

MSc in Applicable Mathematics Programme Regulations – 2019/20

Full year programme. You must take papers (courses) to the value of 4.0 units. The unit value of courses is in brackets.

Paper 1 – one course to the value of 0.5 units from:

- MA407 Algorithms and Computation (0.5)
- MA421 Advanced Algorithms (0.5)

Papers 2/3/4 – courses to the value of 1.5 units from:

- MA402 Game Theory I* (0.5)
- MA409 Continuous Time Optimisation (0.5)
- MA410 Information, Communication and Cryptography (0.5)
- MA411 Probability and Measure (0.5)
- MA413 Games of Incomplete Information (0.5)
- MA414 Stochastic Analysis (0.5)
- MA420 Quantifying Risk and Modelling Alternative Markets (0.5)
- MA421 Advanced Algorithms (0.5) (*if not taken under Paper 1*)
- MA427 Mathematical Optimisation (0.5)
- MA428 Combinatorial Optimisation (0.5)
- MA429 Algorithmic Techniques for Data Mining (0.5)
- MA433 Mathematics of Networks (0.5) (a new course)

Papers 5/6 – courses to the value of 1.0 units from:

- EC484 Econometric Analysis (1.0)**
- EC487 Advanced Microeconomics (1.0)**
- FM402 Financial Risk Analysis (0.5)
- FM429 Asset Markets (0.5)
- FM430 Corporate Finance and Asset Markets (1.0)

- FM441 Derivatives (0.5)
- FM442 Quantitative Methods in Finance and Risk Analysis*** (0.5)
- MG409 Auctions and Game Theory (0.5)
- ST409 Stochastic Processes (0.5)
- ST418 Non-Linear Dynamics and the Analysis of Real Time Series (0.5)
- ST422 Time Series (0.5)
- Another half-unit from the lists for papers 2/3/4 above, or any other paper with the approval of the Programme Director and the teacher responsible for the course.****

Paper 7:

• MA498 Dissertation in Mathematics (1.0)

Notes:

* This option will not be available to those who have already studied MA300 and MA301 or who have studied this subject as part of an undergraduate degree.

Students required to take a pre-sessional course for the EC* courses

*** Students taking this course can apply for a place on <u>FM457 Applied Computational Finance</u>, a non-assessed computer course.

**** Students may not take MA415, MA416, MA417 or MA424.