Programme Specification and Curriculum Map for Medical Science

1. Programme title	BSc (Hons) Medical Science BSc (Hons) Medical Science with Foundation Year
2. Awarding institution	Middlesex University
3. Teaching institution	Middlesex University
4. Programme accredited by	Not applicable (N/A)
5. Final qualification	BSc (Hons) Medical Science BSc (Hons) Medical Science with Foundation Year BSc (Hons) Medical Science (Pharmacology) BSc (Hons) Medical Science (Pharmacology) with Foundation Year Cert HE Medical Science DipHE Medical Science BSc Medical Science
6. Academic year	2021
7. Language of study	English
8. Mode of study	BSc (Hons) Medical Science: Full-time or Part-time BSc (Hons) Medical Science (Pharmacology): Full-time or Part-time BSc (Hons) Medical Science with Foundation Year: Full-time

9. Criteria for admission to the programme

For the BSc (Hons) Medical Science, candidates require Maths and English equivalent to at least GCSE grade 4 as well as 112-128 UCAS tariff points from one of the following awards:

- A-levels (including two A levels with at least one science subject, preferably in biology or chemistry at grade C or better).
- Or Pearson's National Diploma or Certificate in biology, chemistry, forensic science, laboratory and industrial science, healthcare 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.

Candidates, who meet the Maths and English requirements but not the level 3 requirements, would be considered for the BSc (Hons) in Medical Science with Foundation Year. The UCAS tariff points for admission to the foundation year is 56-64, including a relevant science subject. For more information about the foundation year visit:

https://www.mdx.ac.uk/courses/undergraduate/foundation-year-in-science

Overseas candidates, whose first language is not English, will need a qualification that demonstrates competence in English language IELTS 6.0 (with minimum 5.0 in all components) or an equivalent English qualification.

Candidates can make a claim for entry onto the programme with or without advance standing on the basis of either of prior certified learning or experiential learning.

Please refer to the programme specification for the Foundation Year for the criteria for admission to the BSc (Hons) Medical Science with Foundation Year programme.

10. Aims of the programme

The programmes aim:

- To help the student to develop knowledge, skills, attitude and ethical values in the field of medical science.
- To enable the student to competently carry out diagnostic investigations.
- To develop the student's ability to apply scientific methods and approaches to research, development and innovation.
- To help the student develop a range of transferable academic skills required for effective life-long learning, communication, team working and leadership.
- To prepare the student for employment in a medical science research or medical sales.

11. BSc Programme outcomes

A. Knowledge On completion of this programme the successful student will have knowledge and understanding of: 1. Normal and abnormal biochemical, cellular and physiological processes. 2. The principles of diagnosis and management of human disease. 3. The importance of scientific research in the advancement of medical research. 4. Therapeutic and toxic effects of drugs on the human body. 5. Analytical techniques used in medical diagnostic or research.	**Teaching/learning methods** Students gain knowledge and understanding through on-campus or on-line lectures, seminars, laboratory classes, peer presentations, case-studies, debates, designing and undertaking a research project, role-play and practical clinical sessions. **Assessment methods** Students' knowledge and understanding are assessed by summative and formative assessment, including peer presentations, laboratory reports, objective-structured practical examinations, online quizzes, and unseen theory examinations.
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 or practice. 2. Solve clinical problems. 3. Present information in the most effective format to communicate ideas clearly. 4. Design and undertake a research project. 5. Perform a wide range of common medical laboratory techniques competently, and in accordance with health and safety guidelines.	**Teaching/learning methods** Students acquire skills through on-campus or on-line lectures, seminars, discussions, peer presentations, a research project and debates, through 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 methods** Students' cognitive skills are assessed by formative and summative assessment as written work, examinations, online quizzes, case studies, and peer presentation, work in the form of portfolios, and project and research work.

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

12. 1 Overall structure of the programme

Figure 1. BSc ((Hons) Medical Science – Full-Time

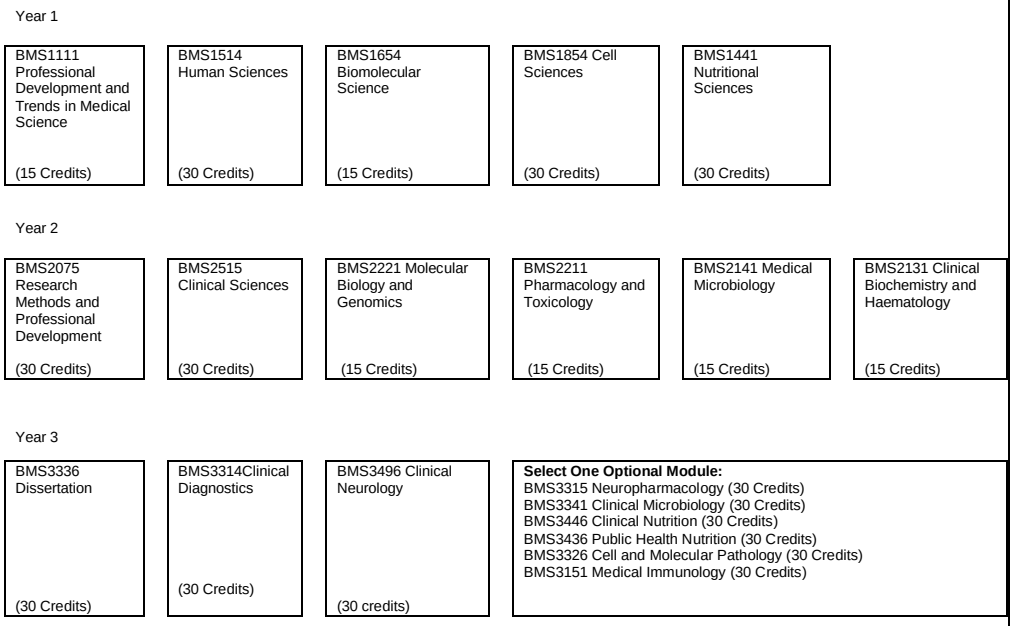
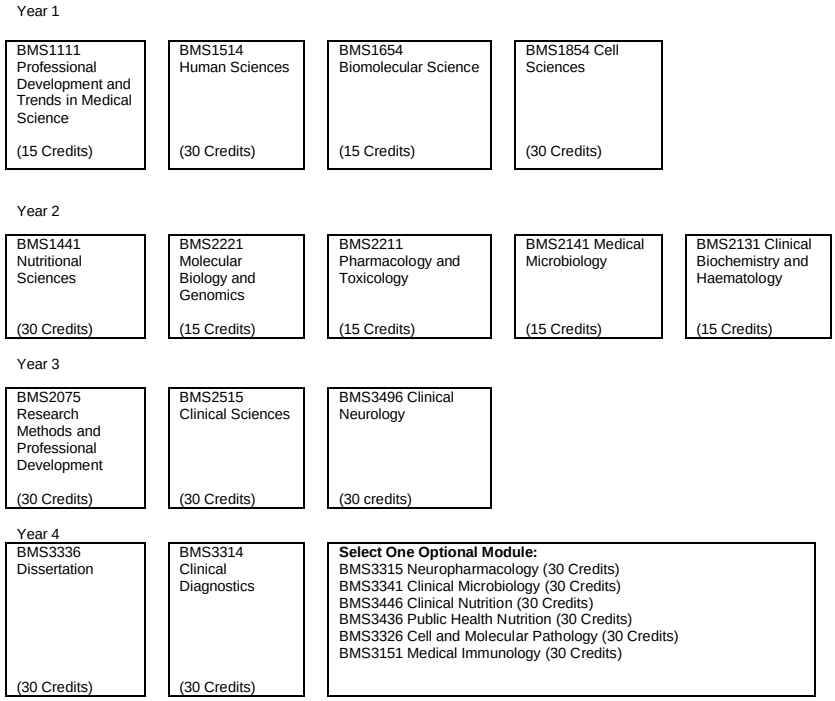


Figure 2. BSc (Hons) Medical Science– Part-Time



To exit with a Cert HE, students must achieve 120-225 credit points at level 4 and above.
To exit with a DipHE, students must achieve 240-285 credit points at level 4 and above.
To exit with an ordinary degree, students must achieve 300-315 credit points at level 4 and above.

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

12. 1 Overall structure of the programme

Figure 3. BSc (Hons) Medical Science (Pharmacology) – Full-Time

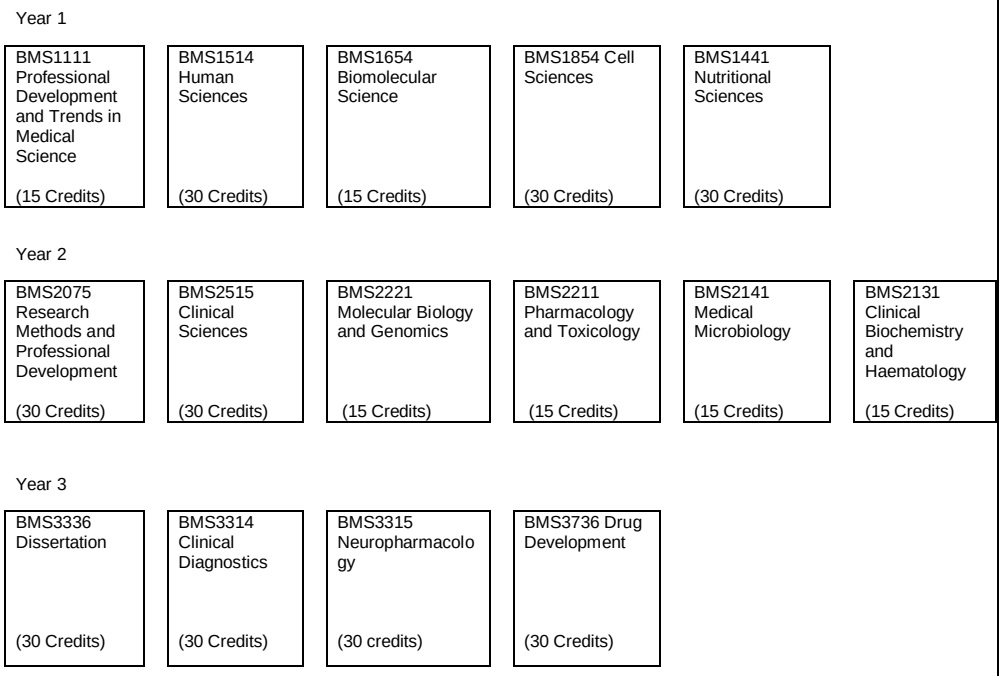
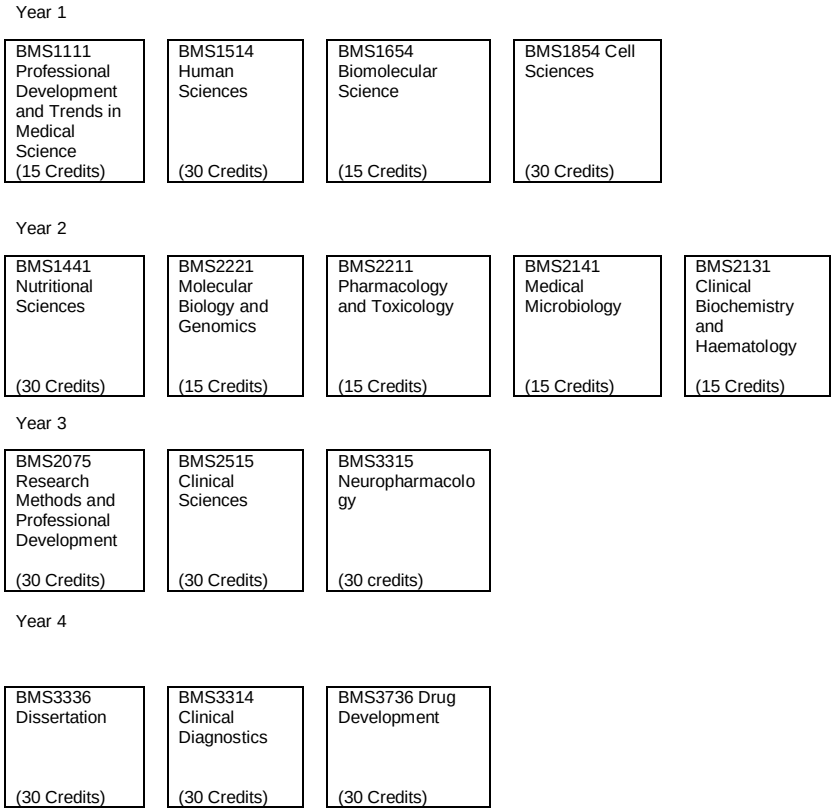


Figure 4. BSc Medical Science (Pharmacology) – Part-Time



To exit with a Cert HE in Medical Science, students must achieve 120-225 credit points at level 4 and above.
To exit with a DipHE in Medical Science, students must achieve 240-285 credit points at level 4 and above.

To exit with an ordinary degree in Medical Science, students must achieve 300-315 credit points at level 4 and above.

12.2 Levels and modules		
Please refer to the programme specification for the Foundation Year for the modules to be taken during the foundation year of the BSc (Hons) Medical Science with Foundation Year programme.		
Level 4		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
All students must take all of the following: BMS1111 BMS1441 BMS1514 BMS1654 BMS1854	There are no optional modules.	Normally all modules must be passed but a marginal failed module can be compensated in accordance with University regulations.
Level 5		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
All students must take all of the following: BMS2075 BMS2221 BMS2211 BMS2131 BMS2141 BMS2515	There are no optional modules.	Normally all modules must be passed but a marginal failed module can be compensated in accordance with University regulations. See 12.3 for the list of non-compensatable modules.
Level 6		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
BSc(Hons) Medical Science students must take the following: BMS3314 BMS3336 BMS3496 BSc(Hons) Medical Science (Pharmacology) students must take the following: BMS3314 BMS3336 BMS3736 BMS3315	BSc(Hons) Medical Science Students must one optional module from the list below: BMS3315 BMS3341 BMS3446 BMS3436 BMS3326 BMS3151	Not applicable.

12.3 Non-compensatable modules: BSc in Medical Science	
Module level	***Module code***
4	None
5	BMS2515
6	BMS3336

12.3 Non-compensatable modules: BSc in Medical Science (Pharmacology)	
Module level	***Module code***
4	None
5	BMS2211, BMS2515
6	BMS3315, BMS3336, BMS3736

13. A curriculum map relating learning outcomes to modules

See Curriculum Map attached.

14. Information about assessment regulations

The assessment regulations are the general university regulations (https://www.mdx.ac.uk/about-us/policies/university-regulations).

Normally all modules must be passed either by assessment or pre-accreditation. To pass a module with multiple assessments, students must achieve an aggregate grade of at least 16 with no lower than a grade 18 for any component.

Formative assessments prepare students for their summative assessments. It is therefore recommended that students should engage with all forms of assessments.

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

Not applicable

16. Future careers (if applicable)

Graduates can gain employment in a wide variety of settings, particularly laboratory-based work. Graduates could be employed by biotechnology, pharmaceutical, forensic, private diagnostic, public health, or university laboratories. Others may obtain posts in sales and marketing of medical products, or publishing companies employing medical science writers and editors, or in education at all levels. Graduates could also choose to undertake further study for a range of health careers in the NHS.

17. Particular support for learning (if applicable)

Specialist laboratory facilities, online resources and learning resource facilitates are available to learn and develop skills. Additionally, student support, such as English language, learning Support, and dyslexic and disability support, are also available. See: https://www.mdx.ac.uk/student-life/student-support

18. JACS code (or other relevant coding system)	B990 BSc (Hons) Medical Science B200 BSc (Hons) BSc Medical Science (Pharmacology)
19. Relevant QAA subject benchmark group(s)	Biomedical Sciences (2019)

20. Reference points

The following reference points were used in designing the Programme:

Internal documentation:

Middlesex University (2020) *Middlesex University Regulations.* MU.
Middlesex University (2020) *LQE Handbook.* MU.

External Documentation:

Quality Assurance Agency (2019) *Subject Benchmark Statements for Biomedical Sciences.* QAA.

21. Other information
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 student programme handbook and the University Regulations.

Curriculum map for *BSc in Medical Science and BSc in Medical Science (Pharmacology)*

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	
A1	Normal and abnormal biochemical, cellular and physiological processes.
A2	The principles of diagnosis and management of human disease.
A3	The importance of scientific research in the advancement of medical research.
A4	Therapeutic and toxic effects of drugs on the human body.
A5	Analytical techniques used in medical diagnostic or research.
Skills	
B1	Critically evaluate research evidence in the context of current theory or practice.
B2	Solve clinical problems.
B3	Present information in the most effective format to communicate ideas clearly.
B4	Design and undertake a research project.
B5	Perform a wide range of common medical laboratory techniques competently, and in accordance with health and safety guidelines.

BSc in Medical Science

	Module Code	Programme outcomes									
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5
Professional Development and Trends in Medical Science	BMS1111		x	x		x	x	x	x	x	
Biomolecular Science	BMS1654	x									
Human Sciences	BMS1514	x			x						
Cell Sciences	BMS1854	x				x					x
Nutritional Sciences	BMS1441	x									
Research Methods and Professional Practice	BMS2075			x			x		x	x	
Molecular Biology and Genomics	BMS2221	x			x	x		x			x
Pharmacology and Toxicology	BMS2211	x			x						
Clinical Biochemistry and Haematology	BMS2131	x				x		x			x
Medical Microbiology	BMS2141	x				x		x			x
Clinical Sciences	BMS2515	x	x		x			x			
Dissertation	BMS3336			x			x		x	x	
Clinical Diagnostics	BMS3314		x			x		x			x
Neuropharmacology	BMS3315	x			x			x			
Clinical Neurology	BMS3496	x			x			x			
Clinical Nutrition	BMS3446	x	x					x			
Public Health Nutrition	BMS3436	x		x					x		
Clinical Microbiology	BMS3341	x				x		x			x
Medical Immunology	BMS3151	x				x		x			x

Programme outcomes										
A1	A2	A3	A4	A5		B1	B2	B3	B4	B5
Highest level achieved by all graduates										
6	6	6	6	6		6	6	6	6	6

BSc in Medical Science (Pharmacology)

	Module Code	Programme outcomes									
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5
Professional Development and Trends in Medical Science	BMS1111		x	x		x	x	x	x	x	
Biomolecular Science	BMS1654	x									
Human Sciences	BMS1514	x			x						
Cell Sciences	BMS1854	x				x					x
Nutritional Sciences	BMS1441	x									
Research Methods and Professional Practice	BMS2075			x			x		x	x	
Molecular Biology and Genomics	BMS2221	x			x	x		x			x
Pharmacology and Toxicology	BMS2211	x			x						
Clinical Biochemistry and Haematology	BMS2131	x				x		x			x
Medical Microbiology	BMS2141	x				x		x			x
Clinical Sciences	BMS2515	x	x		x			x			
Dissertation	BMS3336			x			x		x	x	
Clinical Diagnostics	BMS3314		x			x		x			x
Neuropharmacology	BMS3315	x			x			x			
Drug Development	BMS3736				x			x			

Programme outcomes										
A1	A2	A3	A4	A5		B1	B2	B3	B4	B5
Highest level achieved by all graduates										
6	6	6	6	6		6	6	6	6	6