

# MSc in Operations Research & Analytics

Programme Code: TMORA

Department: Mathematics

For students starting this programme of study in 2019/20

[Guidelines for interpreting programme regulations](#)

[Classification scheme for the award of a taught master's degree \(four units\)](#)

[Exam sub-board local rules](#)

Full-year programme. As below, students must take three compulsory courses (Papers 1-3, 1.5 units in all), options to the value of 1.5 units (Papers 4-6), and a project or dissertation (Paper 7, 1 unit).

*Please note that places are limited on some optional courses. Admission onto any particular course is not guaranteed and may be subject to timetabling constraints, prerequisite requirements, and course-size caps.*

## Paper Course number, title (unit value)

Paper 1 [MA423](#) Fundamentals of Operations Research (0.5) #

Paper 2 [MA424](#) Modelling in Operations Research (0.5) #

Paper 3 [ST447](#) Data Analysis and Statistical Methods (0.5) #

Paper 4 Courses to the value of 0.5 unit(s) from the following:

[MA407](#) Algorithms and Computation (0.5) #

[MA421](#) Advanced Algorithms (0.5) #

[MA427](#) Mathematical Optimisation (0.5) #

[MA428](#) Combinatorial Optimisation (0.5) #

[MA429](#) Algorithmic Techniques for Data Mining (0.5) #

Paper 5 Courses to the value of 0.5 unit(s) from the following:  
Another course from those listed under Paper 4.

[MG409](#) Auctions and Game Theory (0.5) #

[MG422](#) Thinking Strategically (0.5) #

[MG455](#) Decisions, Biases and Nudges (0.5) #

Any other MG4\*\* or MA4\*\* course, with approval of the Programme Director, subject to availability.

Paper 6 Courses to the value of 0.5 unit(s) from the following:

Another course from those listed under Paper 4.

[MA402](#) Game Theory I (0.5) #

[MA409](#) Continuous Time Optimisation (0.5) #

[MA410](#) Information, Communication and Cryptography (0.5) #

[ST409](#) Stochastic Processes (0.5) #

[ST422](#) Time Series (0.5) #

[ST444](#) Statistical Computing (0.5)

[ST446](#) Distributed Computing for Big Data (0.5) #

Any other MSc-level course, with approval of the Programme Director and the teacher responsible for the course.

Paper 7 [MA425](#) Project in Operations Research & Analytics (1.0) *or*

[MA426](#) Dissertation in Operations Research & Analytics (1.0)

# means there may be prerequisites for this course. Please view the course guide for more information.

Students may choose at most one of the following three optional courses as part of this programme: MA402, MG409, MG422.

Upon supplying satisfactory evidence to the course convenor of relevant previous courses taken, a student may be exempted from a course specified in Paper 1, 2, or 3, at the discretion of the Programme Director. A student shall replace such a course with another module, subject to approval of the Programme Director. Exemption from more than one course is rare.

Please note that not all optional courses are available every year.

**Note for prospective students:**

For changes to graduate course and programme information for the next academic session, please see the [graduate summary page for prospective students](#). Changes to course and programme information for future academic sessions can be found on the [graduate summary page for future students](#).