Year of entry: 2021/22

Programme Specification

1	**Awarding body**	University of London							
2	**Teaching Institution**	**Birkbeck College**							
3	**Programme Title(s)**	**MSc/MA in Educational Neuroscience**							
4	**Programme Code(s)**	TMSEDNRO_C / TMAEDNRO_C							
5	**UCAS code**	N/A							
6	**Home Department**	Psychological Sciences							
7	**Exit Award(s)**	PGDip in Educational Neuroscience PGCert in Educational Neuroscience							
8	**Duration of Study** (number of years)	MA/MSc FT 1 year MA/MSc PT 2 years							
9	**Mode of Study**	FT	X	PT	X	DL			
10	**Level of Award (FHEQ)**	7							
11	**Other teaching depts or institution**	UCL- Institute of Education							
12	**Professional, Statutory Regulatory Body(PSRB) details**	N/A							
13	QAA Benchmark Group	N/A							

14	**Programme Rationale & 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.

15	**Entry Criteria**
	A second-class honours degree (2:2) or above in psychology, social science, cognitive science, speech/communication science, neuroscience or related disciplines. Some students complete the course as the first year training component of a four year ESRC-funded PhD (under the ESRC's 1+3 programme).

16	**Learning Outcomes**
	On successful completion of this programme a student will be expected to have acquired the learning outcomes listed below. These learning outcomes will be acquired across the range of modules of this programme and are not specific to individual modules. **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 organizational 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 organize 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

17	**Learning, teaching and assessment methods**

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. Assessment is also 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. 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. Assessment is via 5 worksheets to be completed throughout the course. Worksheets are issued 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.
- 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. Students are asked to perform a 10 minute presentation of a possible dissertation background (literature review) and research question, which is assessed jointly by one Institute of Education (IOE) and one Birkbeck lecturer and counts for 20% of the grade. The presentation will give students the opportunity to demonstrate their ability to conduct a literature review and develop a research question. In addition, students will be assessed through a ~4000 word essay on one of the topics proposed by the module coordinator, marked according to the standard IOE marking scheme outlined below, and which counts for 80% of the grade.
- Five modules **(Genetics of Development, Neuroimaging Methods, Developmental Cognitive Neuroscience, Cognitive Development and Learning, and ONE OPTION out of Language Development and Learning, Reading and Spelling Difficulties, Personality and Social Psychology, Social Development, Autism: Research and Practice)** 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. These module are assessed as follow:

  Genetics of Development, Developmental Cognitive Neuroscience: one 2000-2500 word essay marked according to the standard Birkbeck marking scheme outlined below.

  Neuroimaging Methods: two 1000-1250 word essays marked according to the standard Birkbeck marking scheme outlined below.

Cognitive Development and Learning, Language Development, Reading and Spelling Difficulties: one ~4000 word essay marked according to the standard IOE marking scheme outlined below.

Personality and Social Psychology: one ~4000 word essay or two ~2000 word essays marked according to the standard IOE marking scheme outlined below.

Social Development: one essay and one critique of a published article, each of 2,000-2,500 words and marked according to the standard IOE marking scheme outlined below.

Autism: Research and Practice: one ~ 4000-word essay (80% of the grade) and a 10-minute presentation on contemporary issues in autism research (20% of the grade) marked according to the standard IOE marking scheme outlined below.

- **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. The supervised project is assessed through a 9000 - 11000 word research dissertation demonstrating initiative and creativity due in August in the year of registration (FT) or in the second year of registration (PT). The dissertation will be marked according to the standard marking scheme outlined below.

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

0-39% (fail): The submitted work does not address the question or research issue; There is no evidence of learning from the module (e.g., the submitted work contains only general, unsupported, statements that might reasonably be known by a lay-person).

40–49% (compensated 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.

50–59% (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.

60–69% (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.

70–100% (distinction): The submitted work fully explores the question or research issue and goes beyond what would be expected of something in the 60-69% range; The works shows substantial evidence of the students 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 double marked and moderated 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. Grade of award and assessment procedures are regulated in accordance with the College Common Awards Scheme. **IOE marking scheme for essays (based on that currently used with MAs, MScs& MRes delivered by the Department):** IOE assignments are all marked according to a common scheme, in which Pass grades are A to C, while D is a Fail. The criteria for each grade are as follows: A • grasp of field of study - outstanding grasp of issues and high level of critical insights into field of study - extensive, insightful and critical review of literature - high levels of creativity and independence of thought in the application of knowledge • understanding and evaluating research and methodologies - sophisticated conceptual understanding and high levels of critical evaluation of scholarship, research and methodologies in the field - outstanding understanding of how established techniques of research and enquiry are used to create and interpret knowledge and how these apply to students' own research and/or practice - creative and critical handling, presenting and inferring from data • structure, communication and presentation - exceptional clarity, focus and cogency in organisation and presentation of arguments and conclusions B • grasp of field of study - clear understanding of issues and good level of insights into field of study - wide-ranging, coherent and critical review of literature - elements of creativity and independence of thought in the application of knowledge • understanding and evaluating research and methodologies - consistent and fluent understanding and critical evaluation of scholarship and methodologies in the field - thorough understanding of how established techniques of research and enquiry are used to create and interpret knowledge and how these apply to students' own research and/or practice - competent and critical handling, presenting and inferring from data • structure, communication and presentation

	- clarity, focus and fluency in organisation and presentation of arguments and conclusions C • grasp of field of study - basic understanding of issues and insights into field of study - basic critical competence in reviewing literature - little development of ideas in the application of knowledge • understanding and evaluating research and methodologies - adequate understanding and evaluation of scholarship, research and methodologies in the intellectual field - basic understanding of how established techniques of research and enquiry are used to create and interpret knowledge and how these apply to students' own research and/or practice - rudimentary handling, presenting and inferring from data • structure, communication and presentation - basic clarity, focus and competence in organisation and presentation of arguments and conclusions D • grasp of field of study - inadequate understanding of issues and insights into field of study - unfocused or inaccurate review of literature - confusion in the application of knowledge •understanding and evaluating research and methodologies - lack of understanding and critical evaluation of scholarship, research and methodologies in the field - lack of understanding of how established techniques of research and enquiry are used to create and interpret knowledge and how these apply to students' own research and/or practice - inadequate or confused handling, presenting and inferring from data • structure, communication and presentation - poorly organised and unfocused presentation of arguments and conclusions

18	**Programme Description**
	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 I*ssues 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.

19	**Programme Structure**

Full-Time programme – 1 year

Year 1

Level	Module Code	Module Title	Credits	Status*
7	PSYC007H7	Neuroimaging Methods (BBK)	15	Compulsory
7	PSYC077H7	Advanced Quantitative Methods (BBK)	15	Core – MSc Compulsory-MA
7	SCPS007H7	Genetics of Development (BBK)	15	Compulsory
7	SCPS144S7	Issues in Educational Neuroscience (UCL-IOE & BBK)	30	Core
7	SCPS149H7	Developmental Cognitive Neuroscience (BBK)	15	Compulsory
2 optional modules each worth 30 credits from:				
7	SCPS143S7	Cognitive Development and Learning (UCL-IOE)	30	Option
7	SCPS145S7	Language Development (UCL-IOE)	30	Option
7	SCPS147S7	Reading and Spelling Difficulties (UCL-IOE)	30	Option
7	SCPS171S7	Individual Differences and Social Psychology in Education (UCL-IOE)	30	Option
7	SCPS172S7	Social and Individual Development (UCL-IOE)	30	Option
7	SCPS170S7	Autism: Research and Practice (UCL-IOE)	30	Option
7	SCPS218S7	Social, Emotional and Behavioural Development (UCL-IOE)	30	Option
7	SCPS224S7	Psychological Aspects of Counselling	30	Option
7	PSYC078D7	MSc Psychology Research Dissertation (for MSc only) (BBK coordinated)	60	Core
7	SCPS008D7	MA Psychology Research Dissertation (for MA only) (BBK coordinated)	60	Core

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Part-Time programme – 2 years				
Year 1				
Level	**Module Code**	**Module Title**	**Credits**	**Status***
7	SCPS007H7	Genetics of Development (BBK)	15	Compulsory
7	SCPS144S7	Issues in Educational Neuroscience (IOE & BBK)	30	Core
7	SCPS149H7	Developmental Cognitive Neuroscience (BBK)	15	Compulsory
7		One option (chosen from list below)	30	Option
Year 2				
Level	**Module Code**	**Module Title**	**Credits**	**Status**
7	PSYC077H7	Advanced Quantitative Methods (BBK)	15	Core - MSc Compulsory – MA
7	PSYC007H7	Neuroimaging Methods (BBK)	15	Compulsory
1 optional module worth 30 credits from:				
7	SCPS143S7	Cognitive Development and Learning (UCL-IOE)	30	Option
7	SCPS145S7	Language Development (UCL-IOE)	30	Option
7	SCPS147S7	Reading and Spelling Difficulties (UCL-IOE)	30	Option
7	SCPS171S7	Individual Differences and Social Psychology in Education (UCL-IOE)	30	Option
7	SCPS172S7	Social and Individual Development (UCL-IOE)	30	Option
7	SCPS170S7	Autism: Research and Practice (UCL-IOE)	30	Option
7	SCPS218S7	Social, Emotional and Behavioural Development (UCL-IOE)	30	Option
7	SCPS224S7	Psychological Aspects of Counselling	30	Option
7	PSYC078D7	MSc Psychology Research Dissertation (for MSc only) (BBK coordinated)	60	Core
7	SCPS008D7	MA Psychology Research Dissertation (for MA only) (BBK coordinated)	60	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	**Additional programme-specific information**
	Modules owned and run by Birkbeck are run under the standard Birkbeck regulations, modules owned and run by UCL-IOE are run under the standard UCL-IOE regulations. Regulations for the programme as a whole are determined by a programme specific memorandum of agreement between Birkbeck and IOE.

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21	**Programme Director**	Dr Iroise Dumontheil
22	**Start Date** ***(term/year)***	Autumn term 2011
23	**Date approved by TQEC**	Spring 2011
24	**Date approved by Academic Board**	Summer 2011
25	**Date(s) updated/amended**	21 September 2021