

FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS AND STATISTICS

APPLIED STATISTICS

Master of Science in Applied Statistics
Master of Science in Applied Statistics (Online)
Master of Science in Applied Statistics in Health Sciences
Master of Science in Applied Statistics in Health Sciences (Online)
Master of Science in Applied Statistics with Data Science
Master of Science in Applied Statistics with Data Science (Online)
Master of Science in Applied Statistics in Finance
Master of Science in Applied Statistics in Finance (Online)
Postgraduate Diploma in Applied Statistics
Postgraduate Diploma in Applied Statistics (Online)
Postgraduate Diploma in Applied Statistics in Health Sciences
Postgraduate Diploma in Applied Statistics in Health Sciences (Online)
Postgraduate Diploma in Applied Statistics with Data Science
Postgraduate Diploma in Applied Statistics with Data Science (Online)
Postgraduate Diploma in Applied Statistics in Finance
Postgraduate Diploma in Applied Statistics in Finance (Online)
Postgraduate Certificate in Applied Statistics
Postgraduate Certificate in Applied Statistics (Online)
Postgraduate Certificate in Applied Statistics in Health Sciences
Postgraduate Certificate in Applied Statistics in Health Sciences (Online)
Postgraduate Certificate in Applied Statistics with Data Science
Postgraduate Certificate in Applied Statistics with Data Science (Online)
Postgraduate Certificate in Applied Statistics in Finance
Postgraduate Certificate in Applied Statistics in Finance (Online)
Master of Science in Medical Statistics

These regulations are to be read in conjunction with the [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).

Admission

1. The General Academic Regulations - Postgraduate Taught Degree Programme Level shall apply subject to the following requirements. Applicants shall possess:
 - i. a first or second class Honours degree from a United Kingdom university; or
 - ii. a qualification deemed by the Head of Department acting on behalf of Senate to be equivalent to (i) above.

Duration of Study

2. The [General Academic Regulations - Postgraduate Taught Degree Programme Level](#) shall apply.

Mode of Study

3. The programmes are available by full-time (on-campus versions only) or part-time study (online versions and MSc Medical Statistics).

Curriculum

4. All students shall undertake an approved curriculum as follows:
- i. for the Postgraduate Certificate no fewer than 60 credits
 - ii. for the Postgraduate Diploma no fewer than 120 credits
 - iii. for the degree of MSc no fewer than 180 credits including a research project

Compulsory Modules for on-campus MSc Applied Statistics

All of the compulsory modules listed below plus 10 credits from list A

Module Code	Module Title	Level	Credits
MM914	Foundations of Probability and Statistics	5	20
MM916	Data Analytics in R	5	20
MM953	Experimental Design	5	10
MM954	Multivariate Analysis	5	10
MM550	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM550 which cannot be substituted).

List A

Module Code	Module Title	Level	Credits
MM913	Quantitative Risk Analysis	5	10
MM915	Spatial Statistics	5	10

Optional Modules for on-campus MSc Applied Statistics

No fewer than 50 credits excluding those previously chosen from List A

Module Code	Module Title	Level	Credits
MM904	Financial Stochastic Process ¹	5	10
MM905	Financial Econometrics ¹	5	10
MM909	Medical Statistics ²	5	10
MM911	Effective Statistical Consultancy	5	10
MM912	Survey Design and Analysis	5	10
MM913	Quantitative Risk Analysis	5	10

MM915	Spatial Statistics	5	10
MM962	Data Dashboards with RShiny ³	5	10
MM960	Statistical Machine Learning	5	10
CS988	Big Data Tools and Techniques ³	5	10
CS989	Big Data Fundamentals ³	5	10
CS830	Machine Learning for Data Analytics	5	20

¹Compulsory module for Applied Statistics in Finance. ²Compulsory module for Applied Statistics in Health Sciences. ³Compulsory module for Applied Statistics with Data Science.

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.

Compulsory Modules for online MSc Applied Statistics (September Start, 3 year)

All of the compulsory modules listed below plus 10 credits from List B

Module Code	Module Title	Level	Credits
MM922	Foundations of Probability and Statistics	5	20
MM923	Data Analytics in R	5	20
MM924	Statistical Modelling and Analysis	5	20
MM930	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

List B

Module Code	Module Title	Level	Credits
MM925	Quantitative Risk Analysis	5	10
MM928	Spatial Statistics	5	10

Optional Modules for online MSc Applied Statistics (September Start, 3 year)

No fewer than 50 credits excluding those previously chosen from List B

Module Code	Module Title	Level	Credits
MM956	Financial Stochastic Process (online) ¹	5	10
MM955	Financial Econometrics (online) ¹	5	10
MM927	Medical Statistics ²	5	10
MM929	Effective Statistical Consultancy	5	10
MM926	Survey Design and Analysis	5	10
MM925	Quantitative Risk Analysis	5	10
MM928	Spatial Statistics	5	10
MM961	Data Dashboards with RShiny ³	5	10
CS817	Big Data Tools and Techniques ³	5	10
CS818	Big Data Fundamentals ³	5	10
CS830	Machine Learning for Data Analytics	5	20
MM965	Statistical Machine Learning	5	10

¹Compulsory module for Applied Statistics in Finance. ²Compulsory module for Applied Statistics in Health Sciences. ³Compulsory module for Applied Statistics with Data Science.

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 optional modules offered by the University up to a maximum of 40 credits.

Compulsory Modules for online MSc Applied Statistics (September Start, 2 year)

All of the compulsory modules listed below plus 10 credits from List B

Module Code	Module Title	Level	Credits
MM922	Foundations of Probability and Statistics	5	20
MM923	Data Analytics in R	5	20
MM924	Statistical Modelling and Analysis	5	20
MM931	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM931 which cannot be substituted).

Optional Modules for online MSc Applied Statistics (September Start, 2 year)

Students for the September start 2 year version of the programme take no fewer than 50 credits from the optional modules listed above for the online MSc Applied Statistics (September Start, 3 year) excluding those previously chosen from List B.

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

Compulsory Modules for online MSc Applied Statistics (January Start, 3 year)

All of the compulsory modules listed below plus 10 credits from List B

Module Code	Module Title	Level	Credits
MM959	Foundations of Probability and Statistics	5	20
MM957	Data Analytics in R	5	20
MM958	Statistical Modelling and Analysis	5	20
MM933	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM933 which cannot be substituted).

Optional Modules for online MSc Applied Statistics (January Start, 3 year)

Students for the January start 3 year version of the programme take no fewer than 50 credits from the optional modules listed above for the online MSc Applied Statistics (September Start, 3 year) excluding those previously chosen from List B.

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

Compulsory Modules for online MSc Applied Statistics (September Start, 2 year)

All of the compulsory modules listed below plus 10 credits from List B

Module Code	Module Title	Level	Credits
MM922	Foundations of Probability and Statistics	5	20
MM923	Data Analytics in R	5	20
MM924	Statistical Modelling and Analysis	5	20
MM931	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be

substituted subject to approval by the Programme Director (with the exception of MM931 which cannot be substituted).

Optional Modules for online MSc Applied Statistics (September Start, 2 year)

Students for the September start 2 year version of the programme take no fewer than 50 credits from the optional modules listed above for the online MSc Applied Statistics (September Start, 3 year) excluding those previously chosen from List B.

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

Compulsory Modules for online MSc Applied Statistics (January Start, 2 year)

All of the compulsory modules listed below plus 10 credits from List B

Module Code	Module Title	Level	Credits
MM959	Foundations of Probability and Statistics	5	20
MM957	Data Analytics in R	5	20
MM958	Statistical Modelling and Analysis	5	20
MM932	MSc Project	5	60

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM932 which cannot be substituted).

Optional Modules for online MSc Applied Statistics (January Start, 2 year)

Students for the January start 2 year version of the programme take no fewer than 50 credits from the optional modules listed above for the online MSc Applied Statistics (September Start, 3 year) excluding those previously chosen from List B

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

Compulsory Modules for on-campus MSc Applied Statistics with Data Science

Students for the 'with Data Science' version of the programme take the on-campus compulsory modules listed above for on-campus MSc Applied Statistics plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
CS988	Big Data Tools and Techniques	5	10
CS989	Big Data Fundamentals	5	10

MM962	Data Dashboards with RShiny	5	10
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In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

Optional Modules for on-campus MSc Applied Statistics with Data Science

Students for the 'with Data Science' version of the programme should choose no fewer than 20 credits from the optional modules listed for the on-campus MSc Applied Statistics with the exclusion of those chosen from List A and MM962, which is compulsory.

With the approval of the Programme Director, students may substitute other Level 5 optional modules offered by the University for one or more of the modules listed above up to a maximum of 40 credits.

Compulsory Modules for online MSc Applied Statistics with Data Science (September and January starts, 2 and 3 year programmes)

Students for the 'with Data Science' version of the programme take the online compulsory modules listed above for online MSc Applied Statistics (September start or January start as appropriate, 2 or 3 year as appropriate) plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
CS817	Big Data Tools and Techniques	5	10
CS818	Big Data Fundamentals	5	10
MM961	Data Dashboard with RShiny (online)	5	10

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

Optional Modules for online MSc Applied Statistics with Data Science (September and January starts, 2 and 3 year programmes)

Students for the 'with Data Science' version of the programme should choose no fewer than 20 credits from the optional modules listed for the online MSc Applied Statistics with the exclusion of those chosen from List B and MM961, which is compulsory.

With the approval of the Programme Director, students may substitute other Level 5 optional modules offered by the University for one or more of the modules listed above up to a maximum of 40 credits.

Compulsory Modules for on-campus MSc Applied Statistics in Finance

Students for the 'in Finance' version of the programme take the on-campus compulsory modules listed above for on-campus MSc Applied Statistics plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
MM904	Financial Stochastic Processes	5	10
MM905	Financial Econometrics	5	10

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

Optional Modules for on-campus MSc Applied Statistics in Finance

Students for the 'in Finance' version of the programme should choose no fewer than 30 credits from the optional modules listed for the on-campus MSc Applied Statistics with the exclusion of those chosen from List A and MM904 and MM905, which are compulsory.

With the approval of the Programme Director, students may substitute other Level 5 optional modules offered by the University for one or more of the modules listed above up to a maximum of 40 credit.

Compulsory Modules for online MSc Applied Statistics in Finance (September and January starts 2 and 3 year programmes)

Students for the 'in Finance' version of the programme take the online compulsory modules listed above for the online MSc Applied Statistics (September or January start as appropriate, 2 or 3 year as appropriate) plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
MM956	Financial Stochastic Processes (online)	5	10
MM955	Financial Econometrics (online)	5	10

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

Optional Modules for online MSc Applied Statistics in Finance (September and January starts 2 and 3 year programmes)

Students for the 'in Finance' version of the programme should choose no fewer than 30 credits from the optional modules listed above for the online MSc Applied Statistics with the exclusion of those chosen from List B and MM955 and MM956 which are compulsory.

With the approval of the Programme Director, students may substitute other Level 5 optional modules offered by the University for one or more of the modules listed above up to a maximum of 40 credits.

Compulsory Modules for on-campus MSc Applied Statistics in Health Sciences

Students for the 'in Health Sciences' version of the programme take the on-campus compulsory modules listed above for on-campus MSc Applied Statistics plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
MM909	Medical Statistics	5	20

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM550 which cannot be substituted).

Optional Modules for on-campus MSc Applied Statistics in Health Sciences

Students for the 'in Health Sciences' version of the programme should choose no fewer than 30 credits from the optional modules listed above for the on-campus MSc Applied Statistics with the exclusion of those chosen from List A.

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.

Compulsory Modules for online MSc Applied Statistics in Health Sciences (September and January starts 2 and 3 year programmes)

Students for the 'in Health Sciences' version of the programme take the online compulsory modules listed above for the online MSc Applied Statistics (September or January start as appropriate, 2 or 3 year as appropriate) plus the following additional compulsory modules.

Module Code	Module Title	Level	Credits
MM927	Medical Statistics	5	20

In exceptional circumstances, where a student has already been awarded credit for a corresponding Strathclyde Level 4 module, a maximum of 20 credits at Level 5 may be substituted subject to approval by the Programme Director (with the exception of MM930 which cannot be substituted).

Optional Modules for online MSc Applied Statistics in Health Sciences (September and January starts 2 and 3 year programmes)

Students for the 'in Health Sciences' version of the programme should choose no fewer than 30 credits from the optional modules listed above for the online MSc Applied Statistics with the exclusion of those chosen from List B and MM927 which is compulsory.

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

MSc Medical Statistics (September start)

Compulsory Modules

Module Code	Module Title	Level	Credits
MM922	Foundations of Probability and Statistics	5	20
MM923	Data Analytics in R	5	20
MM924	Statistical Modelling and Analysis	5	20
MM927	Medical Statistics	5	20
MM929	Effective Statistical Consultancy	5	10
MM926	Survey Design and Analysis	5	10
MM928	Spatial Statistics	5	10
MM925	Quantitative Risk Analysis	5	10
MM919	Degree Apprenticeship Project	5	60

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.

MSc Medical Statistics (January start)**Compulsory Modules**

Module Code	Module Title	Level	Credits
MM959	Foundations of Probability and Statistics	5	20
MM957	Data Analytics in R	5	20
MM958	Statistical Modelling and Analysis	5	20
MM927	Medical Statistics	5	20
MM929	Effective Statistical Consultancy	5	10
MM926	Survey Design and Analysis	5	10
MM928	Spatial Statistics	5	10
MM925	Quantitative Risk Analysis	5	10
MM963	Degree Apprenticeship Project (January Start)	5	60

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

5. The [General Academic Regulations - Postgraduate Taught Degree Programme Level](#) shall apply.
6. The final award will be based on performance in the examinations, coursework and the project where undertaken.

Award

7. **Degree of MSc:** In order to qualify for the award of the degree of the MSc, a candidate must have performed to the satisfaction of the Board of Examiners and must have accumulated no fewer than 180 credits, of which 60 must have been awarded in respect of the project (one of MM550, MM930, MM931, MM932, MM933, MM919, MM963).
8. **Postgraduate Diploma:** In order to qualify for the award of the Postgraduate Diploma, a candidate must have accumulated no fewer than 120 credits from the modules of the programme.
9. **Postgraduate Certificate:** In order to qualify for the award of the Postgraduate Certificate, a candidate must have accumulated no fewer than 60 credits from the modules of the programme.