Programme Specification

BSc (Hons) Healthcare Science (Neurophysiology)

1. Programme title	BSc (Hons) Healthcare Science (Neurophysiology)
2. Awarding institution	Middlesex University
3. Teaching institution	Middlesex University
4. Programme accredited by	
5. Final qualification	BSc (Hons) Healthcare Science (Neurophysiology) CertHE Healthcare Science DipHE Healthcare Science
6. Academic year	2022/23
7. Language of study	English
8. Mode of study	Full-time and Part-time

9. Criteria for admission to the programme

Candidates normally require Maths and English equivalent to at least GCSE grade C or an IELTS score of 7 with no element less than 6 as well as 112 UCAS tariff points or equivalent from one of the following awards.

- A-levels (including two A2s with at least one science subject, preferably in biology or chemistry at grade C or better)
- Or Two AVCEs or one double award in Science
- Or EDEXCEL National Diploma or Certificate in biology, chemistry, forensic science, laboratory and industrial science, or medical science
- Or Access course in applied science, clinical physiology, human or life sciences, medical or paramedical science, or science.

- Or high school equivalent, such as an International Baccalaureate

Applicants can make a claim for entry onto the programme with or without advance standing on the basis of equivalent accrued credit from another HEI or prior experiential learning.

DBS and health clearances are also required, which must be achieved before the start of the placement. Students do not pay for the DBS and health checks. Students, who do not get either a DBS or health clearance, will be able to discuss their options with the programme team.

10. Aims of the programme

The programme aims:

- To help the student to develop the knowledge, skills, attitude and ethical values required to provide patient-centred care and work safely and effectively in the NHS as a healthcare scientist in clinical neurophysiology.
- To apply scientific principles and theories underpinning healthcare science to patient care.
- To equip students to carry out competently diagnostic neurophysiological investigations relevant to the role of a Healthcare Science Practitioner.
- To apply scientific methods and approaches to research, development and innovation in healthcare science.
- To develop a range of transferable academic skills required for effective life-long learning, communication, teamworking and leadership.

11. Programme outcomes

A. Knowledge and understanding	**Teaching/learning methods**
On completion of this programme the successful student will have knowledge and understanding of:	Students gain knowledge and understanding through lectures, seminars, laboratory classes, peer presentations, debates,

1. Knowledge, skills and attitude required to work as a neurophysiology healthcare practitioner 2. Normal and abnormal human physiology 3. The principles of diagnosis and management of human disease 4. The sciences underpinning quality healthcare 5. The importance of scientific research in the advancement of healthcare practice 6. The range of diagnostic and therapeutic investigations carried out in Clinical Neurophysiology by a Healthcare Science Practitioner 7. The role of a Healthcare Science Practitioner in and skills required for service improvement	placements in clinical physiology departments, designing and undertaking a research project, role play and practical clinical sessions. **Assessment Method** Students' knowledge and understanding is assessed by summative and formative assessment, including peer presentations, laboratory reports, objective-structured practical examinations, online quizzes, and unseen theory examinations and assessment of clinical practice.
B. Skills On completion of this programme the successful student will be able to: 1. Critically evaluate research evidence in the context of current theory and practice 2. Solve clinical problems 3. Appraise and synthesise evidence-based information to gain new insights into aspects of current practice 4. Reflect on own learning and practice to develop personally and professionally	**Teaching/learning methods** Students learn cognitive, practical and graduate skills through lectures, seminars, discussions, peer presentations, a research project and debates, placements, practical clinical sessions. Experiential learning also includes laboratory classes,

5. Present information in the most effective format to communicate ideas clearly 6. Design and carry out research project or clinical audit 7. Perform a wide range of clinical procedures competently, and in accordance with health and safety guidelines 8. Work within scope of practice and professional codes of conduct 9. Communicate their ideas effectively to patients, relatives, carers and colleagues using a variety of media 10. Work both collaboratively and with an appreciation of skills required for leadership 11. Demonstrate an autonomous and reflective approach to lifelong learning 12. Formulate learning and career development plans 13. Use a range of information technologies 14. Demonstrate a high level of numeracy and problem-solving skills	clinical placements, and a research project. These skills are consolidated by reading, group work, problem-based learning exercises, structured and directed learning, analysis of case studies, and through reflection, placement and development of portfolio material **Assessment Method** Students' skills are assessed via formative and summative assessment by written work, examinations, online quizzes, case studies, assessment of clinical practice and peer presentation. Written work includes laboratory reports and research findings, with clinical skills also assessed by OSPEs and portfolios of clinical practice. Additionally, placement assessment requires case study presentation which incorporates data analysis,

	interpretation and reflective practice.

12. Programme structure (levels, modules, credits and progression requirements).

The professional practice modules incorporate the clinical placement learning and assessment:

Year 1: BMS1004

includes **10 weeks** of placement starting in term 2

Year 2: BMS2015

includes **15 weeks** of placement starting at the end of term 2

Year 3: BMS3236

Includes **25 weeks** of placement.

At each intake the cohort will have an appropriately dated placement planner. The planner highlights exactly which terms, teaching weeks and beyond that students will spend on placement, allowing time for holidays etc to be planned and booked. The planner includes teaching blocks, placement, portfolio submission, Bank Holidays and the exam period. It also includes the university vacations (A/L) which will not apply to year 3 students – only Bank Holidays.

Students are asked NOT to plan any absences during the marked weeks on the Placement Planner so as not to miss any important events on the planner.

Allowances will be made for students with extenuating circumstances, but students must discuss placement planner problems with the Programme Leader as soon as possible.

12.1 Overall structure of the programme: full-time example

Year 1

BMS1004 Professional Practice **(10 Week Placement)** (15 Credits)	BMS1014 Biological Basis of Healthcare (30 Credits)	BMS1024 Social Aspects of Healthcare (15 Credits)	BMS1624 Clinical Technology & Mathematics (15 Credits)	BMS1644 Physics and Measurements (15 Credits)	BMS1904 Anatomy and Physiology of the Nervous System (30 Credits)

Year 2

BMS2015 Research Methods and Professional Practice **(15 Week Placement)** (30 Credits)	BMS2625 Medical Instrumentation and Imaging (15 Credits)	BMS2465 Pathophysiology of the Central and Peripheral Nervous System (45 Credits)	BMS2995 Applied Clinical Neurophysiology I (30 Credits)	EXIT POINT: Pass all year 1 modules – **CertHE in Healthcare Science**

Year 3

BMS3236 Professional Practice **(25 Week Placement)**	BMS3336 Dissertation	BMS3976 Neuroanatomy and Pathology	BMS3956 Applied Clinical Neurophysiology II	EXIT POINT: Pass all year 1 & 2 modules – **DipHE in Healthcare Science**

(30 Credits)	(30 Credits)	(30 Credits)	(30 Credits)	

12.1 Overall structure of the programme: part-time example

Year 1

BMS1004 Professional Practice **(10 Week Placement)** (15 Credits)	BMS1014 Biological Basis of Healthcare (30 Credits)	BMS1024 Social Aspects of Healthcare (15 Credits)	BMS1624 Clinical Technology & Mathematics (15 Credits)	BMS1644 Physics and Measurements (15 Credits)	

Year 2

BMS2015 Research Methods and Professional Practice **(15 Week Placement)** (30 Credits)	BMS2625 Medical Instrumentation and Imaging (15 Credits)	BMS1904 Anatomy and Physiology of Nervous System (30 Credits)	EXIT POINT: Pass all year 1 & 2 modules – **CertHE in Healthcare Science**	

Year 3

BMS2465	BMS2995	

Pathophysiology of the Central and Peripheral Nervous System (45 Credits)	Applied Clinical Neurophysiology I (30 Credits)	BMS3336 Dissertation (30 Credits)

Year 4

BMS3236 Professional Practice **(25 Week Placement)** (30 Credits)	BMS3976 Neuroanatomy and Pathology (30 Credits)	BMS3956 Applied Clinical Neurophysiology II (30 Credits)	EXIT POINT: Pass all year 1, 2 & 3 modules – **DipHE in Healthcare Science**

The part-time programme will only be available for students employed by the appropriate clinical physiology laboratory in an NHS hospital. It will allow students to remain in full-time employment whilst studying

12.2 Levels and modules		
Level 4		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all the following: BMS1004 BMS1014 (Biological) BMS1024 (Social) BMS1624 BMS1644 (Technology) BMS1904	There are no optional modules.	All module assessments must be passed. Exit point (120 credits): **Cert HE (Healthcare Science)**
Level 5		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all the following: BMS2015 BMS2465 BMS2625 BMS2995	There are no optional modules.	All module assessments must be passed. Exit point (240 credits): **DipHE (Healthcare Science)**
Level 6		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS

Students must take all the following: BMS3236 BMS3336 BMS3976 BMS3956	There are no optional modules.	All module assessments must be passed.

12.3 Non-compensatable modules	
Module level	***Module code***
4-6	*All*

13. A curriculum map relating learning outcomes to modules

See Curriculum Map Appendix 2.

14. Information about assessment regulations

- The assessment regulations are the general university regulations.
- All modules of the programme and module assessment components must be passed either by assessment or pre-accreditation.
- A student, who is unable to complete the honours degree due to illness, will be eligible for aegrotat degree in healthcare science without a specialism in the title of the award; students will not have met the programme outcomes therefore will not be qualified to work as a healthcare science practitioner.

15. Placement opportunities, requirements and support (if applicable)

Placements are an integral part of the programme. Over the three years, students will spend a total 50 weeks in NHS clinical physiology departments in London or the South East: 10 weeks in year 1, 15 weeks in years and 25 weeks in year 3. Placements will be from Monday to Friday.

Students are only placed in University approved learning environments. Placement Tutors in collaboration with placement providers will ensure that learning opportunities and support will be available in the placement area to help students meet the module learning outcomes and complete the Practitioner Training Programme (PTP) training manual.
Both parties will also ensure that a robust quality monitoring processes will be in place and establish clear lines of communication.

Prior to going on placement, students are required to get an enhanced DBS and Occupational Health clearance. Students, who do not get either an enhanced DBS or Occupational Health clearance, may have to transfer

to another programme at the University. Because students are not able to claim travel and accommodation expenses, the clinical facilitator will try to place each student with an NHS trust that is near to the student's home or term address. Placement is unpaid unless the student is being sponsored by a Trust.

Students are notified in advanced of their placement allocation and contact details of placement staff. Students are also required to attend placement Monday to Thursday during normal working hours. Their duty rota may include Bank Holidays. Friday is set-aside for protected study time.

At the start of each placement, students will receive an induction and support and guidance will be provided for students with diverse needs.

Each placement area is assigned a Placement Tutor and given a copy of the placement handbook, which outlines for example lines of communication, contact details of key academic staff, attendance policy and complaints procedures. Practice learning is assessed using the training manual and written assignments.

In the final year, students have an opportunity to undertake a research project, which could include a clinical audit. Research projects carried out on placement will normally require local ethical approval.

16. Future careers (if applicable)

On completion of programme, graduates may apply for band 5 healthcare science post in neurophysiology in the NHS. Suitably qualified graduates can study to become physiological scientists, working in the NHS at Band 7 or higher. They would need to get onto an NHS Scientist Training Programme (STP). For STP training places, a 2:1 in the PTP (or a relevant science degree is the minimum required).

17. Support for learning (if applicable)

Key areas:

- Specialist laboratory facilities available on site to learn and develop practical skills
- Online support for all modules in the programme available on My Learning
- Learning resource facilities at the University including computing suites and internet access
- Access to English Language and Learning Support on campus
- Student welfare

UniHelp is the University's central service; you can contact UniHelp online, by phone, in person and via Chat.
http://unihub.mdx.ac.uk/your-support-services/unihelp

You can also use our FAQs to find the answer to your question here:
http://wgfp-prrw02.mdx.ac.uk:8001/KnowledgeBase/FaqSearch.aspx

Student Welfare Advice Team – providing information and advice on money and funding matters, and housing
http://www.mdx.ac.uk/life-at-middlesex/support-services/finance/student-welfare

Learner Enhancement Team (LET)
They provide academic support to you in areas such as writing essays and reports, giving presentations and participating in academic discussions.
Contact Details: http://unihub.mdx.ac.uk/let , LET@mdx.ac.uk

18. JACS code (or other relevant coding system)	Neurophysiology 144B91H (B140)
19. Relevant QAA subject benchmark group(s)	N/A

20. Reference points

The following reference points were used in designing the Programme:

Internal documentation:

i. Middlesex University (2014) *Learning Framework Document*
ii. Middlesex University (2019-20) *Middlesex University Regulations.* MU
iii. Middlesex University (2019-20) *Centre for Learning and Quality Enhancement Handbook.* MU

External Documentation:

1. Quality Assurance Agency (2008) *The QAA Framework for framework for higher education qualifications in England, Wales and Northern Ireland.* QAA
2. Quality Assurance Agency (2010) *Code of practice for the assurance of academic quality and standards in higher education - Section 9: Work-based and placement learning. QAA*
3. Health Education England (HEE) (2016 Modernising Scientific Careers, Practitioner Training Programme, BSc (Hons) Healthcare Science Curriculum: Neurosensory Sciences 2016/17

21. Other information

Course costs; (see page 26 for further details)

The following course-related costs are not included in the fees; the costs are approximate and may change due to changes in pricing at the retailer.

- Visits to NHS meetings (~ 4 one-day travel cards / year)
- Additional books that you wish to purchase
- Lab coats
- Travel costs to Middlesex campus
- Travel costs *within* London during placement:
- Placement location to be provided during the first term.
- Deposit for accommodation – *refundable after your stay*.

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might

reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the rest of your programme handbook and the university regulations.

Appendix 1: Curriculum Map

Curriculum map for *BSc Healthcare Science (Neurophysiology)*

This section shows the highest level at which programme outcomes are to be achieved by all graduates, and maps programme learning outcomes against the modules in which they are assessed.

Programme learning outcomes

Knowledge and understanding		**Skills (cont.)**	
A1	Knowledge, skills and attitude required to work as a healthcare science practitioner	B5	Present information in the most effective format to communicate ideas clearly
A2	Normal and abnormal human anatomy and physiology	B6	Design and carry out a research project or clinical audit
A3	The principles of diagnosis and management of human diseases	B7	Perform a wide range of clinical procedures competently, and in accordance with health and safety guidelines
A4	The sciences underpinning quality healthcare delivery	B8	Work within scope of practice and professional codes of conduct

A5	The importance of scientific research in the advancement of healthcare practice	B9	Communicate their ideas effectively to patients, relatives, carers and colleagues using a variety of media
A6	The range of diagnostic and therapeutic investigations carried out by a Healthcare Science Practitioner	B10	Work both collaboratively and with an appreciation of skills required for leadership
A7	The role of a Healthcare Science Practitioner in and skills required for service improvement	B11	Demonstrate an autonomous and reflective approach to lifelong learning
Skills			
B1	Critically evaluate research evidence in the context of current theory or practice	B12	Formulate learning and career development plans
B2	Solve clinical problems	B13	Use a range of information technologies
B3	Appraise and synthesise evidence-based information to gain new insights into aspects of current practice	B14	Demonstrate a high level of numeracy and problem-solving skills
B4	Reflect on own learning and practice to develop personally and professionally		

BSc(Hons) Healthcare Science (Neurophysiology)

Programme outcomes																									
A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14					
Highest level achieved by all graduates																									
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					

Module Title	Module Code by Level	A 1	A 2	A 3	A 4	A 5	A 6	A 7		B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B1 10	B11	B12	B13	B14		
Professional Practice	BMS1004	x			x	x	x			x	x	x	x	x		x	x	x	x	x	x	x	x		
Social Aspects of Healthcare Science	BMS1024		x	x						x				x											
Biological Basis of Healthcare Science	BMS1014		x		x					x															
Physics and Measurements	BMS1644				x							x		x											

Clinical Technology & Clinical Mathematics	BMS1624				x																x	x		
Anatomy and Physiology of the Nervous System	BMS1904		x	x	x		x			x		x		x								x		
Research Methods and Professional Practice	BMS2015	x			x	x				x		x		x	x	x	x	x	x	x	x	x	x	
Pathophysiology of the Central and Peripheral Nervous System	BMS2465	x			x	x				x		x		x	x	x	x	x	x	x	x	x	x	
Medical Instrumentation and Imaging	BMS2625				x							x		x										
Applied Clinical Neurophysiology I	BMS2995		x	x	x		x			x	x	x		x		x								
Dissertation	BMS3336					x		x		x	x	x	x	x	x			x	x			x	x	
Professional Practice	BMS3236	x		x			x	x		x	x	x	x	x		x	x	x	x	x	x			
Clinical Neurophysiology	BMS3976		x	x						x		x												
Applied Clinical Neurophysiology 2	BMS3956				x		x	x		x	x	x		x		x								