

MSc in Operations Research & Analytics

Programme Code: TMORA

Department: Mathematics

For students starting this programme of study in **2025/26**

[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 and/or students meeting specific prerequisite requirements and course size capping.

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 [MA429](#) Algorithmic Techniques in Machine Learning (0.5) #

Papers 4 &
5 Courses to the value of 1.0 unit(s) from the following:

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

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

[MA421](#) Topics in Algorithms (0.5) #

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

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

[MA429](#) Algorithmic Techniques in Machine Learning (0.5) #

[MA434](#) Algorithmic Game Theory (0.5) #

Students may take at most one of MA407 and MA421 under Papers 4 & 5, but may take the other under Paper 6.

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

Another course from those listed under Papers 4 & 5.

[FM445](#) Portfolio Management (0.5)

[MA431](#) Advanced Topics in Operations Research and Applicable Mathematics (0.5) #

[MA433](#) Mathematics of Networks (0.5) #

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

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

[ST418](#) Advanced Time Series Analysis (0.5) #

[ST449](#) Artificial Intelligence (0.5) #

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

[ST455](#) Reinforcement Learning (0.5) #

[ST456](#) Deep Learning (0.5) #

[ST457](#) Graph Data Analytics and Representation Learning (0.5) #

[ST459](#) Quantum Computation and Information (0.5) #

[ST463](#) Stochastic Simulation, Training, and Calibration (0.5) #

[Papers 4 & 5 options list](#)

OR

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

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)

Papers 4 & 5 options list

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

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

[MA421](#) Topics in Algorithms (0.5) #

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

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

[MA434](#) Algorithmic Game Theory (0.5) #

Prerequisite Requirements and Mutually Exclusive Options

means there may be prerequisites for this course. Please view the course guide for more information. Students may choose at most one of: MA402, MA434, 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](#).