Programme Specification (Postgraduate)

FOR ENTRY YEAR: 2026/27

Date created: 01/04/2021 **Last amended:** 20/01/2025 **Version no.** 1

1. Programme title(s) and code(s)

MRes in Cardiovascular Science

*Postgraduate Certificate in Cardiovascular Science

Notes

* An award marked with an asterisk is only available as an exit award and is not available for students to register onto.

HECOS Code

HECOS Code	%
100270	100

2. Awarding body or institution

University of Leicester

3. a) Mode of study

Full-time

b) Type of study

Campus-based

4. Registration periods

The normal period of registration for the MRes is 12 months

The maximum period of registration for the MRes is 24 months.

5. Typical entry requirements

Students applying for BHF 4y PhD studentship programme, for which this MRes constitutes year 1, will require a minimum of a 2i undergraduate degree and will undergo a selection process including interviews.

Other eligible students will have as a minimum an undergraduate degree (2ii) in a related field of study (e.g. Biological Sciences, Physiology, Medical Physiology).

Students are required to demonstrate English proficiency in line with the requirements of Senate Regulation 1. Students need to achieve a score of 90 in the Test of English as a Foreign Language (TOEFL) or an average score of 6.5 in the International English Language Testing System (IELTS), with a minimum score of 6.0 for writing.

6. Accreditation of Prior Learning

Accreditation of prior learning (APL) is not accepted for exemptions from modules on the programme.

7. Programme aims

The programme aims to develop students' understanding of how cardiovascular research can be translated from bench findings to clinical outcome through participation in the analysis of data from ongoing research projects. Successful completion of the course will enhance students' employment prospects within an academic or industrial research setting, and develop students' skills to enable further study at doctoral level (PhD). For a large part of their studies, students will integrate within a team that advances cardiovascular disease research through the exploration of both fundamental science and clinical research at the forefront of the discipline. Students will develop critical analysis of data and research methodologies through a variety of activities including through the opportunity to participate in world leading biomedical research studies and clinical trials.

8. Reference points used to inform the programme specification

- QAA Characteristics Statement: Master's Degree (2020)
- There are no specific benchmark statements for this programme, but the QAA benchmarking statements for biological sciences, medicine and related subjects have been borne in mind so that the programme and curriculum have been informed by the specific subject knowledge, abilities and skills in these statements.
- University EDI Strategy
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- University Education Strategy
- University Assessment Strategy [login required
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

a) Discipline specific knowledge and competencies

i) Knowledge

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To demonstrate core knowledge of the field of cardiovascular research and how research methodologies can be applied to answer unmet clinical needs.	Lectures; seminars; laboratory practical classes; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work presentations.

ii) Concepts

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To demonstrate an in-depth knowledge of the methodologies used to investigate cardiovascular physiology/pathophysiology, the rationale and processes of experimental design, and good laboratory practice.	Lectures; seminars; laboratory practical classes; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work presentations.

iii) Techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Students will have a thorough grounding in quantitative research methods and be able to demonstrate their application to analysis of pre-existing data sets. Students will demonstrate a range of key laboratory skills appropriate to their research project ranging from functional to a more genetic approach.	Lectures; seminars; directed reading; project supervision; project mentoring; research project (MRes only). Module specifically on quantitative methods.	Research Project (MRes only); written assignments, poster presentation, oral communication, computer-based exercises, problem-based examination.

iv) Critical analysis

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To critically appraise the results of data acquired from cardiovascular fundamental science or clinical research, critically review the literature and critically review the quality and validity of their data analysis.	Lectures; seminars; directed reading; project supervision; project mentoring; research project (MRes only)	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination,

v) Presentation

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To present scientific data generally and in a form that is suitable to disseminate findings at scientific meetings, grant applications or in research papers.	Lectures; seminars; directed reading; research project laboratory meetings (MRes only)	Contribution to discussions in group work; laboratory presentations; poster presentation and oral presentation assessments

vi) Appraisal of evidence

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To demonstrate good practice in data analysis, interpretation of data, and experimental design	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work

b) Transferable skills

i) Research skills

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To maintain accurate research records, solve problems, analyse challenging datasets, and use statistical tests appropriate to typical research questions in cardiovascular research.	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work; record keeping

ii) Communication skills

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To write scientific reports effectively, give effective oral presentations, and present material at a level of a scientific conference	Lectures; seminars; directed reading; independent research; project supervision (MRes only)	Research Project (MRes only); written assignments, poster presentation, oral communication, group work

iii) Data presentation

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To use appropriate statistical tests in data analysis and present data effectively.	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work; record keeping

iv) Information technology

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To demonstrate competency in general computing, analysis software such as Excel and Graph Pad prism, along with word processing, bibliographic software and database searching.	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral communication, computer-based exercises, problem-based examination, group work; record keeping

v) Problem solving

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To solve problems in the context of cardiovascular research effectively.	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral presentation, computer-based exercises, problem-based examination, group work

vi) Working relationships

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To manage projects, interact effectively with a supervisor (MRes only) and fellow students, display organizational skills and manage time effectively.	seminars; computer practical classes; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); group work, computer practical classes, poster presentation, oral communication,

vii) Managing learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To develop new skills, manage information and develop specialization and interests.	Lectures; seminars; computer practical classes; directed reading; independent research; project mentoring; project supervision (MRes only).	Research Project (MRes only); written assignments, poster presentation, oral communication, computer-based exercises, problem-based examination, group work; record keeping

viii) Career management

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
To develop own confidence in applying for positions relevant to cardiovascular research for further study, technical posts, or for positions where the transferrable skills developed in this course can be utilised.	Presentations from representatives from pharma; college research days for early career researchers, career services sessions	Monitoring of employability following on from the course

10. Special features

Research-inspired Education

Students on this programme will advance through the four quadrants of the University of Leicester Research-inspired Education Framework as follows:

RiE Quadrant	Narrative
	The programme provides programme-specific practical experience and knowledge. This also includes critical thinking, data analysis and independent research skills with additional interaction with current literature and ongoing research in the University of Leicester.
Research-briefed Bringing staff research content into the curriculum.	Research-briefed: Lectures are taught by staff actively involved in research. These may contain current research outcomes or techniques widely used in research. One module specifically covers current cutting-edge techniques presented in the context of the lecturer's own research. Proficiency in lab skills is examined by practical assessment. Departmental seminars and subject-specific guest speakers add to the research content of the curriculum.
Research-based	Research-based: Students use active learning to explore the concepts introduced in the lectures and using some of the techniques in laboratory/computer-based practicals to address a research question. The students analyze the results of their

Framed enquiry for exploring existing knowledge.	own experiments to generate written reports and compare outcomes to published literature. Assessments include critical appraisal of published research.
Research-oriented Students critique published research content and process.	Research-oriented: A knowledge of the structure of scientific publications is gained and research is critiqued. Current published research is used to construct a research proposal and/or construct the background to their poster and oral presentation assessments and project dissertation, alongside research and professional skills and regulatory considerations.
Research-apprenticed Experiencing the research process and methods; building new knowledge.	Research-apprenticed: The students will design and undertake research outlined in their proposals as part of two full-time research projects. During this time students will appreciate that research is collaborative and cumulative. Students are invited to attend and be involved in lab meetings and departmental seminars to experience the research process and gain experience in this within two separate research groups.

As part of studying at a research-intensive university, students on this programme have the following extra or co-curricular opportunities available to them to gain exposure to research culture:

Departmental, University and external speaker seminars are an important way that scientists disseminate their research outcomes. Students are invited to attend these seminars to experience the research process. Many students attend the seminars which help them to see the breadth of research in their subject area. The student research projects are embedded into research groups where students are surrounded by other research staff with whom they can discuss the current research being performed and engage with the full research process and environment.

Teaching on this programme will be research-informed (it draws consciously on systematic inquiry into the teaching and learning process itself) in the following way:

The School supports all staff involved in teaching to gain an accredited Higher Education teaching qualification, in which they demonstrate their use of teaching theory to support their own practice and reflect on their current teaching and continuing professional development.

Programme module convenors attend a seminar group that supports teaching activities across the school. This supports educational best practice with talks from external speakers and sharing of evaluations and projects on teaching practice.

11. Indicators of programme quality

Programme quality will be monitored by an annual developmental review process report to College Education committee and the report from the external examiner.

12. Criteria for award and classification

This programme follows the standard scheme of taught postgraduate award and classification set out in Senate Regulations – see the version of *Senate Regulation 6 governing taught postgraduate programmes of study* relevant to year of entry.

13. Progression points

As defined in Senate Regulations - refer to the version of *Senate Regulation 6 governing taught postgraduate programmes of study* relevant to year of entry.

The following dispensation has been approved:

MB7059 - Research Project must be passed at the first attempt.
The Board of Examiners may, at its discretion, permit students to resubmit one or more assessed coursework elements of this module if doing so would enable them to achieve an overall pass mark for the module by improving their mark in individual coursework components. However, there are no resit opportunities permitted for missed non-mitigated practical elements.

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course and a recommendation will be made to the Board of Examiners for an exit award where appropriate.

Rules relating to re-sits or re-submissions

As defined in Senate Regulations - refer to the version of *Senate Regulation 6 governing taught postgraduate programmes of study* relevant to year of entry.

14. External Examiners reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at exampapers@Leicester [log-in required]

15. Additional features (e.g. timetable for admissions)

n/a

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Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

MRes Cardiovascular Science

Credit breakdown

MRes:

Status	**Year long**	**Semester 1**	**Semester 2**	**Other delivery period**
Core taught	n/a	60 credits	n/a	n/a
Optional	n/a	n/a	n/a	n/a
Dissertation/project	n/a	n/a	n/a	120 credits

180 credits in total

PGCert:

Status	**Year long**	**Semester 1**	**Semester 2**	**Other delivery period**
Core taught	n/a	60 credits	n/a	n/a
Optional	n/a	n/a	n/a	n/a
Dissertation/project	n/a	n/a	n/a	n/a

60 credits in total

Level 7/Year 1 2026/27

Core modules

Delivery period	Order	Code	Title	Credits
Semester 1	1	MD7431	Fundamentals of Applied Health Research	15 credits
Semester 1	2	MB7057	Methods in “Bench to Bedside” Research	15 credits
Semester 1	3	MD7432	Quantitative Methods in Applied Health Research	15 credits
Semester 1	4	MB7058	Physiology and Pharmacology of Cardiovascular Disease	15 credits
Semester 2	5	MB7059	Research Project	120 credits

Notes
n/a

Option modules

n/a

Appendix 2: Module specifications

See taught postgraduate module specification database [log-in required]. Note - modules are organized by year of delivery.