Programme Specification

BSc Mathematics with Finance and Investment Banking with International Foundation Year

For students entering Foundation year in September 2026

UCAS Code:
GN13
UFMATFIBFF

This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.

Awarding Institution	University of Reading
Teaching Institution	University of Reading
Length of Programme	4 years
Accreditation	Accredited by the Institute of Mathematics and its applications to meet the educational requirements for the Chartered Mathematician designation when followed by subsequent training and experience in employment to obtain competencies equivalent to those specified by the QAA for taught Masters degrees.
QAA Subject Benchmarking Group	Mathematics, Statistics and Operational Research; Finance

Programme information and content	
The programme aims to provide you with a general education in both mathematics and finance, as preparation for work in investment banking. It aims to develop your ability to use mathematical and statistical methods to study investments and corporate finance. You will benefit from significant opportunities to develop your problem-solving skills. Logic is an essential part of the understanding and construction of mathematical proofs and is embedded throughout the programme. On the finance side, you will learn basic techniques to solve 'business world' problems.	
Foundation year:	This programme comprises a foundation year (Part 0) provided through the International Foundation Programme (IFP) which provides access to higher education in Britain to international students who do not possess the normal entry requirements of GCE Advanced level qualifications or the equivalent. Through Part 0 you will be equipped with subject specific and general study skills which will enable you to cope with the demands of undergraduate study. This is achieved through the provision of high quality teaching which is sympathetic to the needs of students from a wide range of educational backgrounds.
Part 1:	Part 1 introduces you to core mathematics skills and knowledge through a number of introductory modules designed to manage the transition to university level mathematics and provide the basis for more advanced study in later years.

	In Finance, Part 1 deals with Introductory Securities and Markets, as well as Introductory Finance and Trading Simulation.
Part 2:	Part 2 provides you with more advanced topics in mathematics, with topics such as differential equations building on techniques established in Part 1 in the areas of calculus and linear algebra. Trends in finance are also studied.
Part 3:	In Part 3 you will undertake some project work in mathematics. The choice of optional modules will allow you to express your preference for certain topics in pure or applied mathematics, and finance. In finance you will explore Derivative Securities.

Programme Learning Outcomes - BSc Mathematics with Finance and Investment Banking with International Foundation Year

During the course of the Programme, you will have the opportunity to develop a range of skills, knowledge and attributes (known as learning outcomes) For this programme, these are:

	Learning outcomes
1	Demonstrate logical thinking through the production of a structured argument.
2	Select and use appropriate mathematical and statistical tools, techniques and theory to solve problems in the mathematical sciences, and cognate disciplines, and be able to critically evaluate and reflect on the appropriateness of these.
3	Recognise what makes an argument a mathematical proof, and be able to construct mathematical proofs to a range of propositions drawn from the mathematical sciences.
4	Critically analyse so-called 'real world' problems and identify their essential mathematical or statistical features, and apply appropriate elements of discipline-based theory to solve these.
5	Reflect on aspects from one sub-field of the mathematical sciences and articulate how this applies to or illuminates another.
6	Plan, conduct and appropriately communicate work undertaken as part of a project.
7	Communicate, clearly and effectively, discipline-based arguments to a variety of audiences through a variety of means.
8	Identify how skills obtained in the programme can be applied outside the context of your studies.
9	Critically understand the concepts and techniques of corporate finance.
10	Understand and apply the most frequently used mathematical techniques, comprising OLS estimation, hypothesis testing and model evaluation.
11	Apply financial concepts and techniques to real-world problems.

You will be expected to engage in learning activities to achieve these Programme learning outcomes. Assessment of your modules will reflect these learning outcomes and test how far you have met the requirements for your degree.

To pass the Programme, you will be required to meet the progression or accreditation and award criteria set out below.

Additional Learning outcomes
N/A

Module information

Part 0 comprises 140 credits and Parts 1, 2 and 3 each comprise 120 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.

Foundation modules:

Module	Name	Credits	Level
IF0CMA	Core Mathematics	20	0
IF0QM	Quantitative Methods	20	0
IF0RAS	Foundation in Academic Skills	20	0
MA0FM	Further Mathematics	20	0
MA0PH	Physics	20	0

If your level of English is below the standard specified for undergraduate study, you will take the two 20 credit modules Academic English 1 (IF0AE1) and Academic English 2 (IF0AE2). The remaining credits will be made up of optional modules available from a list provided by the International Foundation Programme.

Part 1 Modules:

Module	Name	Credits	Level
IC101	Introductory Securities and Markets	20	4
IC102	Introductory Finance/Trading Simulation I	20	4
MA1CA	Calculus	20	4
MA1FM	Foundations of Mathematics	20	4
MA1LA	Linear Algebra	20	4
ST1PS	Probability and Statistics	20	4

All modules at Part 1 of the programme are compulsory.

Part 2 Modules:

Module	Name	Credits	Level
IC212	Financial Modelling	20	5
MA1RA1	Real Analysis I	20	4
MA2DE	Differential Equations	20	5
MA2MMS	Mathematical Modelling and Professional Skills	20	5
MA2NAO	Numerical Analysis I	20	5

Students must take 20 credits of optional Finance modules from a list available from the Department of Mathematics and Statistics.

If you take a year-long placement or study abroad, Part 3 as described below may be subject to variation.

Part 3 Modules:

Module	Name	Credits	Level
IC317	Derivative Securities	20	6
MA3PPR	Portfolio of Projects	20	6

Students must take a further 80 credits of optional modules from a list available from the Department of Mathematics and Statistics, 20 credits of which must be Finance modules, and 60 credits of which must be Mathematics or Statistics modules.

Placement opportunities

N/A

Optional modules:

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your programme can be found online in the Course Catalogue. Details of optional modules for each part, including any additional costs associated with the optional modules, will be made available to you prior to the beginning of the Part in which they are to be taken and you will be given an opportunity to express interest in the optional modules that you would like to take. Entry to optional modules will be at the discretion of the University and subject to availability and may be subject to pre-requisites, such as completion of another module. Although the University tries to ensure you are able to take the optional modules in which you have expressed interest this cannot be guaranteed.

Teaching and learning delivery:

You will be taught primarily through a mixture of lectures, tutorials, computer classes and supervised project work, depending on the modules you choose. Some modules may include group work.

Elements of your programme will be delivered via digital technology.

The International Foundation Programme will include at least 15 hours of classroom-based teaching each week.

The scheduled teaching and learning activity hours and amount of technology enhanced learning activity for your programme will depend upon your module combination. In addition, you will undertake some self-scheduled teaching and learning activities, designed by and/or involving staff, which give some flexibility for you to choose when to complete them. You will also be expected to undertake guided independent study. Information about module study hours including contact hours and the amount of independent study which a student is normally expected to undertake for a module is indicated in the relevant module description.

Accreditation details

These programmes are accredited by the Institute of Mathematics and Its Applications (IMA). Accreditation guarantees that the educational requirements for the Chartered Mathematician (CMath) designation, subject to subsequent training and experience in employment to obtain equivalent competences to those specified by the Quality Assurance Agency (QAA) for taught Masters degrees, are met. When you successfully complete the degree you can apply for Associate Membership of the IMA.

Assessment

The programme will be assessed through a combination of written examinations, coursework (including class tests) and oral examinations. Further information is contained in the individual module descriptions.

Progression

Foundation Year

The University-wide rules relating to 'threshold performance' as follows

(i) obtain an overall weighted average of 50% over 120 credits taken in Part 0; and

(ii) obtain a mark of at least 40% in all individual modules.

In order to progress from Part 0 to Part 1 and be eligible for transfer to BSc Mathematics with Finance and Investment Banking, a student must achieve a threshold performance; and

(iii) at least 55% in Core Mathematics (IF0CMA), Quantitative Methods (IF0QM), and Further Mathematics (MA0FM);

(iv) at least 50% in each of Academic English 1 (IF0AE1 or IF0E1J) and Academic English 2 (IF0AE2 or IF0E2J) (if taken).

Part 1

To achieve a threshold performance at Part 1, a student will normally be required to:

(i) Obtain an overall weighted average of 40% over 120 credits taken in Part 1;

(ii) Obtain a mark of at least 40% in individual modules amounting to not less than 80 credits taken in Part 1; and

(iii) Obtain marks of at least 30% in modules amounting to 120 credits. (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree.)

In order to progress from Part 1 to Part 2, a student must achieve a threshold performance.

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if they leave the University before completing the subsequent Part.

Students are able to transfer from a Joint or Major/Minor Honours programme to a Single Honours programme in one of their joint subject areas at the end of Part 1, subject to:

- Meeting the University Threshold Standard at the end of Part 1; and
- Achieving marks of at least 40% in at least 40 credits of modules (e.g., 2 x 20 credit modules) in the subject to which they wish to transfer; and
- Meeting any programme-specific progression rules for the Part 1 Single Honours Programme to which they wish to transfer.

NB Students taking a Major/Minor programme may only transfer to a Single Honours programme in the Major subject and must meet the above requirements.

Students should seek advice about the titles of programmes they may be eligible to transfer to.

Students who transfer from a Joint or Major/Minor Honours programme to a Single Honours programme may not have taken all of the Part 1 modules listed in the Single Honours Programme Specification. The modules which they have taken will be shown on their Diploma Supplement.

Part 2

To achieve a threshold performance at Part 2, a student shall normally be required to:

(i) Obtain a weighted average of 40% over 120 credits taken in Part 2; and

(ii) Obtain marks of at least 40% in individual modules amounting to at least 80 credits taken in Part 2; and

(iii) Obtain marks of at least 30% in individual modules amounting to at least 120 credits. (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree.)

In order to progress from Part 2 to Part 3, a student must achieve a threshold performance.

The achievement of a threshold performance at Part 2 qualifies a student for a Diploma of Higher Education if they leave the University before completing the subsequent Part.

Classification

Bachelors' degrees
The University's honours classification scheme is based on the following:

Mark Interpretation
70% - 100% First class
60% - 69% Upper Second class
50% - 59% Lower Second class
40% - 49% Third class
35% - 39% Below Honours Standard
0% - 34% Fail

The weighting of the Parts/Years in the calculation of the degree classification is:

Three year programmes:
Part 2: one-third
Part 3: two-thirds

Four year programmes, including professional/work placement or study abroad:
Part 2: one-third
Placement/Study abroad: not included in the classification
Part 3: two-thirds

Details of the classification method is given in detail in the Assessment Handbook under:

- Section 17: Awards (Bachelor's), or
- Section 18: Awards (Integrated Master's programmes). Students who do not progress to Part 4 of the Integrated Master's will normally be subject to the method detailed under Section 17: Awards (Bachelor's)

Please note that there may be a specific version of the above for your year of entry.

Additional costs of the programme

During your programme of study you will incur some additional costs. For textbooks and similar learning resources, we recommend that you budget up to £100 per year, depending on your preference to have your own books rather than borrow from the library. Some books may be available second-hand, which will reduce costs. A range of resources to support your curriculum, including textbooks and electronic resources, are available through the library. Reading lists and module specific costs are listed on the individual module descriptions. You will need an approved scientific calculator (approximate cost £14).

Costs are indicative and may vary according to optional modules chosen and are subject to inflation and other price fluctuations. Estimates were calculated in 2025.

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at <u>http://www.reading.ac.uk/module/</u>. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.

BSc Mathematics with Finance and Investment Banking with International Foundation Year for students entering Part 1 in session 2026/27
15 October 2025