Master of Science in Financial Technology (FinTech)
Distance Learning Programme Specification

https://www.bradford.ac.uk/courses/pg/financial-technology-distance-learning/

PROGRAMME DETAILS	
Academic Year	2021-22
Framework for Higher Education Qualifications (FHEQ) Level	Final and Interim Award(s)
FHEQ Level 7	MSc in Financial Technology
FHEQ Level 7	Postgraduate Diploma Financial Technology
FHEQ Level 7	Postgraduate Certificate Financial Technology
Entry and Modes of Study	1. September intake – approximately 24 months 2. January intake – approximately 30 months
Degree Awarding Body	University of Bradford
Faculty	Management, Law and Social Sciences
Accrediting Body	ACCA qualification exemptions applies
External Frameworks/ Reference Points	QAA Subject Benchmark Statement for Finance
Date of Original Approval	July 21

Please note: This programme specification has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but changes may occur given the interval between publishing and commencement of teaching. Any change which impacts the terms and conditions of an applicant's offer will be communicated to them. Upon commencement of the programme, students will receive further detail about their course and any minor changes will be discussed and/or communicated at this point.

REVIEW/MODIFICATION SCHEDULE	
Date	Review/Modification Activity Since Last Publication
August 21	Annual changes for 2021 academic year
October 21	Minor amends and corrected module codes

PROGRAMME AIMS

Where did the idea for this programme originate?

Financial technology (abbreviated fintech or FinTech) is the technology and innovation that aims to compete with traditional financial methods in the delivery of financial services. The rise of FinTech has permanently changed the way companies do business. It has never been easier and cheaper to not only start up your business but also to expand it. The idea for developing this programme is originated from:

- **Change in financial services career path:** According to a global survey, 47% of financial services employees believe technology is putting their job at risk. The growing tendency of financial institutions to cut jobs in favour of automation has become a worrying phenomenon. Also, McKinsey predicted that automation may wipe out up to 30% of the hours worked globally by 2030, suggesting that every professional – especially in financial services – must plan for the effect of the digital transformation on their career.
- **FinTech professionals & In-Demand skills:** Fintech is one of the world's fastest-growing and in-demand industries. As FinTech gains momentum year on year, there is a huge demand for professionals with specific Tech skills such as Blockchain & Distributed Ledger Experts, programming skills, Machine learning, artificial intelligence and deep learning, cybersecurity expertise.

Why Distance learning?

The Distance Learning (DL) FinTech is the online version of the FinTech programme, which implements the School of Management's strategic vision for growth and development by entering distance learning education. The DL FinTech together with the on-campus FinTech provide the basis for a vibrant postgraduate community and contributes towards enhancing the research-led teaching strategy of the School and the University, with a strong focus on supporting local businesses and communities and is geared towards 'making knowledge work'. The DL version aims to share the benefits of our FinTech programme with a broader audience by engaging those individuals based around the world who due to a variety of reasons are unable to join the on-campus FinTech programme. This will enable greater diversity in the cohort, and therefore brings in additional, potentially global, perspectives that will add breadth and depth to students' understanding. The DL version of the programme employs a range of distance learning technologies, which ensure universal accessibility of the programme's extensive online resources while allowing you to learn at a time, place and pace that suit your individual needs.

What makes this programme unique and how will you benefit from it?

This programme is designed to provide you with a thorough grounding in the multiple disciplines of finance, FinTech and data analytics, underpinned by the main concepts and theories. The programme uses industry-specific cases from schools of management's contacts in the FinTech sector to train you how to blend and practice the relevant skills (i.e., Tech, finance, and people skills) in solving problems. While the programme focuses on technical innovations in finance, you also gain insight into how

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ethics, regulation, financial governance, and risk management contribute to their essential knowledge.

What type of graduate does this programme aim to produce?

In line with the change in business and jobs landscape, the Level 7 MSc Degree in FinTech is a new exciting and focused programme that equips you with the new requirements and skills of the job market in the financial sector and secures a career in the financial service field. You achieve three essential required skills for this field, namely, tech skills (e.g., the ability of programming, solid understanding of artificial intelligence and machine learning, cryptocurrency and blockchain), finance skills (e.g., understanding of financial institutions, instruments, and markets, asset pricing and risk management), and people skills (e.g., ethics, emotional intelligence, communication, creativity, problem-solving, adaptability, and team working) and gain insights how to apply those skills into practice.

The programme is not aimed at preparing you for a particular professional path, instead, it seeks to develop your critical thinking, research, analytical and communication skills which will help you succeed in your chosen field. Therefore, the programme is of interest to anyone wishing to deepen their understanding of FinTech and graduates are likely to go on to pursue a variety of paths including careers in business, teaching, and academia. As a FinTech graduate, you have the opportunity to continue your research in a variety of PhD programmes in Accounting, Finance, Economics research centre and Business Analytics, Circular Economy & Supply Chain research centre.

How will the proposed programme benefit the wider discipline, employment sector and/or community?

During the last few decades, technology has penetrated and transformed the major sectors in the UK, and the financial sector is not an exception. FinTech has disrupted most of the aspects of the industry and has challenged traditional banking and financial services.

Despite the concerns about Brexit and fears that investment will plunge, FinTech has continued to grow every year. This rapid growth of FinTech (especially start-ups) has been in a variety of ranges from heavy tech-focused roles to a whole host of other graduate jobs such as operations, sales, marketing and many more. Due to such a huge variety of graduate jobs on offer, FinTech companies will be looking for candidates from alternative degree backgrounds and skillsets.

Also, local FinTech start-ups, SMEs, Tech firms and other businesses could take advantage of this programme as a provider of knowledge and trainer of well-equipped graduates who are able to bring innovative and tech-based ideas into their businesses.

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Therefore, this programme is intended to:

- A1. Deliver a programme of study in Financial Technology that is contemporary, of policy and practical relevance, and reflects the expertise of the School and Faculty.
- A2. Develop your competence in a range of subject knowledge and understanding, and necessary analytical and personal skills to enable you to pursue varying careers in the financial industry.
- A3. Develop a critical awareness of the current issues and complexities affecting the financial industry and the knowledge, skills, and expertise to assist organisations in achieving a sustainable business future.
- A4. Encourage participative, independent, and reflective learning and the development of personal and professional skills.
- A5. Equip you to have mastery of the subject, conduct effective research and critically analyse and assess the specific areas of study undertaken and apply this learning in the relevant practical context.

MSc Programme in FinTech is about disrupting the financial system's core functions by innovations and how they could help efforts to align financing with sustainable development; therefore, this programme is in line with the new strategy and mission of University of Bradford in driving sustainable social and economic development through outstanding teaching, research, and innovation.

The graduates of this programme will equip with knowledge, skills, and innovative analysis of how advances in three digital technologies – blockchain, machine learning and artificial intelligence (MLAI) and the Internet of Things (IoT) – could lead to revolutionary innovations for building trust, transparency and traceability for financial transactions and make tomorrow's financial system far more efficient in mobilizing green finance.

This programme is developed under the accounting, finance, and economics (AFE) research centre of the school of management. The AFE centre brings together a dynamic group of younger and more experienced academics in a multi-disciplinary team with substantial experience and expertise in financial technology, blockchain, machine learning and artificial intelligence, corporate finance, international finance, accounting, etc. The primary research focus of the AFE centre is on financial and economic decision making, based on the use of new technologies for advanced analytics and modelling. To enrich the portfolio of programme context and expertise, the programme includes modules from other research centres such ad Business Data Analytics.

The programme is in line with the QAA subject benchmark for Finance in terms of:

1) the principle of this programme that is a joint course of finance with technology;

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2) the nature and extent of the programme that requires students to study the design and operation of financial systems, structures, and instruments and, in particular, measuring and managing risk, and pricing assets using advance technologies (e.g., AI and machine learning);

3) subject-specific knowledge and skills including an ability to interpret financial data, understanding of the relationship between financial theory and empirical testing, and application of this knowledge to the appraisal of the empirical evidence using advanced technologies;

4) cognitive abilities and generic skills, including numeracy, the processing and analysis of financial and other numerical data and the appreciation of statistical concepts at an appropriate level.

The programme aligns with the University's overall strategy to position it as a sector leader in creating and sustaining the conditions for holistic, inclusive learning that enables social mobility and progression into graduate employment. This alignment is demonstrated through the conversion course adopting the key principles of *Active and Collaborative Learning.*

- We ensure the accessibility of the programme to students from diverse backgrounds, various career trajectories, and those who for any reason cannot study on-campus or full-time.
- This programme considers inclusivity and diversity in defining problems, case studies, and coursework as well as modules' study sources. Further, you are encouraged to consider inclusivity in choosing research topics for the final dissertation.
- Respect, fairness, and inclusion are integral to our culture and values, and we ensure that all students, staff, and visitors are treated fairly, and with dignity and respect.

PROGRAMME LEARNING OUTCOMES

Upon successful completion of this program, you are able to demonstrate the achievement of the following learning outcomes:

Subject Knowledge and Cognitive Skills:

1. Demonstrate detailed, in-depth knowledge of current developments in FinTech and its impact on investors, the financial services industry, markets, and the global economy.

2. Explore contemporary issues in blockchain, Artificial intelligence and machine learning, crypto assets, Ethics, regulation, and compliance procedures within the FinTech industry.

PROGRAMME LEARNING OUTCOMES

3. Explain and critically apply a range of state-of-the-art principles, concepts, methods, tools, and technologies in ML and AI, and discuss their current and potential application and impact in the field of finance.

4. Evaluate critically current research and methodologies of discipline, and develop critiques of them and, where appropriate, propose new hypotheses.

Practical and Transferable Skills:

5. Demonstrate the qualities and transferable skills of creativity, innovation, and the ability to come up with new ideas and to problem solve across a range of academic disciplines.

6. Demonstrate the qualities and transferable skills of flexibility and industry variability to work in a complex, innovative, and unpredictable environment.

7. Demonstrate the qualities and transferable skills of emotional intelligence, communication, and teamwork.

8. Demonstrate the qualities and transferable skills of initiative and personal responsibility for decision-making in complex and unpredictable contexts.

9. Demonstrate the qualities and transferable skills of self-study and independent personal learning in a way that meets their individual needs.

Professional Behaviours:

10. Commit to their own personal and professional development, having acquired lifelong learning skills, and developed a desire to make a difference in the world.

11. Have experience of the world of work and have developed relevant employability skills, attitudes and behaviours including self-awareness, a commitment to equality and diversity and cultural competence.

12. Consider and articulate issues of accessibility, inclusivity, and diversity in defining problems and proposing solutions.

13. Consider and commit to economic, social, and environmental sustainability from a local to a global level.

ADMISSIONS REQUIREMENTS

- We take into consideration a number of factors when assessing your application. It is not just about your grades; we carefully look to understand your personal circumstances and make decisions based on your potential to thrive at university

ADMISSIONS REQUIREMENTS

and beyond. We consider the policy of the University of Bradford related to equality, diversity and inclusion in the admission of protected characteristics such as age, disability, gender reassignment, race, religion/belief, sex, and sexual orientation: **https://www.bradford.ac.uk/equality-and-diversity/**

- The University welcomes applications from all prospective students and most important in the decision to offer a place is our assessment of a candidate's potential to benefit from their studies and of their ability to succeed in this programme.
- The programme is aimed at graduates interested in acquiring specialist and transferable knowledge and skillsets needed to enhance careers for Financial Technology such as Blockchain developer, App developer, financial or business analysts, product manager, compliance expert, data scientist, quantitative analyst or to start new FinTech startup.
- Consideration of applications will be based on a combination of formal academic qualifications and other relevant experience.
- Candidates for the M.Sc. in Financial Technology will normally have a 2:2 UK degree or its equivalent in any discipline (in any STEM or non-STEM-related subjects) from an approved higher education institution.
- Mature students will be considered on a case-by-case basis.
- Applications are welcome from students with non-standard qualifications and/or students without formal qualifications who have relevant work experience. For such applicants, evidence of their interests and work experience would be required and this would likely take the form of a Work Certificate. Applicants will be fairly assessed on an interview basis with programme team.
- As the programme is delivered entirely in English, applicants must be able to demonstrate proficiency in the English language; thus, UK educated students must have a GCSE grade 4 (C) or above. Non-native speakers must have a 6.0 overall score on the IELTS test of English (with no sub-test less than 5.5) or 94 on the internet-based TOEFL - exceptionally, holders of a UK degree awarded within 2 years before entry to the University of Bradford programme may be exempt from these English test requirements.
- Due to the online nature of the programme, students must have access to a reliable internet connection and a laptop or a desktop. Throughout the programme, students will receive training on distance learning methods and on the software and other virtual learning equipment of the University of Bradford.
- The current tariff and accepted qualifications for entry into the programme is published at **https://www.bradford.ac.uk/money/fees/**

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At the beginning of the programme, during induction week, you will attend an online induction session, which will provide necessary information about the study through distance learning and learning support you will receive including access to the library and online facilities of the university, personal academic tutor, and supervision. Also, there is a 'Meet the programme Leader' session wherein you can understand programme from PL in detail and resolve any query.

The DL FinTech Programme comprises a taught component and a research element. The students will study 120 credits of taught modules and undertake 60 credits of independent research projects which culminates in the writing of their dissertation. The DL FinTech Programme is a part-time (PT) programme and students should aim to take half the full-time number of credits in each year of study. DL/PT students will take core modules in the first year of study, following by optional modules in the second year of study. The maximum number of credits in one year for DL/PT students is 90 credits. DL students will have 4 semesters to finalize their taught modules.

There will be two cohorts of students in each academic year - September and January intake. The January intake will commence the programme by studying semester 2 modules and complete the taught element of their programme alongside the September cohort. September and January- intake students will have to complete their studies within 24 and 30 months, respectively.

The dissertation is a 60-credit module and provides the student with the opportunity to research and prepare a substantial analysis of a specialist area of interest to them as well as demonstrate understanding of the complex policy and practical dimension of the subject, thereby preparing them with the knowledge and skills for their chosen career. Students can take the dissertation module in the summer semester where the taught classes of the dissertation module will be delivered. Students will be allocated a guide after taught classes by ML.

Taught Components

Aims/Outcomes

The 120 credits taught component aims to introduce a wide array of knowledge on finance and financial technology. To be more specific, one modified existing module (i.e., Fundamentals of Financial Technology, Blockchain, and Value Creation (AFE7521-B)) and two new modules (i.e., Machine Learning & Artificial Intelligence in Finance (AFE7523-B) and FinTech Regulation, Compliance, Ethics and Risk Management (AFE7524-B) in addition to an optional module of Business Data Analytics (OIM7502-DL) will equip students with a strong understanding of cutting edge knowledge on finance applications of blockchain technology, digital currencies, Big Data, and machine learning techniques. Developing programming skills in R is embedded in two first semester modules of Quantitative Methods in Finance (AFE7519-B) and Fundamentals of Financial Technology, Blockchain, and Value Creation (AFE7521-B). Also, developing programming skills in Python is embedded in the second-semester module Machine Learning & Artificial Intelligence in Finance (AFE7523-B). Additionally, the new module of FinTech Regulation, Compliance, Ethics and Risk Management (AFE7524-B) will equip students

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with an understanding of ethics and the concept of risk (e.g., compliance, operational, and technology), risk management, regulation, and compliance in FinTech.

Students will develop and customise their finance skills by optional modules of Asset pricing and financial markets (AFE7520-B), Corporate Finance (AFE7526-A), Accounting and Finance (AFE7527-A) and International Finance (AFE7525-A).

The combination of modules teaching content and method, learning and assessment strategies will help students to develop skills such as emotional intelligence, communication, and other people skills such as creativity, problem-solving, adaptability, flexibility, and creativity.

Modules

Students will take **80 credits core taught modules** (4 core 20-credit modules):

1) Fundamentals of Financial Technology, Blockchain and Value Creation (AFE7521-B)
2) Quantitative Methods in Finance (AFE7519-B)
3) Machine Learning & Artificial Intelligence in Finance (AFE7523-B)
4) FinTech Regulation, Compliance, Ethics and Risk Management (AFE7521-B)

Module 1 provides students with a conceptual understanding of financial technology, Blockchain, and the way to create value in the FinTech industry. In addition, the module introduces the ethical issues to the use of new technologies in financial services. Also, the skill of programming in R is embedded in this module.

Module 2 provides students with the conceptual understanding and core technical skills in the fields of mathematics, econometrics and statistics that enable them to pursue advanced specialist study in finance. Also, the skill of programming in R is embedded in this module.

Module 3 provides knowledge of computer algorithms to learn from data for different purposes such as forecasting, algorithmic trading, investment analysis, etc. Also, the skill of programming in Python is embedded in this module.

Module 4 introduces students to current developments in FinTech with respect to regulation, governance, compliance, Ethics, and risk management. It explores contemporary FinTech regulation and compliance procedures as well as ethical issues in employing new technologies in financial services.

Students will take **40 credit optional modules** out of the following list of the school's modules:

1) Business Data Analytics (OIM7511-B) [20 credits]
2) Asset Pricing & Financial Markets (AFE7520-B) [20 credits]

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3) International Finance (AFE7525-A) [10 credits]
4) Corporate Finance (AFE7526-A) [10 credits]
5) Accounting and Finance (AFE7527-A) [10 credits]

This choice allows the students to customize their master's programme in line with their career interests and aspirations while aiming to enhance their finance and people skills.

This will bring the total of the taught modules studied to 120 credits.

FHEQ Level	Module Title	Core/ Optional	Credit	Study Period	Module Code
7	Quantitative Methods in Finance	Core	20	Sem 1	AFE7519-B
7	Fundamentals of Financial Technology, Blockchain, and Value Creation	Core	20	Sem 1	AFE7521-B
7	Asset Pricing & Financial Markets	Optional	20	Sem 1	AFE7520-B
7	Business Data Analytics	Optional	20	Sem 1	OIM7511-B
7	Machine Learning & Artificial Intelligence in Finance	Core	20	Sem 2	AFE7523-B
7	FinTech Regulation, Compliance, Ethics and Risk Management	Core	20	Sem 2	AFE7524-B
7	International Finance	Optional	10	Sem 2	AFE7525-A
7	Corporate Finance	Optional	10	Sem 2	AFE7526-A
7	Accounting and Finance	Optional	10	Sem 2	AFE7527-A

None of the modules of these programmes is a pre-requisite for the other one, although there is integration in the core modules of these programmes. For example, two modules of "Fundamental of FinTech, Blockchain and value Creation", and "FinTech Regulation, Compliance, Ethics and Risk management" which are offered in the first semester integrate with the context of "Machine Learning and AI in Finance" to develop required knowledge and skills for students.

Dissertation Component

Aims/Outcomes
In this component, students apply the skills and knowledge developed during the taught modules to solving a real-world research question at the intersection of finance/technology. The modules studied, in addition to a taught component of the dissertation module will provide the student with the subject knowledge and skills necessary to complete the final research dissertation. Students should study research topics theoretically and/or empirically by validating potential hypotheses against various credible data sources to provide a significant insightful perspective.

Module

FHEQ Level	Module Title	Core/ Optional	Credit	Study Period	Module Code
7	Dissertation	Core	60	Full Year	MAL7505-E

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DL Part-time students will be expected to commence the independent element of their dissertation when they have completed the modules.

You will be eligible to exit with the award of “Postgraduate Certificate” if they have completed 60 taught credits and achieved the required learning outcomes. Successful completion of two core modules is required for the award to Postgraduate Certificate. Please note that completion of just 60 credit “Dissertation” does not qualify you for the exit with Postgraduate Certificate.

You will be eligible to exit with the award of “Postgraduate Diploma” if you have completed 120 credits and achieved the required learning outcomes.

You will be eligible for the award of a “master’s degree” if you have completed 180 credits and achieved the required learning outcomes.

Please note that we considered the following items in the sequence and distribution of modules in semesters:

1) None of the modules is a pre-requisite for the other one and as such the January intake students will not be disadvantaged.
2) The core modules are distributed equally in two semesters (i.e., two 20-credit core modules in each semester).
3) The curriculum may change, subject to the University’s programme approval, monitoring, and review procedures.

LEARNING, TEACHING AND ASSESSMENT STRATEGY

Learning and Teaching Strategy

The FinTech programme aims to integrate applied and theoretical knowledge with assessment processes that test both the knowledge of the discipline and understanding of its applications and limitations. To this end, the learning, teaching, and assessment strategy for this programme have been developed to help the student build their knowledge over the period of study to develop their research, critical thinking and writing skills.

Due to the distance learning nature of the programme, the learning and teaching will be directed, supported, and reinforced through a combination of online lectures, recorded lectures, online tutorials, seminars, labs, and project supervision, as well as through personal research and directed and self-directed study.

The programme provides a consistent online layout for all modules so students have a reliable ‘map’ and can understand how learning happens across the programme. Also,

LEARNING, TEACHING AND ASSESSMENT STRATEGY

to create a sense of belonging, there will be a ‘programme page’ as well as module pages, which will be used to communicate to students as a cohort.

Students will find the following items on the Canvas site of each module:

- The module manual provides an outline of the module structure, content, learning and teaching strategy and assessment format. The manual is complemented by more detailed guidance on the topic of the weekly study and contains the learning materials (pre-recorded lectures, slides, tutorial tasks, self-study tasks), the reading lists, and other useful information for each week.
- The module handbook provides a more detailed explanation of each lecture.
- The links to the live sessions (on Zoom, or Microsoft Teams), pre-recorded lectures, audio, and video files.

Further, DL students will have access to online resources and databases as follows:

- At least 50% of reading lists of DL modules include online resources such as e-books and journal papers.
- Research papers, white papers and other industry-facing publications will be made available to all the students in soft copy.
- Online (off-campus) Databases (e.g., Thompson Eikon).
- The module handbook.

To facilitate learning, lectures will be grounded in active and collaborative learning and will typically utilise expertise from the school of management faculty, industry experts, case studies and problem-solving exercises. The nature of the collaborative activities varies, though typically students may be required to engage as a group, develop and discuss a case(s)/scenario and provide solutions based on sound analysis and logical arguments using information from varying sources. Students also will use the expertise of their peers and will gain the skills to lead start-ups and companies into the fintech revolution. Constructive feedback is provided by peers and the module leader/tutor during the teaching sessions.

Tutorials will be in the format of discussion-based, problem-solving and/or review and Q&A sessions, with oral feedback given in class. Lab sessions will complement formal lectures and tutorials and will be an opportunity for students to do some hands-on-system work and focus on developing and practising both coding analytics skills and coding-free analytics skills. Students will be guided to suitable primary and secondary (open access) data sources and be required to conduct research, analysis, and presentation exercises.

The teaching format is a combination of synchronous (“live”) and asynchronous (at the student’s own time) lectures and synchronous tutorials. Synchronous sessions will help

students to interact with each other and their module lecturer. All the lectures and tutorials will be recorded for student's review and access.

Each 20-credit module represents approximately 200 hours of study time broken down into formal tutor-led live online sessions as well as engagement via the Virtual Learning Environment (VLE) and independent study. A typical 20-credit module offers **four 2-hour synchronous ("live") lectures** and **seven 2-hour asynchronous lectures** focusing on delivering content, explaining issues on the FinTech and finance topics, explaining student tasks, and discussing answers to student tasks. Students can explore resources, slides and videos online in 'chunks' in their own time during asynchronous lectures. Synchronous online sessions will be more interactive, with a clear connection made between the student's offline research/study and the activities. **One additional 2-hour synchronous session** will be allocated to module revisions, the design of and preparation for the summative assessments and the collection of student feedback which will be used to improve module delivery. This will give students more flexibility and control of their learning as they will be able to study the module at their own time and pace. Case study analysis and discussion are used to contextualise learning and the application of techniques. Further, a 20-credit module offers **twelve 1-hour synchronous tutorials.**

Each 10 credits module represents approximately 100 hours of study time broken down into formal tutor-led live online sessions as well as engagement via the VLE and independent study. A typical 10-credit module offers **four 1-hour synchronous ("live") lectures** and **seven 1-hour asynchronous lectures** focusing on delivering content, explaining student tasks, and discussing answers to student tasks. Students can explore resources, slides and videos online in 'chunks' in their own time during asynchronous lectures. Synchronous online sessions will be more interactive, with a clear connection made between the student's offline research/study and the activities. One **additional 1-hour synchronous session** will be allocated to module revisions, the design of and preparation for the summative assessments and the collection of student feedback which will be used to improve module delivery. Further, a 10-credit module **offers twelve 1-hour synchronous tutorials**. Case study analysis and discussion are used to contextualise learning and the application of techniques. We consider time zones and commitments of our DL students during weekdays; therefore, "live" modules and tutorials will be scheduled based on the availability of most DL students (such as weekends).

As a distance learning programme, the DL FinTech is based on the expectation that students will work independently in the biggest part of their study. Module handbooks are self-study manuscripts and are designed in the format of an action handbook that contains some tasks under each unit of study. Students are required to practice/solve those tasks and present them to the tutorial or lecture sessions for feedback. Students are expected to take responsibility for their learning and engage with the materials and ideas provided. Students must therefore prepare for all live sessions and take all

opportunities offered to develop their skills and knowledge, while they have to use the period of self-study to progress on the target of achieving the learning outcomes.

Learning of the required skills of finance, tech and people are embedded throughout programme delivery as follows:

Module Lectures, Tutorials and Assessment
A significant part of strategies for developing the required skills for this programme is embedded in module lectures, tutorials as well as module assessment. Visiting and guest lectures from industry practitioners across different modules are planned to nurture those skills.

We will hold targeted short-term online workshops that are specifically serving the FinTech program. for example, we plan to hold series of workshops on **understanding the challenges of local start-up/FinTech companies**. Students are invited to attend other Bradford seminars and research talk series. We also encourage students to attend Library workshop series on research, access to databases etc.

Finance skills *will be delivered in the following modules:*

1) Quantitative Methods in Finance.
2) Asset Pricing & Financial Markets.
3) International Finance.
4) Corporate Finance.
5) Accounting & Finance.

Lectures will be used to present the related materials and cover the main LOs of each module. Tutorial sessions give students the opportunity to interact and discuss the content of the previous lecture. The tutorial learning context provides opportunities for students to engage more thoughtfully with the course concepts and discipline knowledge.

Tech skills *will be developed in the following modules:*

1) Fundamentals of Financial Technology, Blockchain, and Value Creation.
2) Machine Learning & Artificial Intelligence in finance.
3) FinTech Regulation, Compliance, Ethics and Risk Management.
4) Business Data Analytics.

Lectures will present the main concepts, theories related to FinTech and the application of technology in finance. One of the inevitable tech skills for the profession in FinTech is programming in the most common programming environments of the field, i.e., R and Python.

LEARNING, TEACHING AND ASSESSMENT STRATEGY

- **Python** – in module Machine learning (ML) & AI in finance (Sem 2): each 2-hour lecture consist of explaining the theoretical context of ML following by application of theories using real-data in Python. For this, the programming in Python will be taught to students step-by-step with adequate examples and practices. Students will be given some real-world tasks and cases to solve. 1-hour tutorial is allocated to providing answers and discussion on tasks and cases.
- **R** – two modules of "Quantitative Methods in Finance" and "Fundamentals of Financial Technology, Blockchain, and Value Creation" involve step-by-step learning of R programming. The focus of the former module is on the application of R in econometrics and advanced statistics and the latter focus on the application of R in FinTech. Tutorial sessions and coursework challenge students with real cases and problems and push students to make their hands dirty with real datasets.

***People skills** are developed throughout the programme:*

- Lectures and tutorials give students the opportunity to develop people skills. The interaction of students during lectures and tutorials will develop their interpersonal skills and oral communication. Group-based discussion and student presentation during lectures, and group-based case studies during tutorials will improve their team-working, critical thinking, and problem-solving skills.
- Interaction with supervisor during the process of preparing dissertation will develop the skills of communication, personal responsibility and decision making, inclusivity, and diversity in defining problems and proposing solutions etc.
- In some of the modules, students will have the choice to present topics of interest to them and to take the lead in elements of modules. This would enable them to focus on areas of particular interest to them and help develop independence, confidence, and leadership skills.
- All the above-mentioned modules will be assessed using a combination of individual coursework or group-based coursework and presentations which facilitates the development of team-working, emotional intelligence, communication, personal responsibility for decision making, accessibility, inclusivity, and diversity in defining problems and proposing solutions etc.

***Ethics in Financial Technology** is covered throughout the programme:*
The context of Ethics in FinTech will be covered in two modules of "Fundamentals of Financial Technology, Blockchain, and Value Creation" (Sem1) and "FinTech regulation, compliance, Ethics and Risk Management" (Sem2).

Specifically, the following key ethical concerns are covered in these two modules:

LEARNING, TEACHING AND ASSESSMENT STRATEGY

- The impact of increasingly pre-emptive, data-driven approaches to financial decision-making for consumer privacy and autonomy, particularly the ability of individuals to determine and manage their own (financial) identities.
- The scope for bias and discrimination against vulnerable persons due to the use of these technologies.
- unfair price discrimination, and the implications of predictive risk measurement for those whose perceived riskiness increases as a result (i.e., the problem of too much information).
- The power differential between the large-scale financial institutions and the small-scale customers, which suggests big financial institutions should be subject to greater ethical scrutiny and responsibility than retail customers.

Supporting Your Studies

The DL FinTech programme aims to support the students learning in several ways.

1) There is the scheduled online class time, and we expect them to attend all scheduled classes as the interaction with the tutors and the other students will be highly beneficial to their learning. All live sessions will be recorded, and the text will be made available to cover primarily those who miss the live sessions and those who wish to revisit them. Online classes contain a variety of activities from traditional lecture-style input by the tutor to explain often complex ideas and principles, to individual and group tasks (undertaken in breakout rooms) to allow them to practice the skills and knowledge they have been developing.
2) All module leaders provide a module handbook and detailed study guides which include a list of relevant reading material, while the VLE, is the hub where these documents and all module resources available to the student, host discussions and programme related information and links are provided.
3) We cater for a variety of learning styles and preferences and aim to create an inclusive and inspiring learning environment where the student can engage with the material studied in the ways most suitable to them. However, we also want them to push themselves out of their comfort zone, learn new things and develop intellectually and personally and we, therefore, hope they will engage in as many of the activities as possible to give the best possible chance of achieving the learning outcomes and demonstrating this through various assessments. The curriculum (case studies, reading list etc.) draws on diverse, global sources that reflect the make-up of the student body. Students of DL/PT have the choice of selecting a range of optional modules as well as the choice of selecting their taught modules in 4 semesters which gives theme flexibility in terms of what and how they study. In some of the modules, students will have the choice to present topics of interest to them and to take the lead in elements of modules. This would enable them to focus on areas of particular interest to them and help develop independence, confidence and leadership skills.

LEARNING, TEACHING AND ASSESSMENT STRATEGY

The nature of distance learning is based on online delivery and as such university of Bradford and the school of management provide the following training workshops to support staff in maintaining an outstanding learning experience for DL students:

- workshops on virtual learning equipment for online delivery in Zoom, Teams, Canvas etc.
- workshops on how to interact with students in the classroom through frameworks such as poll everywhere, Socrative, etc.
- Bradford fellowship helps staff to have an outstanding impact on the student learning experience.
- Peer–review system helps academic staff to improve their teaching skills by understanding their strengths and weaknesses in the classroom.

The above training facilities are not specific to DL programme but also is beneficial for on-campus MSc FinTech and other programmes. In particular, some modules of this programme are shared with other programmes (e.g., Quantitative methods in finance, Business data analytics), which provide potentials for the development of other DL programmes in future.

Supporting returning students to study:
As a returning student to study or mature student, you will not be treated any differently during the study, but there will be a support mechanism available throughout the programme duration. You will be allocated a Personal Academic Tutor who provides extra help and guidance on how to get back to study. You also will be offered extra training workshops (e.g., research skills and tools, computer skills etc.) by library and career booster week to fill the possible gaps of your study and get back on track.

Assessment Strategy

The assessment strategy on this programme is robust, adopting a range of assessment methods, all submitted online, aiming to be inclusive, and giving students the opportunity to play to their strengths while also developing areas of weakness.

The skills and knowledge developed throughout the programme will be assessed formatively and summatively. Due to different time zones, and possible disruption in technology, internet access etc., there are no closed book examinations for this programme. Instead, the programme will use a mixture of 24-hour open book examinations, assessed coursework, group projects and presentations to develop and test their understanding of learning outcomes, research, critical thinking, problem-solving and writing skills. The type of assessment for each module will be specified in the module descriptor with more detail being available in the module handbook.

There is a balance of formative and summative assessments, including feedback during individual and group tasks to ensure that students are supported effectively in their learning and can produce their best work for the summative assessment. Final

feedback of summative assessment helps Master students to understand the marks they have been given, know what/where to improve for future assessments, and understand their progress against learning outcomes. Formative assessment is built into specific modules but not all, the expectation is that, as the students develop as independent learners, they will need to rely less on this form of support and can transfer the skills learned from one module to another. Emphasis is placed on the feedback function of formative assessment as part of the learning, teaching, and assessment strategy.

Modules and tutorials include formative feedback techniques such as many interactive classroom activities, short case studies from industry, online quizzes through an interactive framework (e.g., Socrative, poll everywhere, and zoom) that are complemented with feedback. This formative feedback builds student's learning and helps them through the final summative assignment. Further, it identifies areas for teaching improvement and evaluates how much students and the class has learned.

Also, the programme aims to improve the "assessment literacy" of students – ensuring that students fully understand the purpose and methods of assessment, how it relates to learning outcomes, the criteria by which it will be marked etc. Active engagement of Master students in the assessment will help them develop capabilities in analysing their learning, and the ability to critically reflect on their work, recognise where improvement is needed and plan how to achieve it.

Learning outcomes 1 to 4 are focused on knowledge and subject-specific skills, needed to enhance careers for FinTech and Finance professionals, graduate analysts, technology consultants, or to start new tech businesses. They are assessed by a mixture of open-book examination, individual pieces of coursework and group coursework.

Learning outcomes 5 to 13 are focused on practical and transferable skills, as well as professional behaviours, that are so important to employability. They are assessed by a mixture of open-book examination, individual pieces of coursework and group coursework.

The dissertation assesses all learning outcomes and is mandatory. Students have the opportunity to interact with their supervisors during the process of working on their dissertation. Students can reflect on the provided feedback from their supervisors, recognise where improvement is needed and plan to achieve it.

The type of assessment for each module is specified in the module descriptor with more detail being available in the module handbook.

All assessments are related to programme learning outcomes, in particular, there are in line with the requirements of accreditation bodies such as ACCA. Assessments are used to cover some specific issues covered by PLOs in modules meeting them. For

LEARNING, TEACHING AND ASSESSMENT STRATEGY

example, in the module “Machine Learning & Artificial Intelligence in Finance” students will be asked to optimise a portfolio of assets considering risk and return. To do this assignment, students need to understand current development in FinTech and its impact on the investor (PLO1), have an analytical understanding of contemporary issues in ML (PLO2) to apply an effective MLAI technique to solve the problem (PLO3) considering current methodologies applied in the field (PLO4). Students should demonstrate some level of innovation and creativity in developing new techniques/approaches to optimise the portfolio (PLO5). The assignment will enhance the personal responsibility of students in decision making (PLO8) and boost their skills of self-study and personal learning (PLO9). In the group-based coursework of this module, students are encouraged to consider inclusivity and diversity in defining a financial problem (e.g., focusing on emerging or underdeveloped financial markets) and providing a solution (PLO13). Students will be encouraged to engage and consider the financial problems of local SMEs or FinTech start-ups. Students will be assessed based on their relevant employability skills, attitudes and behaviours including self-awareness (PLO 11).

PLACEMENT/STUDY ABROAD OPPORTUNITIES

Placement is not available for this programme.

REGULATIONS

This Programme conforms to the standard University Postgraduate Assessment Regulations which are available at the link: **http://www.bradford.ac.uk/regulations**

However, there is one waiver exception to these regulations as listed below:

On completion of the taught element of the programme and at the Interim Exam Board, a student who has 50 credits or more requiring supplementary assessment will not be permitted to proceed to the dissertation stage of the programme. The decision to allow progression will only be reconsidered at the Supplementary Exam Board.