BAYES BUSINESS SCHOOL
CITY ST GEORGE'S UNIVERSITY OF LONDON

PROGRAMME SPECIFICATION

KEY FACTS

Programme name	MSc Financial Technology and Innovation
Award	MSc
Exit Awards	PG Dip
Exit Awards	PG Cert
School	Bayes Business School
Department(s) or equivalent	Specialist Masters Programme
Programme code	PSFTAI
Type of Study	Full-time
Total UK credits	180
Total ECTS	90
Mode of learning	In person

PROGRAMME SUMMARY

The MSc in Financial Technology and Innovation is designed to provide you with the skills and knowledge to solve problems and systemic inefficiencies in banking and in asset management by building and embedding technological and algorithmic solutions. Fintech has revolutionised modern trading, portfolio management and financial intermediation practices and an understanding of how these new practices have developed is crucial for modern financial professionals.

This programme will allow you to develop a clear understanding of how modern financial markets function and how to apply quantitative and algorithmic tools to attack problems in these markets (for example using machine learning to aid portfolio construction or building blockchain-based savings protocols). The programme will also provide you with skills required by an entrepreneur looking to innovate in this field. Last, but not least, this course delivers knowledge and best practices required to understand regulatory and legal concerns, puzzles emerging from digital financial solutions and advanced data analytics.

While the programme is practical and hands-on, you will obtain a thorough, high-level postgraduate training in relevant areas of finance, banking, coding, and data science. The

fundamental aim of the programme is to deliver graduates who understand the theory in these areas at a deep level, but who can also enter a working environment and apply this knowledge to practical problems from day one.

You are required to take eight core modules in term 1 and term 2 as listed below. In term 3, you are required to work on an industry-based research project, whereas the preparation for the project work spans through the whole academic year. You also take three elective modules. These electives are chosen from a list that is made available in term 2 and which varies from year to year as practice changes.

Prior to beginning the degree you will be offered access to pre-study modules that focus building on mathematical and statistical skills and which introduce you to coding in Python.

Term 1 Compulsory Modules
SMM940 - Financial markets and financial intermediation
EPM965 - Foundations of Fintech
SMM097 - Foundations of Data Science
SMM098 - Innovation, entrepreneurship and financial technology

Term 2 Compulsory modules
EPM961 - Regulatory Compliance, Ethics, Social Values
SMM093 - Digital money and banking
SMM094 - Data Analytics for Fintech
SMM096 - Decentralised finance and blockchain applications

Throughout the programme you will also acquire direct knowledge of current issues in the Fintech industry through events and guest lectures from professionals working in relevant fields.

Where possible, lecturers will address any ethical issues that might arise in the practice of finance and banking. In so doing you will be encouraged to share your views with your lecturers and with your classmates, where a diversity of opinion is to be expected and encouraged.

Registration Period

It is expected that you will complete this degree within 12 months. The maximum period of registration for the degree is three years full time.

WHAT WILL I BE EXPECTED TO ACHIEVE?

On successful completion of this programme, you will be expected to be able to:

Knowledge and understanding

- **Explain** the current architectures of the financial and banking systems and to evaluate their strengths and weaknesses.
- **Sharply characterise** specific problems in finance and banking and identify appropriate algorithmic and data-based solutions.
- **Evaluate** the impact of regulatory change on a financial product, market or solution.
- **Explain** the fundamentals of data science as applied to financial problems.
- **Identify** issues affecting and strategies to manage the deployment and embedding of a new technological solution.

Skills

- **Collect**, manage and analyse financial data using a variety of tools.
- **Deploy** programming skills to build quantitative and algorithmic solutions to specified problems in finance and banking.
- **Prepare** reports and presentations, often in teams, that communicate information and ideas effectively, both to expert and non-technical audiences.
- **Apply** strategies to deploy new technological solutions.

Values and attitudes

- **Demonstrate awareness** of the financial environment, and appreciation of the wider social context of finance and banking.
- **Reflect on** ethical issues connected with finance and banking and the application of technology to them.
- **Utilise** appropriate ethical practice when handling sensitive financial data.
- **Debate** relevant, perhaps contentious, issues openly and respectfully.

Graduate Attributes

The graduate attributes you can demonstrate on completion of your programme are key to your future employment. It is therefore central to every programme that there will be opportunities in the learning, teaching and assessment activities for you to engage with these on all modules. Further detail of this will be provided for you by your module leader. The graduate attributes are:

- Always learning
- Engaged in the world
- Technical and digital
- Connected Professional

WHAT WILL I STUDY?

You will take eight compulsory modules in terms 1 and 2. You will then write a compulsory industry-based project and take three elective modules in term 3.

Module Title	SITS Code	Module Credits	Compulsory/ Elective	Compensation Yes/No	Level
Term one					
Foundations of Fintech	EPM965	15	Co	Yes	7
Financial Markets and Financial Intermediation	SMM940	15	Co	Yes	7
Foundations of Data Science	SMM097	15	Co	Yes	7
Innovation, Entrepreneurship and Financial Technology	SMM098	15	Co	Yes	7
Term two					
Regulatory Compliance, Ethics, Social Values	EPM961	15	Co	Yes	7
Digital Money and Banking	SMM093	15	Co	Yes	7
Data analytics for Fintech	SMM094	15	Co	Yes	7
Decentralised Finance and Blockchain Applications	SMM096	15	Co	Yes	7
Term three					
Industry-based research project	SMM095	30	Co	No	7
Sustainable Finance with ESG	SMM087	10	E	Yes	7
Data Management Systems	SMM695	10	E	Yes	7
Financial Crime	SMM739	10	E	Yes	7
Ethics Society and the Financial Sector	SMM500	10	E	Yes	7
Mergers and Acquisitions	SMM233	10	E	Yes	7
Trading and Hedging in the FOREX Market	SMM620	10	E	Yes	7
Investment Strategy	SMM140	10	E	Yes	7
Hedge Funds	SMM121	10	E	Yes	7

During term three you will be able to choose from a range of electives to personalise your experience.

This list of electives is an indication of the range of modules that can be on offer and is subject to change due to circumstances such as: enhancing or updating the quality and content of educational provision; responding to student feedback; academic staffing changes; the number of students in each programme; a lack of student demand for certain modules; or factors beyond the institution's reasonable control, such as meeting the latest requirements of a commissioning or accrediting body. For these reasons, not all the electives listed will be offered every year. New (additional or replacement) modules may also be added for these reasons.

There may also be pre-requisites for joining a module, and space and timetable availability restrictions may also apply.

The list of electives offered in a given year will be confirmed by February 1st.

HOW WILL I LEARN?

Learning and teaching methods include the opportunity for you to apply your knowledge and expertise to problems beyond those generally encountered. A range of learning and teaching strategies are used to help you meet the different learning outcomes and to cater for the varied backgrounds and experiences of you and your fellow students.

- Lectures and directed reading are used to help to help you achieve an understanding of the current level of knowledge in the relevant areas.
- Case studies, the use of general programming languages and specialist software packages, plus real-life exercises as well as contributions from outside speakers are used to achieve integration between theory and practice.
- Substantial pieces of individual work such as the Industry-Based Research Project will provide you with the opportunity to acquire research and report writing skills on an individual basis. You will also work in small groups with your fellow students on various pieces of coursework in order to benefit from peer interaction and build team-working skills.
- In-person classes are accompanied by carefully curated online content, which is designed to prepare you for the in-person sessions and expand your learning beyond the material covered in the in-person sessions.

The assessment of the course will also support your learning:

- Coursework provides ongoing feedback on your performance.
- Tests will assess the knowledge gained.
- Examinations provide a more in-depth assessment of knowledge gained and assess your problem-solving abilities.

The MSc Financial Technology and Innovation is designed and structured to allow for intellectual progression through core modules taught in terms 1 and 2. Modules taught in term 2 normally build on the knowledge and skill acquired in term 1. Term three allows for further progression as you choose specialist elective modules. The Industry-Based Research Project requires you to deploy knowledge and skills acquired throughout the whole program.

An indicative number of learning and teaching hours (normally around 10, both contact and non-contact) are required for each credit awarded. The precise weighting of different types of learning and teaching depends on the modules you take, and the breakdown is therefore provided within the appropriate module specifications.

Non-contact hours are for self-directed study and account for the **indicative** amount of time you should spend studying independently, including subject research, reading, working in groups and completing assignments and other homework. Whilst these are non-contact hours we will have designed some activities that you should engage in during that time, and we will also spend time responding to questions and providing feedback on some of these activities and draft assessments.

Overall learning and teaching hours: approx 1800 hours
Contact hours: approx 306 hours

WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?

Assessment and Assessment Criteria

This course is assessed by coursework and examinations and applies standard MSc grade related criteria.

The programme assessment uses a variety of coursework formats that include group essay-based coursework, individual report-based coursework and group presentations as well as tests and other set exercises and a final project. The choice of assessment format is based on the learning objectives and requirements of each specific module.

For some of your modules, coursework will be assessed using peer review, to help you do this Bayes Business School has developed a peer review strategy that is part of the assessment for some of the modules on your degree. You will be asked to grade your fellow group members and comment on their performance.

Your modules will also provide you with formative activities and assessments, alongside model assessments and revision materials to support you in your progress and allow you assess your own strengths and weaknesses as you work through the programme.

Assessment Criteria are descriptions, based on the intended learning outcomes, of the skills, knowledge or attitudes that you need to demonstrate in order to complete an assessment successfully, providing a mechanism by which the quality of an assessment can be measured.

Grade Related Criteria are descriptions of the level of skills, knowledge or attributes that you need to demonstrate in order achieve a certain grade or mark in an assessment, providing a mechanism by which the quality of an assessment can be measured and placed within the overall set of marks.

These will be provided through different means including in programme handbooks and module specifications, on the virtual learning environment or attached to a specific assessment task

Feedback on assessment

Feedback will be provided in line with our Assessment and Feedback Policy and will be provided in a variety of ways throughout your course, both formally and informally, in order to support your learning.

You will normally be provided with coursework feedback within three weeks of the submission deadline or assessment date. This would normally include a provisional grade or mark. The timescale for feedback on final projects or dissertations may be longer. Examination grades will be provided once they have been agreed by an Assessment Board.

More details about the feedback you can expect from individual modules and assessments will be provided by your lecturers.

The full policy can be found at: assessment regulations and policy.

Assessment Regulations

In order to pass your Programme, you should complete successfully or be exempted from the relevant modules and assessments and will therefore acquire the required number of credits. The programme is weighted according to the number of credits awarded for each module. Pass / Fail modules are excluded from this calculation.

The pass mark for each module is 50% and there are no minimum qualifying marks for individual components.

If you fail an assessment component or a module, the following will apply:

1. Re-Sit:

You will normally be offered one re-sit attempt.

If you are successful in the re-sit, you will be awarded the credit for that module. The mark for each assessment component that is subject to a re-sit will be capped at the pass mark for the module. This capped mark will be used in the calculation of the final module mark together with the original marks for the component(s) that you passed at first attempt.

2. Compensation:

Compensation can only be awarded by the Final Assessment Board and must be applied within the following limits and conditions:

Where you fail up to a total of 30 credits (15 for a postgraduate certificate), you may be eligible for compensation if:

- Compensation is permitted for the module involved (see the "What will I Study" section of the programme specification), and
- It can be demonstrated that you have satisfied all the Learning Outcomes of the modules in the Programme, and
- A minimum overall mark of no more than 10% below the module pass mark has been achieved in the module to be compensated, and
- An aggregate mark of 50% has been achieved overall.

If you receive a compensated pass in a module, you will be awarded the credit for that module. The original component marks will be retained in the record of marks and your original mark shall be used for the purpose of your award calculation.

If, at the point where you have results for all taught modules:

- You have no more than 30 credits outstanding (15 for a PG Certificate), and
- The grade for this module(s) is 40% or above, and
- Your overall degree average is at least 50%, and
- If the module(s) is eligible for compensation.

Then you will **not** be required to undertake the re-sit for that module, as this will be eligible for compensation.

Please note:

- **If you fail more than 30 credits (excluding project modules), then you must retake all outstanding assessments with no exceptions.**

If you do not meet the pass requirements for a module and do not complete your re-sit by the date specified you will not progress and the Assessment Board will require that you be withdrawn from the programme.

If you fail to meet the requirements for the Programme, the Assessment Board will consider whether you are eligible for an Exit Award as per the table below.

If you would like to know more about the way in which assessment works at City St George's, please see the full version of the Assessment Regulations.

WHAT AWARD CAN I GET?

Master's Degree:

Following successful completion of the MSc in Financial Technology and Innovation you will have the ability to assess and evaluate all aspects of Financial Technology and Innovation and apply your learning in the appropriate context. You will also have demonstrated the capacity to undertake business research from an analytical perspective and present an individually researched project applicable to the Financial Technology and Innovation subject area.

	HE Level	Credits	Weighting (%)
Taught	7	180	100%

Class	% required
With Distinction	70
With Merit	65
Without classification	50

Postgraduate Diploma:

Following the award of a Postgraduate Diploma Financial Technology and Innovation in addition to the above you will gain a more advanced knowledge and in-depth understanding of these subject areas, from a variety of different perspectives and in order for you to broaden your expertise and skills. You will have developed a sophisticated appreciation of current theories and practice in Financial Technology and Innovation together with the ability to evaluate a range of different approaches to them.

You must achieve 120 credits with a minimum mark of 50%.

	HE Level	Credits	Weighting (%)
Taught	7	120	100

Class	% required
With Distinction	70
With Merit	65
Without classification	50

Postgraduate Certificate:

Following the award of a Postgraduate Certificate in Financial Technology and Innovation you will be able to examine the theories related to all aspects of the subject area and apply your learning in the appropriate context. You will possess the skills and knowledge required to develop a career in the Financial Technology arena, will have mastered essential skills and knowledge and also developed an appreciation of what it takes to engage with Financial Technology and Innovation in context. The assessments you undertake to achieve this qualification will focus on the skills, knowledge and attributes that you will need to facilitate your career development and will support you in developing your practical abilities. The postgraduate certificate will enable you to gain confidence in your skills and your future role.

You must achieve 60 credits with a minimum mark of 50%.

	HE Level	**Credits**	**Weighting (%)**
Taught	7	60	100

Class	**% required**
With Distinction	70
With Merit	65
Without classification	50

WHAT KIND OF CAREER MIGHT I GO ONTO?

Graduates from the MSc Financial Technology and Innovation can expect to gain employment in quantitative trading and risk management units in banks, investment managers and hedge funds and in data science and application development roles in banking and finance. We expect that graduates will also work in start-up ventures in banking and finance. Finally, many of the skills, in coding and data science for example, are in demand outside the finance industry (e.g. in retail and logistics) and so some graduates may migrate to those sectors.

For more information on the Careers support available at City St George's, please go to: Careers services | Bayes Business School

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Information is provided subject to Terms and Conditions for study at City St George's, University of London.