

Postgraduate Programme Specification

MSc Financial Technology

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	Master of Science in Financial Technology		
Final Award	Master of Science in Financial Technology		
Awarding Body	Glasgow Caledonian University		
School	Glasgow School for Business and Society		
Department	Finance, Accounting and Risk		
Mode of Study	Full-time Part-time Online Distance Learning		
Location of Delivery	Glasgow Campus		
UCAS Code			
Accreditations (PSRB)			
Period of Approval	From:	January 2022	To: January 2027

2. EDUCATIONAL AIMS OF PROGRAMME
<i>Financial Technology (FinTech) is a multidisciplinary area in the intersection of finance and computer science. It has been a source of radical change in the operations, services and products offered by financial services industries. This transformation has been driven by the advances in communication networks and the portability and affordability of computing hardware and software. The derived technologies have permeated all aspects of social, cultural, and economic life and its rapid development has changed consumers' expectations of how they engage with financial institutions.</i> <i>The Master of Science in Financial Technology (FinTech) will prepare students for a career in the financial services with an emphasis in technologies and data management. In addition to the fundamental skills and knowledge of finance, students will be exposed to leading edge concepts in artificial intelligence (AI), blockchain (cryptocurrencies), and big data analysis amongst other emerging topics. The interdisciplinary curriculum will draw on GCU's expertise in diverse areas of finance including regulation, risk analysis, modelling, and securities and investments within the framework of systems architecture, software development, and data management. The content and teaching strategies are designed to help students gain the essential skills and knowledge to prepare them to grow as professionals within the changing landscape of the banking & finance industry.</i> Aim: <i>The aim of the MSc in Financial Technology is to prepare students to provide up-to-date support and solutions in current technological trends to financial service providers by gaining the skills and knowledge necessary to understand, design, and implement software solutions.</i>

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 Critically apply concepts of machine learning, neural networks, data science algorithms, advanced exploratory statistics to solve financial problems with applications of computational intelligence
- A2 Evaluate the latest software development methodologies and apply the appropriate process to the information system needs of banking and financial institutions
- A3 Critically analyse information collection techniques and analysis methods and manipulate and develop tools and technologies designed for capturing, processing, storing, transferring, analysing, and visualising data for financial applications
- A4 Develop a workable knowledge base and skills in areas of current technological development in finance (e.g., blockchain, distributed ledger technology, cybersecurity, payment systems, etc.) as applied to risk analysis and modelling, regulation, compliance, and investment analysis
- A5 Critically apply concepts of machine learning, neural networks, data science algorithms, advanced exploratory statistics to solve financial problems with applications of computational intelligence.
- A6 Evaluate the latest software development methodologies and apply the appropriate process to the information system needs of banking and financial institutions

B Practice: Applied Knowledge, Skills and Understanding:

- B1 Critically analyse, evaluate, and synthesise qualitative and quantitative information in relation to financial technology from a range of different sources
- B2 Critically analyse current thinking, research, and business practice in the development of technological solutions to financial problems
- B3 Utilise relevant information sources in an appropriate manner to generate alternative decisions and formulate creative, innovative and responsible decisions
- B4 Demonstrate originality, insight and innovation in tackling and solving problems
- B5 Critically review, synthesise and develop knowledge relevant to financial technology in an international context
- B6 Reflect on personal learning and development

C Generic Cognitive Skills:

- C1 Effective use of communication and information technologies to present ideas, analyse problems and develop clear and concise conclusions and recommendations
- C2 Critically analyse and interpret financial information
- C3 Cognitive and intellectual skills including critical thinking, self-reflection, creativity and ethical problem- solving.
- C4 Research skills: information retrieval and collection; data analysis and synthesis
- C5 Demonstrate the ability to identify the strengths and weaknesses of financial technology applications and develop creative responses to them
- C6 Critically review and consolidate knowledge within finance and technologies and recognise the trend towards globalisation in their development and use

D Communication, Numeracy and ICT skills:

- D1 Numeracy skills, including the ability to manipulate financial and other technical numerical data to solve problems
- D2 Communication skills (oral and written and through digital media), and reporting to specific stakeholders, and being aware of these stakeholders' diverse needs
- D3 Effectively communicate ideas and information in compliance with the profession's regulations and policies
- D4 Locating, extracting, analysing, and presenting quantitative and qualitative information, together with analysis and commentary
- D5 Awareness of strengths and weaknesses
- D6 Critical thinking and problem solving

E Autonomy, Accountability and Working with Others:

- E1 Take responsibility for own work, behave ethically with a strong sense of social responsibility
- E2 Self-appraise evaluate and critically reflect on own work
- E3 Demonstrate initiative and work independently in a wide range of situations
- E4 Plan and organise activities, collecting and organising information
- E5 Work creatively with others and in teams and take leadership roles where appropriate
- E6 Enhance their career prospects by appreciating the complexity and similarity of the way finance and financial technology is implemented in different parts of the world

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
- Placements
- 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 (Placement, VIVA, Laboratory work)
- Group work
- Blogs and Wikis
- Portfolio Presentations
- Formal Examinations and Class Tests

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-financial-technology-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 %
MMN330194	Bank Risk Management	Core	11	15	40		60
MMI330815	Data Programming for Business Decision-Making	Core	11	15	50		50
MMI430813	Artificial Intelligence and Business Analytics	Core	11	15	50		50
MMI226822	Data Ethics and Research Methods	Core	11	15	30		70
MMN330195	Banking and Financial Regulation	Core	11	15	50		50
MMN327060	Fundamentals of Financial Technology	Core	11	15	50		50
MMN330819	Research Methods for Finance and Analytics	Core	11	15	40		60
MMI230816	Data Visualisation for Business Analytics	Core	11	15	30		70
MMN324976	Financial Risk Modelling	Core	11	15	60		40
MMN330820	Finance and Analytics Research Project	Core	11	45	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. This may be subject to variation for students commencing the programme at other times of year (e.g. January) and/or undertaking the programme on a part-time or distance learning mode of delivery.

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

Postgraduate Certificate in MSc Financial Technology - *Achievement of 60 credits*

Postgraduate Diploma in MSc Financial Technology - *achieved upon successful completion of 120 credits (taught modules)*

Master of Science in Financial Technology - *Achievement of 180 credits including the Finance Research Project.*

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

<https://www.gcu.ac.uk/currentstudents/essentials/policiesandprocedures>

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.

8. ASSESSMENT REGULATIONS

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:

<https://www.gcu.ac.uk/aboutgcu/services-and-facilities/qualityassuranceandenhancement/regulations-and-policies>

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>
1.1	2022-2027 PSP Transferred to new template and new modules incorporated	April 2026	September 2026