

FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS AND STATISTICS

MATHEMATICAL SCIENCES

Master of Research in Mathematical Sciences Postgraduate Certificate in Mathematical Sciences

For regulations relating to admissions, duration of study, examinations, progress, final assessment, award and research elements of this degree, please refer to [the General Academic Regulations - Postgraduate Research Degree Regulations](#).

For regulations relating to taught (compulsory/optional) modules, please refer to [the General Academic Regulations - Postgraduate Taught Degree Programme Level](#).

Admission

1. The [General Academic Regulations - Postgraduate Research Degree Regulations](#) shall apply subject to the following requirements. Applicants shall possess:
 - (i) a first or second class Honours degree from a United Kingdom university (in Mathematics or a closely related subject); or
 - (ii) a qualification deemed by the Programme Director acting on behalf of Senate to be equivalent to (i) above.
2. In all cases, applicants whose first language is not English, shall be required to demonstrate an appropriate level of English.

Duration of Study

3. The [General Academic Regulations - Postgraduate Research Degree Regulations](#) shall apply.

Mode of Study

4. The programme is available by full-time and part-time study.

Curriculum

5. All students shall undertake an approved curriculum as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
MM551	MRes Research Project	5	120

Optional Modules

All students shall take modules amounting to 60 credits. Students may select a maximum of 20 credits from list A, with all other credits from list B.

List A

Module Code	Module Title	Level	Credits
MM552	Applied Analysis and PDEs 1	5	20

MM554	Applied Mathematics Methods 1	5	20
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List B

Module Code	Module Title	Level	Credits
MM502	Modelling and Simulation with Applications to Financial Derivatives	5	20
MM503	Applicable Analysis 3	5	20
MM508	Mathematical Biology and Marine Population Modelling	5	20
MM509	Mathematical Introduction to Networks	5	20
MM521	Mathematics of Machine Learning	5	20
MM571	Numerical and Deep Learning Methods for PDEs	5	20
MM909	Medical Statistics	5	20
MM911	Effective Statistical Consultancy	5	10
MM912	Survey Design and Analysis	5	10
MM913	Quantitative Risk Analysis	5	10
MM915	Spatial Statistics	5	10
MM953	Experimental Design	5	10
MM954	Multivariate Analysis	5	10
MM960	Statistical Machine Learning	5	10
MM962	Data Dashboards with RShiny	5	10
MM967	Optimisation: Theory	5	10
MS987	Optimisation for Analytics	5	10

Not all optional modules on this list will be available in each academic year. Please check your programme handbook for confirmation of which optional modules will run.

With the approval of the Programme Director, students may substitute other Level 5 modules offered by the University up to a maximum of 40 credits.

Examination, Progress and Final Assessment

- Students are required to pass written and oral examinations and to perform to the satisfaction of the Board of Examiners in the course work, and the Examining Committee in the dissertation or report or design or project.
- At all stages of the programme, a student must achieve an approved standard of performance with regard to level of study and academic attainment.

Award

8. **MRes:** In order to qualify for the degree of MRes, a student must have performed to the satisfaction of the Examiners and must have accumulated no fewer than 180 credits, of which 120 must have been awarded in respect of Research Project MM551.
9. **Postgraduate Certificate:** In order to qualify for the award of PGCert in Mathematical Sciences a student must have accumulated no fewer than 60 credits from the taught curriculum.