



**UNIVERSITY OF
PLYMOUTH**

Faculty of Health and
Human Sciences

Plymouth University

Faculty of Health and Human Sciences

School of Psychology

Programme Specification

MSc Human Neuroscience

A handwritten signature in black ink, appearing to be 'H. L.', written over a light blue horizontal line.

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Year of first award: 2021

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1. MSc

MSc Human Neuroscience

Henceforth abbreviated MSc HN

Level 7 Intermediate award title(s)

PgDip Human Neuroscience

PgCert Human Neuroscience

PgDip

PgCert

Henceforth abbreviated PgDip HN and PgCert HN, respectively

JACS codes: C8 Psychology, B140 Neuroscience, C861 Cognitive neuroscience, C862 Affective neuroscience

HECoS Codes: 100272 40% Neuroscience, 101381 40% Cognitive Neuroscience, 101382 20% Affective Neuroscience.

2. Awarding Institution:

University of Plymouth

Teaching institution(s):

University of Plymouth

3. Accrediting body(ies): N/A

4. Distinctive Features of the Programme and the Student Experience

The proposed MSc HN forms part of an interlinked suite of masters programmes in the school, but is distinctive, above all, because it provides an intensive, hands-on training in advanced methods in human neuroscience. Graduates will be distinctive in their ability to perform at a high level, autonomously developing and implementing advanced research designs to apply techniques in neuroimaging and neurostimulation to answer psychologically-informed research questions. These skills will be gained through extensive time spent working within the BRIC, forming part of an active, diverse and inclusive research community which will foster the interdisciplinary thinking and networks students require to thrive in a progression to doctoral study or industry. Our approach to skills training and knowledge acquisition is relatively unusual in the field, but will integrate problem-based learning with more traditional lectures and workshops. This approach is intended to maximise the degree to which students' learning is scaffolded by academic staff, and promote a collaborative environment in which peer support plays an important role as students' acquire this complex and challenging material. Furthermore, this approach provides a seamless integration between the practical and theoretical aspects of training, which is critical in a field that requires mastering complex neuroimaging/neurostimulation methods and procedures but also understanding their theoretical foundations. Our research project will place our students at the centre of the development of world-class neuroimaging research, and demonstrate the degree to which their skills are valued: Staff in the school will bid to have their projects adopted by students. Students will then be tasked with developing suitable methods and stimuli, and to run these as a real study, with the expectation that data will be published, thus ensuring that both learning and assessment are authentic and place students on a clear trajectory towards doctoral study. Before conducting the study, students will develop and submit a formal ethics application via the online ethics system currently in place in the School of Psychology. The application will be assessed by an expert panel of academic staff members like all other undergraduate and postgraduate ethics applications.

In addition to this hands-on training, by drawing on existing MSc AP modules or new modules also offered to AP students and delivered on the main campus, students will also gain:

A thorough, experientially-based training in psychological research methods.

Through core modules in advanced research methods students on all programmes will gain a secure understanding of the theory, application and limitations of quantitative statistical methods for experimental and observational data. Enhanced emphasis will be placed on fluency in data manipulation and visualisation, and in developing insight and understanding for the ways in which assumptions and theory form the basis on which statistics can be used for scientific inference. MSc students (as distinct from MPsych HN students) will also have access to optional modules

covering specialist techniques (e.g. Bayesian inference, approaches to causal analysis in non-experimental data), to ensure students can extend this conceptual understanding with practical experience applying specific techniques required in particular research domains.

Advanced, training in theoretical and empirical advances in cognitive and brain science.

Through the “current issues in cognitive and brain sciences” and “foundations and applications of neuroimaging and neurostimulation” modules, students will develop awareness and understanding of new research questions, debates and findings in their chosen field. These modules are cross-cutting in nature, designed to integrate multiple research perspectives and prove relevant in different combinations for a variety of students.

Deep and thorough conceptual understanding of chosen areas of study

All aspects of the programme aim towards deepening conceptual understanding of the theoretical, empirical, and methodological advances in their field. Students’ achievements on each module will be assessed entirely through coursework, which will provide a stimulus and opportunity for them to critically evaluate the material covered, to apply it to new problems, and to develop new ideas for future research.

Professionalism and professional identity

For all programmes, we shall organise the academic year such that students are encouraged to think of psychological research and practice as an iterative, cyclical process involving: *enquiry, design, technique, communication, practice, and reflection*. Students will be encouraged to reflect on their learning regularly throughout the year, and tutorial activities will ensure this is integrated within their own research practice. The work undertaken in all modules aims to develop students’ critical understanding of research methodology, and apply it to the design of their own research projects.

A considered approach to PT study

We have worked with timetabling to ensure that the current MSc AP programme can be delivered within a 2-day timetabling footprint, and these efforts mean the new HN programmes can be delivered within a 2-3 day footprint for FT students, and within 2 days for PT students. PT study will allow some students to combine PT research assistant or similar work with study, again enhancing their skills and experience and increasing the chance of successfully accessing PhD funding or graduate-level employment on graduation (and also responding to financial pressures on our current cohorts).

5. Relevant QAA Subject Benchmark Group(s)

There is currently no relevant QAA benchmark group for psychology or neuroscience at masters level, see <http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code/subject-benchmark-statements/masters-degree-subjects>

6. Programme Structure

The MSc HN is a 1-year, level 7 programme. It will also be available via a part time route, with the order of modules in each year chosen in partnership between student and the programme lead (but with the advanced practice and project modules to be studied in year 2). Please, see section 10 and Appendices for information on Intermediate Awards.

The following table indicates the programme structure for both FT and PT study. Please note that the MSc HN-specific modules are indicated in bold and are preceded by an asterisk.

Module	Core/Elective	Credits	FT	PT Year 1	PT Year 2
PSYC750	C	0	X	X	
PSYC751	C	10	X	X	
PSYC752	C	10	X	X	
PSYC754	C	20	X	X	
PSYC756	C	10	X	X	
PSYC771	C	10	X	X	
*PSYC775	C	30	X	X	
*PSYC778	C	10	X	X	
*PSYC784	C	40	X		X
*PSYC785	C	40	X		X

7. Programme Aims

These new programmes are designed to meet the descriptors of the QAA's (2008) Framework for Higher Education Qualifications in England, Wales and Northern Ireland for level 7 Master's degree. The aims specific to the programme are

- To provide students with concrete competencies and experiences such that they would be immediately productive in global research labs in human neuroscience.

- To provide students with a deep understanding of the full spectrum of links between levels of analysis in human neuroscience: from the physical foundations to the use of neuroimaging and neurostimulation methods to design, execute, and write up a full study in the field.
- To develop the understanding and knowledge of how human neuroimaging and neurostimulation are applied to real-world research questions.
- To develop students' professional ethos and identity within psychology and neuroscience, encouraging the consistent application of evidence-based thinking to novel contexts and problems.
- To develop students' capability as independent researchers, capable of working autonomously to produce new knowledge
- To develop a deep and systematic understanding of research methods and techniques which cut-across many areas of research in psychology and/or neuroscience, and to develop specialist expertise in methods that are at the forefront of the particular areas of research in psychology and/or neuroscience.

8. Programme Intended Learning Outcomes

8.1. Knowledge and understanding

On successful completion graduates should have developed:

- 1) Systematic knowledge of the core techniques for quantitative enquiry in psychology and/or neuroscience, and the theoretical and practical limitations of current approaches and knowledge.
- 2) Understanding and expertise in the application of specialist methods in human neuroscience related to the students chosen research and professional interests.
- 3) Advanced understanding of psychological and/or neuroscientific theory and evidence within specialist topics in these areas. Understanding of the uniqueness and interconnectedness of psychological and neuroscientific knowledge across these loci of enquiry.
- 4) Advanced knowledge of the principles of magnetic resonance imaging, electroencephalography, and transcranial magnetic stimulation.

8.2. Cognitive and intellectual skills

On successful completion graduates should have developed:

- 1) Ability to select and apply advanced methodological approaches to the design of supervised research in psychology and/or human neuroscience

- 2) Capacity to analyse and critically evaluate a complex body of empirical research — which may include contradictory or incomplete findings.
- 3) Ability to synthesise ideas and techniques from multiple perspectives, demonstrating insight, understanding, and creativity in their work.
- 4) Capacity to critically evaluate and process the human neuroimaging and neurostimulation literature.

8.3. Key and transferable skills

On successful completion graduates should have developed the ability to:

- 1) Explain complex ideas to non-experts, in plain English.
- 2) Experience of group and team-working, and of developing and maintaining effective working relationships with supervisors and peers.
- 3) Insight and understanding of the roles of psychology and/or neuroscience in professional life
- 4) Capacity to act autonomously to undertake a sustained research project; insight into the nature of research impact and leadership

8.4. Employment related skills

On successful completion graduates should have developed:

- 1) Demonstrate expertise in problem solving with technology for different purposes
- 2) Reflect upon their strengths and weaknesses, and take responsibility for personal and professional development.
- 3) Insight and understanding of the value of psychology and/or neuroscience in the workplace, and the range of career opportunities available to graduates, especially those outside of traditional professional psychological training
- 4) Ability to understand and identify potential applications of human neuroimaging and neurostimulation to areas outside of a traditional professional psychological curriculum.

8.5. Practical skills

On successful completion graduates should have developed:

- 1) Fluency and precision with proper use of technical neuroscientific terminology in professional written communication
- 2) Clarity and confidence in oral presentation
- 3) Fluency and confidence in visualising and communicating insights from neuroscientific data.
- 4) Ability to collect data using human neuroimaging and neurostimulation equipment, including magnetic resonance imaging, electroencephalography, and transcranial magnetic stimulation.

9. Admissions Criteria, including APCL, APEL and DAS arrangements

Successful applicants will typically have a good honours degree (2:1 or equivalent) either in psychology or a cognate subject (e.g. computational neuroscience). However, other degrees (e.g. medicine, engineering) would also be welcome reflecting the multidisciplinary nature of the field. BPS graduate membership is not required for entry. Wherever possible, established relationships or equivalencies to other international qualifications will be used, with reference to current University guidance on these matters. However, the admissions policy is based upon the principle that students will be admitted if we believe that they can benefit from the experience, and this principle will be used to make decisions where equivalencies are not available.

Candidates with existing achievements may be considered for exemption from specific modules under the University guidelines for accreditation of prior learning (APCL) and assessment of prior experiential learning (APEL). The school lead for postgraduate programmes has responsibility for approving exemption under these guidelines. Her decision will be made after consulting with the Programme/Module Leaders.

Applicants will be made aware that the standard MRI safety screening will be used prior to work at BRIC, but this will not affect students' learning or assessment on the programme (MRI scanners can present a risk for individuals with ferrous metals within their bodies, but this is easily managed without disadvantaging these students).

Applicants with Disabilities

The University is committed to promoting and providing a positive study environment for all students and has a dedicated department to help students with disabilities, the Disability Services team <https://www.plymouth.ac.uk/student-life/services/learning-gateway/disability-and-dyslexia> Disability is defined as a physical or mental impairment that has a substantial and long-term adverse effect on the ability of an individual to carry out normal day-to-day activities, and can mean different things to different people. The University has a duty to make anticipatory 'reasonable adjustments' to make sure students with disabilities are not discriminated against. Where a person with a disability is at a substantial disadvantage in comparison with a person without a disability, the University has a duty to take reasonable steps to remove that disadvantage by:- changing provisions, criteria or practices, altering, removing or providing a reasonable alternative means of avoiding physical features and providing auxiliary aids.

Please contact us for further details.

International applications (all programmes)

Overseas students for whom English is not the first language will be expected to demonstrate proficiency in English with a minimum IELTS score of 6.5. Successful completion of the University's English pre-sessional Programme will be accepted as equivalent.

Disclosure and Barring Service (DBS) Checks

Students on the HN award will not require DBS checks routinely.

10. Progression criteria for Final and Intermediate Awards

Students on the MSc HN must achieve 180 credits, in accordance with the standard university procedures for PG awards. Awards will be classified in line with university procedures for PG awards, based on the student's aggregate percentage.

To achieve MSc awards at distinction, merit and pass students must achieve an aggregate mark of 70%, 60% and 50% respectively, and a dissertation mark equal to or greater than that percentage.

Students who fail to complete 180 credits may be awarded one of the specified intermediate awards (PGDip/PGCert, see Appendices), provided they meet the learning outcomes of these intermediate awards (see mapping documents).

Because of the overlap with the MSc AP modules, students failing to complete 180 credits on the MSc HN might still meet the programme learning outcomes for the PgDip AP or PGCert AP; in these instances students will be given these awards wherever possible.

11. Non Standard Regulations

Not applicable

12. Transitional Arrangements

Not applicable

Appendices

Programme Specification Mapping (PGT): module contribution to the meeting of Award Learning Outcomes

Tick those Award Learning Outcomes the module contributes to through its assessed learning outcomes. Insert rows and columns as required.

Module	Credits	C core E elective																					Compensation Y/N	Assessment element(s) and weightings [use KIS definition] E1 - exam E2 - clinical exam T1 - test C1 - coursework A1 - generic assessment P1 - practical			
			Cognitive & intellectual skills				Employment related skills				Knowledge & understanding				Practical skills				Key & transferable skills								
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
*PSYC784	40	C	X		X	X		X	X	X	X	X	X	X			X	X	X	X	X	X	No	A1, C1, P1 (Pass/Fail, 100%, Pass/Fail)			
Plus modules from the 180 credit award totalling 20 credits.																											
			X		X	X		X	X	X	X	X	X			X	X	X	X	X	X	PgCert (60 credits)					
*PSYC784	40	C	X		X	X		X	X	X	X	X	X			X	X	X	X	X	X	No	A1, C1, P1 (Pass/Fail, 100%, Pass/Fail)				
*PSYC785	40	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	No	A1, C1, P1 (50%, 50%, Pass/Fail)				
Plus modules from the 180 credit award totalling 40 credits.																											
			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	PgDip (120 credits)					

PSYC750	0	C	X				X	X			X					X			X	X	X	Yes	C1, P1 (Pass/Fail, Pass/Fail)	
PSYC751	10	C	X	X	X			X			X		X						X	X	X	X	Yes	C1 (100%)
PSYC752	10	C	X								X	X								X		X	Yes	C1 (100%)
PSYC754	20	C	X						X		X	X										X	Yes	C1 (100%)
PSYC756	10	C	X				X	X	X							X	X	X		X		X	Yes	P1 (100%)
PSYC771	10	C		X	X	X	X		X	X		X	X									X	Yes	C1 (100%)
*PSYC775	30	C	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X		X		Yes	C1, C2, P1 (40%, 60%, Pass/Fail)
*PSYC778	10	C		X		X						X	X	X	X					X			Yes	C1, P1 (100%, Pass/Fail)
*PSYC784	40	C	X		X	X		X	X	X	X	X	X	X			X	X	X	X	X	X	No	A1, C1, P1 (Pass/Fail, 100%, Pass/Fail)
*PSYC785	40	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	No	A1, C1, P1 (50%, 50%, Pass/Fail)
Learning Outcomes 180 credits			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		MSc (180 credits)
Confirmed Award LOs			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

* New modules