines in the human and life sciences, and for both full-time students over 1 year and part-time students over 2 years.

The distinctive features of this programme are:

- Access to world renowned developmental research and facilities with broad international appeal
- Combination of Birkbeck's strengths in developmental cognitive neuroscience with the Institute of Education's extensive history of education research and training
- Face-to-face teaching, with a part-time (day release) option

- A unique combination of theoretical approaches to studying development (neurobiological, genetic, educational) that enables an overview of all factors contributing to children's development and learning within an educational context.

Course structure

To achieve the award of a Masters degree, students must obtain a minimum of 210 credits, consisting of:

- 5 compulsory or core taught modules (4 at 15 credits and 1 at 30 credits)
- 2 optional modules (each worth 30 credits)
- a dissertation (60 credits)

For the award of an MSc, the dissertation must report an empirical piece of research relating to neuroscience and education and the modules Advanced Quantitative Methods and Issues in Educational Neuroscience both must be passed; for the award of an MA the dissertation consists of an extended critical review relating to a relevant area of research and the module Issues in Educational Neuroscience must be passed. Students who do not complete (or fail elements of) the full programme can be awarded a Postgraduate Diploma if they successfully complete 120 credits in taught modules (excluding the dissertation) or a Postgraduate certificate on completion of 60 credits.

Level	Module Code	Module Title	Credit	Status	Teaching term(s)
Full-time – 1 year					
7	PSYC007H7	Neuroimaging Methods (BBK)	15	Compulsory	Term 1
7	SCPS144S7	Issues in Educational Neuroscience (UCL IOE & BBK)	30	Core	Terms 1 & 2
7	SCPS007H7	Genetics of Development (BBK)	15	Compulsory	Term 1
7	PSYC077H7	Advanced Quantitative Methods (BBK)	15	Core MSc /Compulsory MA	Term 1
7	SCPS149H7	Developmental Cognitive Neuroscience (BBK)	15	Compulsory	Term 2
7		2 optional modules each worth 30 credits from list below	30	Option	Term 2 or 3
7	PSYC078H7	MSc Dissertation (MSc only)	60	Core	Terms 1,2,3
7	SCPS008D7	MA Dissertation (MA only)	60	Core	Terms 1,2,3
Part-time – 2 years					
Year 1					
7	PSYC007H7	Neuroimaging Methods (BBK)	15	Compulsory	Term 1
7	SCPS144S7	Issues in Educational Neuroscience (UCL IOE & BBK)	30	Core	Terms 1 & 2
7	SCPS149H7	Developmental Cognitive Neuroscience (BBK)	15	Compulsory	Term 2
7		1 optional module each worth 30 credits from list below	30	Option	Term 2 or 3

Year 2					
7	SCPS007H7	Genetics of Development (BBK)	15	Compulsory	Term 1
7	PSYC077H7	Advanced Quantitative Methods (BBK)	15	Core MSc /Compulsory MA	Term 1
7	PSYC078H7	MSc Dissertation (MSc only)	60	Core	Terms 1,2,3
7	SCPS008D7	MA Dissertation (MA only)	60	Core	Terms 1,2,3
Option modules (2 for FT, 1 per year for PT)					
7	SCPS143S7	Cognitive Development and Learning (UCL-IOE & BBK)	30	Option	Term 2
7	SCPS145S7	Language Development (UCL-IOE)	30	Option	Term 2
7	SCPS147S7	Reading and Spelling Difficulties (UCL-IOE)	30	Option	Term 3
7	SCPS171S7	Individual Differences and Social Psychology in Education (UCL-IOE)	30	Option	Term 2
7	SCPS172S7	Social and Individual Development (UCL-IOE)	30	Option	Term 2
7	SCPS170S7	Autism: Research and Practice (UCL-IOE)	30	Option	Term 2
7	SCPS218S7	Social, Emotional and Behavioural Development (UCL-IOE)	30	Option	Term 3
7	SCPS226S7	Qualitative Data Analysis (UCL-IOE)	30	Option	Term 2
7	SCPS224S7	Psychological Aspects of Counselling (UCL-IOE)	30	Option	Term 2
7	SCPS230S7	Maths and Science Learning (UCL-IOE)	30	Option	Term 2
7	SC12005S7	Psychological and Sociological Perspectives on Inclusion and Special Educational Needs (UCL-IOE)	30	Option	Term 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.

This programme includes lecture-based theory modules, practical laboratory modules and a supervised project. The teaching styles are matched to the content, and class sizes are kept

small or moderate (e.g., 10–40) to encourage student participation, even in lecture-based modules.

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

- The Advanced Quantitative Methods module features lectures with laboratory/practical session. These will provide students with hands-on experience of using statistical software in a relatively self-contained setting.
- The Issues in Educational Neuroscience module involves small group collaborative learning. The classes include a lecture component and a discussion component during which the students, under the direction of the instructor, explore the basis, the obstacles and the benefits of bridging across a basic science (developmental cognitive neuroscience) and an applied field (education). This module runs throughout the year ensuring real integration of the two domains across the course as a whole.
- Five modules (Genetics of Development, Neuroimaging Methods, Developmental Cognitive Neuroscience, Cognitive Development and Learning, and ONE OPTION) will feature lecturing as well as guided discussion led by one member of academic staff. Students will be encouraged to also contribute to the discussion. This will provide students with an opportunity to question and understand the motivation for different methods when addressing different questions.
- Supervised Dissertation. 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. We use a variety of assessment methods. Assessment is matched to the learning outcomes, and the 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.

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Assessment of Birkbeck modules will follow the Birkbeck Department of Psychological Sciences marking regulations and marking scheme, while assessment of UCL IOE modules will follow UCL IOE regulations and marking schemes.

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 show:

Subject Specific:

1. Knowledge of the different theoretical positions underlying a range of areas within educational neuroscience
2. Practical knowledge of all phases of developing, conducting and reporting a research project
3. Understanding of conventions in psychological report writing and the purpose of each section within a research report
4. A better understanding of the relation between basic cognitive research and educational practice
5. Understanding and being able to evaluate the logical flow of a scientific research report
6. Understanding the relation between research questions and research methodologies
7. An understanding of a range of research designs and the conditions under which each is appropriate
8. An understanding of the range of methods available for neuroimaging in a developmental populations
9. Knowledge of a wide range of parametric and non-parametric univariate and multivariate statistical procedures, the conditions under which they may reasonably be applied, and how to interpret the results of the procedures
10. An understanding of the relation between educational practice and basic neuroscience of learning
11. A critical understanding of the limitations and benefits of bridging between basic science and applied educational practice
12. Understanding the ethical guidelines of the British Psychological Society and ramifications of ethical practice

Intellectual:

13. Ability to articulate some similarities and differences between qualitative methods and to evaluate the arguments presented for and against qualitative methodology
14. A critical appreciation of contemporary research and research methodologies across a number of areas within Developmental Cognitive Neuroscience, Psychology and Education
15. Understanding alternative ways of addressing a research question and how to advance reported research
16. Critical thinking skills in relation to
    - presenting and critiquing an argument
    - evaluating theoretical assumptions underlying contemporary developmental sciences
    - reviewing and assimilating existing topic-specific literature and formulating a research question
17. An ability to apply research methodologies to wider work/life situations
18. The ability to formulate and test hypotheses
19. An ability to study a problem in-depth
20. Logical thinking (e.g., in relation to hypothesis testing)
21. Evaluation skills

Practical:

22. Enhanced essay and report writing
23. Enhanced numeracy in relation to understanding numerical data
24. General IT skills (use of web browsers, email, Word, PowerPoint, EndNote)
25. Subject specific IT skills (familiarity with SPSS)
26. Ability to conduct literature reviews using electronic search tools, electronic journals and databases (PsycInfo)

27. Ability to summarise and assess contemporary research succinctly
28. An ability to apply a range of research methods to specific research questions
29. Data collection and analysis skills
30. Ability to present data in a meaningful way, and to transform it into different presentational formats
31. Planning and organisational skills

Personal and Social:

32. Ability to work with others in small groups on practical research tasks
33. Ability to work independently
34. To effectively plan and organise substantive, medium-term, projects
35. Time management skills
36. To communicate effectively through both written reports and verbal presentations
37. An enhanced ability to appreciate (and formulate) a structured argument and to appreciate the theoretical assumptions underpinning such arguments
38. An understanding of the relevance of scientific research as reported in the media to everyday questions
39. An increased awareness of ethical issues and ethical practice

Careers and further study

Graduates can pursue career paths in psychology, education and policy development. Possible professions include:

- child/youth psychologist
- teacher
- special educational needs teacher
- learning mentor
- youth worker.

Birkbeck's MSc/MA Educational Neuroscience graduates will complete with a set of valuable attributes, for example:

- High-level written communication skills in English
- Research skills
- Skills in evaluating and assessing types of information
- Quantitative and possibly qualitative analyses skills
- Ability to make and support an argument
- Data collection and presentation skills

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.

Students have access to a Postgraduate Psychological Sciences Learning Support Officer and to learning resources developed by the Learning Support Officer team of the Department of Psychological Sciences.

As you will also be enrolled at UCL IOE, you will have access to the UCL IOE library and UCL IOE student support services.

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.