Programme Specification

BSc Mathematics with International Foundation Year **UCAS Code: G102**

For students entering Foundation year in September 2025 **UFMATHBFF**

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 of 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

Programme information and content	
The programme aims to provide you with a good general mathematical education for those not necessarily intending to continue as professional mathematicians. This is achieved by providing a mix of compulsory and optional modules, some giving an overview of a broad area of mathematics and others studying a particular topic in depth.	
Foundation year:	This Part comprises of 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 the 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:	Introduces you to core skills and knowledge through a number of introductory modules designed to manage the transition from A level (or equivalent) to university level mathematics. The Foundations of Mathematics module will establish the need for proof and will enable students to construct their own formal proofs. Other compulsory Part 1 mathematics modules build on and reinforce core material from the A level syllabus and form the basis for more advanced study in later years.
Part 2:	Provides you with more advanced topics in mathematics: Part 2 modules will employ techniques established in Part 1 Calculus and Linear Algebra. The

	concept of abstract algebra is introduced and builds on the Part 1 Foundations module. Students have the option here to explore modules in statistics, opening up Part 3 optional modules in this important area of mathematics.
Part 3:	Gives you the opportunity to undertake some project work in mathematics or statistics. Most of your modules will be optional, allowing you to express your preference for certain topics in pure or applied mathematics and statistics.

Programme Learning Outcomes - BSc Mathematics 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	Use skills in calculation and mathematical manipulation to solve problems in the mathematical sciences and cognate disciplines.
3	Select appropriate mathematical and statistical tools, techniques and theory to solve problems in the mathematical sciences and cognate disciplines, and critically evaluate and reflect on their appropriateness.
4	Recognise what constitutes a mathematical proof and articulate the role of the various constituent hypotheses.
5	Construct mathematical proofs to a range of propositions from the mathematical sciences.
6	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.
7	Reflect on aspects from one sub-field of the mathematical sciences and articulate how this applies to or illuminates another.
8	Plan, conduct and appropriately communicate work undertaken as part of a project.
9	Communicate, clearly and effectively, discipline-based arguments to a variety of audiences through a variety of means.
10	Identify how skills obtained in the programme can be applied outside the context of your studies.

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.

In addition to the learning outcomes stated above if you are on a placement or study abroad programme you will have the opportunity to develop the following learning outcome:

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
IF0ACA	Academic Skills	20	0
IF0CMA	Core Mathematics	20	0
IF0QM	Quantitative Methods	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
MA1CA	Calculus	20	4
MA1FM	Foundations of Mathematics	20	4
MA1LA	Linear Algebra	20	4
MA1MC	Mathematical Communication	20	4
MA1RA1	Real Analysis I	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
MA2ALA	Algebra	20	5
MA2DE	Differential Equations	20	5
MA2MMS	Mathematical Modelling and Professional Skills	20	5

Students must also take either Real Analysis I or Real Analysis II, and must take a further 40 credits of optional 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
MA3PPR	Portfolio of Projects	20	6

Students must take 100 credits of optional modules from a list available from the Department of Mathematics and Statistics, at least 60 credits of which must be modules taught by the Department of Mathematics and Statistics.

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
To achieve a threshold performance in the Foundation Year, a student will normally be required to:
(i) Obtain an overall average of 40% over 120 credits taken in Part 0;
(ii) Have no more than 40 credits of modules at Part 0 with marks below 35%; and
(iii) Achieve a mark of at least 40% in the Academic Skills module.

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

(i) at least 40% in IF0ACA Academic Skills and 55% in each of IF0AE1 Academic English 1 and IF0AE2 Academic English 2 (if taken)

and achieve the following in the remaining 120 credits or 80 credits (if taking Academic English)

(i) at least 55% in IF0CMA Core Mathematics and IF0QM Quantitative Methods;

(ii) at least 50% in MA0FM Further Mathematics and MA0PH Physics;

(iii) at least 40% in any other modules

The achievement of a threshold performance at Foundation Year qualifies a student for a Certificate of Completion if they leave the University before completing the subsequent Part.

Part 1
To achieve a threshold performance at Part 1, a student will normally be required to:
(i) Obtain an overall 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.

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.

Transferring from a Joint Honours to a Single Honours programme

Students are able to transfer from a Joint Honours to a Single Honours programme in one of their joint subject areas at the end of Part 1, subject to fulfilling the Part 1 University Threshold Standard, achieving marks of at least 40% in at least 40 credits of modules in the subject to which they wish to transfer, and fulfilling any programme-specific progression rules for the Part 1 Single Honours Programme to which they wish to transfer.

Students who transfer from a Joint Honours 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, except that a mark below 30% may be condoned in no more than 20 credits of modules owned by the Department of Mathematics and Statistics.

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

The classification method is given in detail in Section 17 of the Assessment Handbook.

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 2024.

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at http://www.reading.ac.uk/module/. 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 International Foundation Year for students entering Part 1 in session 2025/26
16 July 2024