

Postgraduate Programme Specification

MSc Medical Bioscience

This specification provides a summary of the main features of the programme and learning outcomes that a student might reasonably be expected to achieve and demonstrate where full advantage is taken of all learning opportunities offered. Further details on the learning, teaching and assessment approach for the programme and modules can be accessed on the University website and Virtual Learning Environment, GCU Learn. All programmes of the University are subject to the University's [Quality Assurance](#) processes.

1. GENERAL INFORMATION			
Programme Title	MSc Medical Bioscience		
Final Award	Master of Science in Medical Bioscience		
Awarding Body	Glasgow Caledonian University		
School	Health and Life Sciences		
Department	Biomedical and Biological Sciences		
Mode of Study	Full-time		
Location of Delivery	Glasgow Campus		
UCAS Code			
Accreditations (PSRB)			
Period of Approval	From:	January 2025	To:

2. EDUCATIONAL AIMS OF PROGRAMME	
<p>The M.Sc. in Medical Bioscience aims to provide an opportunity for both home and overseas students to study academically challenging and vocationally relevant subjects:</p>	
1.	Provide a detailed understanding at a theoretical and practical level of current topics in medical bioscience.
2.	Produce graduates who have developed the skills, knowledge and opportunity to pursue careers in medical bioscience.
3.	Produce graduates who are able to integrate theory and practice and who are critical, reflective thinkers.
4.	Stimulate deeper learning, critical evaluation and encourage students to take responsibility for their own learning through using a range of student-centred approaches and develop an effective learning environment.
5.	Foster an ethos of career-long self-directed learning through continuous professional development.
6.	Develop further the student's ability to critically analyse published material including supportive data.
7.	Develop the student's ability to analyse complex scientific research.
8.	Foster the ability of the student to deliver effective communication of scientific knowledge to fellow professionals.
9.	Develop the student's ability to design and conduct a research project under supervision and demonstrate a critical and rigorous analysis of the data in the production of a dissertation.

3. LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

A: Knowledge and understanding;

- A1 Attain an advanced knowledge of the facts, concepts, principles and theories associated in the field of medical bioscience.
- A2 Appreciate the integrated study of a range of human diseases and disorders together with the principles and practice of laboratory-based investigation.
- A3 Develop extensive, detailed and critical knowledge and understanding in a discipline-specific field, informed by developments at the forefront and current issues in the discipline.

Learning outcomes will be developed and demonstrated by the delivery of core material by interactive lectures, tutorials and practical classes. Students are encouraged to reflect on and consolidate lecture by undertaking student centred learning and background reading. Learning outcomes will require the incorporation of IT and web-based information retrieval systems and will be assessed in various ways including data interpretation and reporting, written unseen exams, laboratory and project reports, oral presentations and examinations and writing a research proposal.

B: Practice: Applied knowledge, skills and understanding;

- B1 Attain skills in the safe and ethical handling of chemical and biological materials considering their physical and chemical properties including risk assessments and specific hazards associated with their use and disposal
- B2 Attain skills in the practical application of a range of chemical and biological techniques and test measurement systems.
- B3 Critically evaluate and discuss information from a variety of sources
- B4 Apply research, planning and analytical skills to problem solve
- B5 Attain the ability to keep full and accurate records of laboratory or other investigative work and carry out and report the results of this work.

Learning outcomes will be developed through planned practical classes and independent experimental design and implementation. Safe working practice, including the application of risk assessments and COSHH will be implemented throughout the programme

Assessment is conducted by the completion of a portfolio of laboratory skills. Experimental design and analysis during the mini project, research project and laboratory classes.

C: Generic cognitive skills;

- C1 Understand and execute various research skills and methodology
- C2 Utilise information retrieval skills to search for current scientific literature.
- C3 Critically evaluate, interpret and review information and data, including information and data contained within research-based material.
- C4 Be able to plan, monitor, review and evaluate their own learning and development.
- C5 The ability based on commercial and/or academic needs, to plan and conduct research.

Learning Outcomes will be developed and demonstrated by students developing further skills throughout the taught programme modules. Data analysis and other analytical skills are developed through the student-centred learning exercises and taught laboratory classes and mini project. The design, organisation and development of project work are supported by the Bioscience Toolkit 2: Research, Analysis and Employability module.

Safe working practice, including appreciation and application of Health and Safety and COSHH, is developed during the module, The Bioscience Toolkit 1: Digital/information Literacy and Practical Skills Development.

Assessment is conducted via the testing of practical skills through assessment of student-centred learning exercises, compilation of a portfolio of laboratory techniques and Research Project work.

D: Communication, numeracy and ICT skills

- D1 Have the ability to present information and arguments clearly, concisely and accurately, both written and orally.
- D2 Attain skills in the practical application of a range of statistical, quality assurance and computational techniques used in the acquisition and treatment of experimental data.
- D3 Demonstrate ability to critically analyse published information in terms of their significance and the underlying theory.

Transferable and key skills are embedded within modules throughout the programme with a keen focus in the module Research Project Design. Examples of strategies to develop the student's transferrable skills include the completion of student-centred learning exercises, developing oral communication by delivering presentations, viva voce examinations, completion of unseen written examinations, creation of a portfolio of specialist evidence and production of project reports.

E: Autonomy, accountability and working with others.

- E1 Independently apply knowledge to investigations of familiar and unfamiliar problems where evaluations may have to be made on the basis of limited material.
- E2 Application of time management and task prioritisation skills as evidenced by the ability to plan and implement efficient and effective modes of working.
- E3 Independent working, displaying the self-discipline required for professional development and the desire to go on learning.
- E4 Interpersonal skills relating to the ability to display leadership and interact with other people as evidenced by effective team performance.

Learning outcomes will be supported by the participation in the programme which includes sessions led by the Library and Learning Development Centre staff. Practical and research skills will be developed through planned practical classes and independent experimental design.

Assessment will be carried out in various ways including compilation of a portfolio, project proposal and a project thesis.

4. LEARNING AND TEACHING METHODS

The programme provides a variety of learning and teaching methods. Programme and Module specific guidance will provide detail of the learning and teaching methods specific to each module.

Across the programme the learning and teaching methods and approaches may include the following:

- Lectures
- Seminars
- Practical classes
- Employability exercises
- Simulation experiences
- Groupwork
- Flipped classroom approaches
- Online learning

The above approaches may be delivered either in person or online as appropriate and determined at module level by the Module Leader.

5. ASSESSMENT METHODS

The programme provides a variety of formative and summative assessment methods. Programme and Module specific guidance will provide detail of the assessment methods specific to each module.

Across the programme the assessment methods may include the following:

- Written coursework (essays, reports, case studies, dissertation, literature review)
- Oral coursework (presentations, structured conversations)
- Practical Assessment (viva, Laboratory work)
- Group work
- Graphical abstract preparation, blogs and wikis
- Portfolio Presentations
- Formal Examinations

The above assessments may be delivered either in person and online as appropriate and determined at module level by the Module Leader.

6. ENTRY REQUIREMENTS

Specific entry requirements for this programme can be found on the prospectus and study pages on the GCU website at this location: www.gcu.ac.uk/study

The Course webpage specific to this Programme is: <https://www.gcu.ac.uk/study/courses/postgraduate-medical-bioscience-glasgow>

All students entering the programme are required to adhere to the [GCU Code of Student Conduct](#).

7. PROGRAMME STRUCTURE AND AVAILABLE AND FINAL EXIT AWARDS¹

The following modules are delivered as part of this programme:

Module Code	Module Title	Core or Optional	SCQF Level	Credit Size	Coursework %	Examination %	Practical %
MMC430749	Genomics for Medical Bioscience	Core	11	20	40	60	
MMC930750	The Bioscience Toolkit 1: Digital/information Literacy and Practical Skills Development	Core	11	20	100		
MMB130751	Case Studies in Medical Bioscience	Core	11	20	100		
MMC930751	The Bioscience Toolkit 2: Research, Analysis and Employability	Core	11	20	100		
MMC930754	Research Project Design	Core	11	20	100		
MMB130751	Cancer Biology & Advanced Therapeutics	Optional	11	20	100		
MMC530753	Bacterial Pathogenicity	Optional	11	20	100		
MMC923492	MSc Research Project	Core	11	60	100		

Students undertaking the programme on a full-time basis commencing in September of each year will undertake the modules in the order presented above.

The following final and early Exit Awards are available from this programme²:

Postgraduate Certificate in Medical Bioscience - *achieved upon successful completion of 60 credits (excluding the Dissertation / Project Module)*

Postgraduate Diploma in Medical Bioscience- *achieved upon successful completion of 120 credits*

Master of Science in Medical Bioscience - *achieved upon successful completion of 180 credits*

8. ASSESSMENT REGULATIONS

¹ Periodically, programmes and modules may be subject to change or cancellation. Further information on this can be found on the GCU website here:

www.gcu.ac.uk/currentstudents/essentials/policiesandprocedures/changesandcancellationtoprogrammes

² Please refer to the [GCU Qualifications Framework](#) for the minimum credits required for each level of award and the Programme Handbook for requirements on any specified or prohibited module combinations for each award.

Students should expect to complete their programme of study under the GCU Assessment Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students. These can be found at:

www.gcu.ac.uk/aboutgcu/supportservices/qualityassuranceandenhancement/regulationsandpolicies

In addition to the GCU Assessment Regulations noted above, this programme is subject to Programme Specific Regulations in line with the following approved Exceptions:

VERSION CONTROL (to be completed in line with AQPP processes)			
Any changes to the PSP must be recorded below by the programme team to ensure accuracy of the programme of study being offered.			
<i>Version Number</i>	<i>Changes/Updates</i>	<i>Date Changes/Updates made</i>	<i>Date Effective From</i>
1.0	Weighting of assessment in Oncology	Sept 2024 / change of assessment weighting from CW 40%: Exam 60% to CW 50%: Exam 50%	Sept 2024
2.0	Changes to modules credits from 20 credits to 15 credits. Resign of programme. New modules Genomics for Medical Bioscience, The Bioscience Toolkit 1: Digital/information literacy and Practical skills development , Case Studies in Medical Bioscience, The Bioscience Toolkit 2: Research Project Design , Cancer Biology & Advanced Therapeutics & Bacterial Pathogenicity	Approval date March 2025	