

## Programme Specification 2025-26

<b>1.</b>	<b>Programme title</b>	MSc Cardiology
<b>2.</b>	<b>Awarding institution</b>	Middlesex University
<b>3a</b>	<b>Teaching institution</b>	Middlesex University London
<b>3b</b>	<b>Language of study</b>	English

<b>4a</b>	<b>Valid intake dates and mode of study</b>
-----------	---------------------------------------------

<b>Mode of Study</b>	<b>Cohort</b>	<b>Delivery Location</b>	<b>Duration</b>
Full-time (FT)	Semester 1	Hendon	1 Years
Part-time (PT)	Semester 1	Hendon	2 Years

<b>4c</b>	<b>Delivery method</b>	On Campus/Blended Learning
-----------	------------------------	----------------------------

<b>5. Professional/Statutory/Regulatory body (if applicable)</b>
N/A

<b>6.</b>	<b>Apprenticeship Standard (if applicable)</b>	N/A
-----------	------------------------------------------------	-----

<b>7. Final qualification(s) available</b>
<b>Target Award Title(s)</b>
MSc Cardiology
<b>Exit Award Title(s)</b>
PGCert Cardiology
PGDip Cardiology

<b>8. Academic year effective from</b>	2025-26
----------------------------------------	---------

<b>9. Criteria for admission to the programme</b>
The programmes are primarily for Cardiac Physiologists seeking professional development, though applications from other healthcare professionals, such as cardiac nurses, medical practitioners, and radiographers in cardiology, will be considered individually.

Applicants must hold a minimum 2:2 undergraduate degree in a science-based subject. Those with relevant qualifications or significant work experience may be considered through the Recognition of Prior Learning (RPL) scheme, with prior learning mapped against programme modules.

Overseas applicants must meet English proficiency requirements: IELTS 6.5 (minimum 6.0 in each component) or TOEFL 84. Applicants with disabilities are welcome, subject to an assessment ensuring laboratory safety. The programme team is experienced in providing tailored support for students with disabilities.

#### Fair Admission Policy

The University aims to ensure that its admissions processes are fair, open and transparent and aims to admit students who, regardless of their background, demonstrate potential to successfully complete their chosen programme of study where a suitable place exists and where entry criteria are met. The University values diversity and is committed to equality in education and students are selected on the basis of their individual merits, abilities and aptitudes. The University ensures that the operation of admissions processes and application of entry criteria are undertaken in compliance with the Equality Act.

We take a personalised and fair approach to how we make offers. We feel it's important that our applicants continue to aspire to achieving great results and make offers which take into account pieces of information provided to us on the application form.

This includes recognition of prior learning and experience. If you have been working, or you have other learning experience that is relevant to your programme, then we can count this towards your entry requirements and even certain modules once you start studying.

### 10. Aims of the programme

The programme aims to:

The programme is designed to enhance students' careers by equipping them with advanced expertise in cardiology, preparing them to excel in specialised areas of cardiovascular health. It aims to support career advancement in academia, diagnostic laboratories, or the life sciences sector, while specifically preparing students for the British Heart Rhythm Society (BHRS), International Board of Heart Rhythm Examiners (IBHRE), and British Society of Echocardiography (BSE) Level 1 accreditation theory exams. The programme also focuses on developing leadership, management, and ethical decision-making skills, fostering professionalism and adaptability in diverse healthcare and research environments.

In addition, the programme provides a comprehensive, in-depth understanding of the mechanisms underpinning cardiovascular disease, along with modern diagnostic technologies. This knowledge will enable students to engage in innovative research and clinical applications. Students will also cultivate the ability to critically assess legal, ethical, and safety issues in research, while developing key skills in laboratory management, quality control, research design, and statistical methods essential for professional practice.

Throughout their studies, students will enhance their communication, teamwork, and lifelong learning skills, while fostering the critical evaluation of current research literature to generate new hypotheses and ideas.

Upon completion of the MSc project, successful students will acquire the skills to design, analyse, and conduct individualised experimental research projects. They will critically evaluate the literature in the context of their research and propose new, relevant hypotheses in cardiovascular health.

## **11. Programme learning outcomes**

### **Programme - Knowledge and Understanding**

On completion of this programme the successful student will have a knowledge and understanding of:

1. The aetiology and pathology of common cardiovascular diseases, including cardiac valve disease and cardiomyopathies.
2. The complexities of the cardiac conduction system and its impact on cardiovascular health.
3. Advanced cardiac imaging modalities, diagnostic techniques, and therapeutic interventions used in modern cardiology.
4. The importance of calibration, safety testing, quality control, and assurance procedures in physiological science services.
5. Ethical and legal considerations related to the collection, handling, and storage of data in cardiovascular research and clinical practice.
6. Research methods and the design and conduct of original research projects.
7. Clinical leadership and management, including strategic decision-making, team collaboration, and the integration of best practices to improve patient outcomes.

### **Programme - Skills**

On completion of this programme the successful student will be able to:

8. Apply and synthesise complex and specialised skills in postgraduate cardiology, including advanced cardiac ultrasound techniques, electrophysiology, and the analysis and management of cardiac devices, while demonstrating the ability to critically evaluate and apply this expertise in clinical practice.
9. Critically evaluate cardiac disease processes, integrating advanced knowledge and clinical evidence to make informed, accountable decision-making, while applying best-practice.
10. Critically evaluate and address ethical, legal, and safety issues in cardiology, understanding their impact in clinical and research settings.
11. Formulate novel hypotheses to advance research in cardiology and critically analyse and evaluate physiological data using sophisticated techniques and methodologies.
12. Design, develop, and manage a research project, including the ability to critically evaluate findings in the context of existing literature.
13. Apply advanced communication and presentation skills to convey complex information clearly and persuasively.
14. Integrate leadership, management, and teamwork skills to navigate and resolve clinical and research challenges, while fostering professional development.

## 12. Teaching/learning methods

The teaching and learning methods for the MSc Cardiology programme are designed to provide an integrated and flexible learning experience, helping students develop the knowledge, understanding, and skills necessary for advanced roles in healthcare and academia.

The curriculum is inclusive and flexible, with materials provided in various formats to cater to diverse learning needs. Small group discussions and practical workshops promote student participation and collaboration, fostering a dynamic learning environment. Key concept videos allow students to engage with critical concepts at their own pace, revisiting content as needed.

Students are encouraged to take a lead in discussions and presentations, building co-leadership skills by critiquing and sharing advancements in cardiology. Digital platforms like Epicardio© and university learning management systems help students develop essential digital skills, with activities involving professional-grade cardiac software and simulations. Practical sessions, such as diagnostic procedures and case studies, prepare students for real-world clinical roles, while guest speakers and collaborations with employers ensure content is aligned with current clinical practices.

The programme emphasises leadership, problem-solving, and data interpretation skills, essential for success in both healthcare and academia. Adjustments in teaching methods ensure inclusivity, while topics and case studies reflect global cardiology practices. Hands-on training, including the use of cardiac ultrasound machines, supports employability and practical expertise. The curriculum also promotes sustainable healthcare practices, teaching resource-efficient diagnostic methods.

Planned learning activities include weekly face-to-face sessions, seminars, case studies, group projects, and independent study. Practical workshops provide hands-on experience with diagnostic tools, while research project supervision fosters critical thinking and active research involvement.

Hours Allocation:

Full-time students: Approximately 8 hours of contact teaching per week.

Part-time students: Adjusted hours to suit the part-time schedule.

Independent study: 32 hours per week, promoting self-directed learning and project work.

Approx. number of timetabled hours per week (at each level of study, as appropriate), including on-campus and online hours. FT 8 hours, PT 4 hours.

Approx. number of hours of independent study per week (at each level of study, as appropriate). FT 32 hours, PT 16 hours.

Approx. number of hours on placement (including placement, work-based learning or year abroad, as appropriate). FT 0 hours, PT 0 hours.

<b>13. Employability</b>
<b>13a Development of graduate competencies</b>
<b>13b Employability development</b>
<p>Development of graduate competencies</p> <p>1. Curiosity and Learning</p> <ul style="list-style-type: none"> <li>•Learning: The curriculum encourages exploration through modules like Research Methods and Bioethics, with practical workshops in Cardiac Ultrasound and Electrophysiology.</li> <li>•Assessment: Creativity is evaluated via research projects and case studies, integrating theory with practice BMS4002 Cardiac Rhythm Management and BMS4107 Cardiac Ultrasound.</li> </ul> <p>2. Collaborative Innovation</p> <ul style="list-style-type: none"> <li>•Learning: Teamwork is central to Cardiac Rhythm Management and Electrophysiology, where students work on clinical data and case studies.</li> <li>•Assessment: Group projects and lab work assess both the process and outcomes of collaboration.</li> </ul> <p>3. Resilience and Adaptability</p> <ul style="list-style-type: none"> <li>•Learning: Real-world case studies help students develop adaptable problem-solving skills in Cardiac Ultrasound and Electrophysiology.</li> <li>•Assessment: Situational assessments test responses to clinical challenges and diagnostic failures.</li> </ul> <p>4. Technological Agility</p> <ul style="list-style-type: none"> <li>•Learning: Students gain experience with advanced diagnostic tools such as Epicardio© and Heartworks for echocardiography.</li> <li>•Assessment: Practical assessments evaluate proficiency in using technology for complex diagnostic tasks.</li> </ul> <p>5. Entrepreneurship</p> <ul style="list-style-type: none"> <li>•Learning: Leadership and Management equips students with skills to navigate healthcare business and innovation.</li> <li>•Assessment: Business proposals and innovation projects are assessed for feasibility and creativity.</li> </ul> <p>6. Communication, Empathy, and Inclusion</p> <ul style="list-style-type: none"> <li>•Learning: Workshops teach effective, inclusive communication for diverse patient and team interactions.</li> <li>•Assessment: Group work and presentations assess clarity, empathy, and inclusivity.</li> </ul> <p>7. Leadership and Influence</p> <ul style="list-style-type: none"> <li>•Learning: The Leadership and Management module and Research Project provide opportunities to develop leadership skills in clinical and research settings.</li> <li>•Assessment: Leadership effectiveness is assessed through project management and reflective evaluations.</li> </ul> <p>8. Problem Solving and Delivery</p> <ul style="list-style-type: none"> <li>•Learning: Problem-based learning in Electrophysiology and Cardiac Rhythm Management hones diagnostic and decision-making skills.</li> <li>•Assessment: Case studies and diagnostic challenges assess problem-solving ability in real-</li> </ul>

world scenarios
<p>Employability development</p> <p>The MSc Cardiology programme incorporates comprehensive career development support, including preparation for professional certifications such as BSE Level 1 for Cardiac Ultrasound and BHRS for Cardiac Rhythm Management and Clinical Electrophysiology. These certifications are essential for advancing clinical roles, and the curriculum ensures alignment with industry standards.</p> <p>In addition, the programme provides dedicated sessions on CV writing, interview techniques, and employability skills. These include mock interviews, networking opportunities with guest speakers from healthcare and research sectors, and workshops that focus on transferable skills such as communication, leadership, and time management. These activities aim to prepare students for successful careers in clinical practice, healthcare management, research, and industry.</p>
<b>13c Placement and work experience opportunities (if applicable)</b>
N/A
<b>13d Future careers / progression</b>
<p>Successful MSc Cardiology students will be well-prepared for clinical professional development, particularly in specialised fields such as cardiac rhythm management, electrophysiology, and cardiac ultrasound. The programme enables NHS practitioners to advance from practitioner to highly skilled practitioner, progressing beyond Band 7 into senior management roles. For those outside the NHS, it opens career paths in cardiac research, academia, private sector biotechnology, and the pharmaceutical industry, preparing graduates for roles such as research scientists, clinical trial coordinators, and medical device specialists. Ultimately, the programme provides a solid foundation for progression to PhD programmes in cardiology or related specialised fields.</p>
<b>14. Assessment methods</b>
Students' knowledge, understanding and skills is assessed via a range of assessment methods, such as: presentations, practical assessments, case studies, written assignments and dissertation
<b>15. Programme Structure (level of study, modules, credits and progression requirements)</b>
<p>Structure is indicative for Part-time routes.</p> <p>Students must take all of the compulsory modules and choose following programme requirements from the optional modules.</p> <p>Non-compensatable modules are noted below.</p>
<b>Available Pathways</b>
Not Applicable

## Year 1

**Year 1 Level 7 FT and PT**

<b>Code</b>	<b>Type</b>	<b>Module Title</b>	<b>Credits at FHEQ Level</b>
BMS4002	Compulsory	Cardiac Rhythm Management 2025-26	30 at Level 7
BMS4998	Compulsory	Research Project 2025-26	60 at Level 7
BMS4477	Compulsory	Bioethics 2025-26	15 at Level 7
BMS4107	Compulsory	Cardiac Ultrasound 2025-26	30 at Level 7
BMS4067	Compulsory	Clinical Electrophysiology 2025-26	15 at Level 7
BMS4887	Compulsory	Experimental Design and Statistics 2025-26	15 at Level 7
BMS4677	Compulsory	Leadership and Management 2025-26	15 at Level 7

**Year 2****Year 2 Level 7 PT**

<b>Code</b>	<b>Type</b>	<b>Module Title</b>	<b>Credits at FHEQ Level</b>
BMS4067	Compulsory	Clinical Electrophysiology 2026-27	15 at Level 7
BMS4998	Compulsory	Research Project 2026-27	60 at Level 7
BMS4477	Compulsory	Bioethics 2026-27	15 at Level 7
BMS4887	Compulsory	Experimental Design and Statistics 2026-27	15 at Level 7

BMS4677	Compulsory	Leadership and Management 2026-27	15 at Level 7
---------	------------	-----------------------------------	---------------

\*Please refer to your programme page on the website re availability of option modules

## 16. Programme-specific support for learning

### Facilities and Resources

Specialist Laboratory Facilities: Students have access to professional-standard software and hardware, such as:

The online platform Epicardio© for developing practical skills, knowledge, and understanding in ECG, cardiac rhythm management, and electrophysiology.

Philips Vividi cardiac ultrasound machines.

Heartworks© simulation with real-time imagery for practical workshops to enhance assessment skills.

### Research Opportunities:

Students employed in the sector can conduct workplace-based research projects, such as service improvement audits or participation in existing research projects.

Students not employed in the sector undertake a systematic review-style project.

### Library Resources:

Access to specialist journals through Middlesex University Library.

Access to the British Library in London for photocopying additional articles.

### Student Support

Offers academic support in essay/report writing, presentations, and academic discussions.

Provides one-to-one tutorials and workshops for additional literacy and numeracy support.

### Student Welfare Advice:

Provides information and advice on money, funding, and housing.

### Disability and Dyslexia Service:

Aims to create an inclusive teaching and learning environment for all students.

### Learning Platforms

#### Virtual Learning

Central service for accessing learning resources and module support.

Support via online, phone, in-person, or chat options.

Additional Facilities Self-Service Laptops: Available for a loan for up to 7-days

## 17. HECos code(s)

100748: Cardiology

## 18. Relevant QAA subject benchmark(s)

Health Studies 2019

## 19. University Regulations



This programme will run in line with general University Regulations: [Policies | Middlesex University](#)

This programme will run in line with general University Regulations:  
<https://www.mdx.ac.uk/about-us/policies/>

## 20. Reference points

### Internal documentation

Middlesex University Regulations 2024/25 - <https://www.mdx.ac.uk/about-us/policies/>  
Middlesex University Learning and Quality Enhancement Handbook - <https://www.mdx.ac.uk/about-us/policies/academic-quality/learning-and-quality-enhancement-handbook-lqeh/>

### External documentation

Quality Assurance Agency (2024) The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies, second edition. Gloucester: QAA - [https://www.qaa.ac.uk/docs/qaa/quality-code/the-frameworks-for-higher-education-qualifications-of-uk-degree-awarding-bodies-2024.pdf?sfvrsn=3562b281\\_11](https://www.qaa.ac.uk/docs/qaa/quality-code/the-frameworks-for-higher-education-qualifications-of-uk-degree-awarding-bodies-2024.pdf?sfvrsn=3562b281_11)

Quality Assurance Agency (2024) UK Quality Code for subject benchmarks for health studies

Quality Assurance Agency (2024) UK Quality Code for Higher Education. Gloucester: QAA - <https://www.qaa.ac.uk/the-quality-code/2024>

Quality Assurance Agency (2020) Characteristics Statement. Master's Degree. London, QAA - [https://www.qaa.ac.uk/docs/qaa/quality-code/master's-degree-characteristics-statement.pdf?sfvrsn=86c5ca81\\_22](https://www.qaa.ac.uk/docs/qaa/quality-code/master's-degree-characteristics-statement.pdf?sfvrsn=86c5ca81_22)

Department of Health (DH) (2016) Modernising Scientific Careers. Scientist Training Programme MSc in Clinical Science Curriculum. Cardiac, Critical Care, Vascular, Respiratory and Sleep Sciences 2016/17. DH

## 21. Other information (if applicable)

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 they take 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.

## Curriculum map for MSc Cardiology

### Programme learning outcomes

#### Knowledge and understanding

A1	The aetiology and pathology of common cardiovascular diseases, including cardiac valve disease and cardiomyopathies.
A2	The complexities of the cardiac conduction system and its impact on cardiovascular health.
A3	Advanced cardiac imaging modalities, diagnostic techniques, and therapeutic interventions used in modern cardiology.
A4	The importance of calibration, safety testing, quality control, and assurance procedures in physiological science services.
A5	Ethical and legal considerations related to the collection, handling, and storage of data in cardiovascular research and clinical practice.
A6	Research methods and the design and conduct of original research projects.
A7	Clinical leadership and management, including strategic decision-making, team collaboration, and the integration of best practices to improve patient outcomes.

#### Skills

B1	Apply and synthesise complex and specialised skills in postgraduate cardiology, including advanced cardiac ultrasound techniques, electrophysiology, and the analysis and management of cardiac devices, while demonstrating the ability to critically evaluate and apply this expertise in clinical practice.
B2	Critically evaluate cardiac disease processes, integrating advanced knowledge and clinical evidence to make informed, accountable decision-making, while applying best-practice.
B3	Critically evaluate and address ethical, legal, and safety issues in cardiology, understanding their impact in clinical and research settings.
B4	Formulate novel hypotheses to advance research in cardiology and critically analyse and evaluate physiological data using sophisticated techniques and methodologies.
B5	Design, develop, and manage a research project, including the ability to critically evaluate findings in the context of existing literature.
B6	Apply advanced communication and presentation skills to convey complex information clearly and persuasively.

B7	Integrate leadership, management, and teamwork skills to navigate and resolve clinical and research challenges, while fostering professional development.
----	-----------------------------------------------------------------------------------------------------------------------------------------------------------

**Programme learning outcomes - Highest level achieved by graduates**

A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7
7	7	7	7	7	7	7	7	7	7	7	7	7	7

**Mapping by level of study and module**

Module Title	Module Code by Level of study	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7
<b>MSc Cardiology – level 7</b>															
Cardiac Ultrasound	BMS4107	x		x	x				x	x	x			x	x
Clinical Electrophysiology	BMS4067	x	x		x				x	x	x			x	x
Cardia Rhythm Management	BMS4002	x		x	x				x	x	x			x	x
Research Project	BMS4998						x	x				x	x	x	x
Experimental Design and Statistics	BMS4887					x	x					x		x	
Bioethics	BMS4477					x	x				x				x

Leadership and Management	BMS4677							X			X				X
---------------------------	---------	--	--	--	--	--	--	---	--	--	---	--	--	--	---