

Mathematics with Financial Mathematics (3 Years) [BSc]

Year 3 Programme Structure

The 3rd year of this programme consists of 120 credits of optional course units of which 80 credits must include level 3 (level 4 with permission) MATH course units. Up to 40 credits can be taken with approval from approved non-MATH course units listed below (which must be at Level 3) and a maximum of 20 credits of Level 2 course units may be taken. Optional choice of course units must include 30 credits from MATH37001, MATH38181, MATH38191, MATH38032, MATH39032, and Accounting and Finance outside course units BMAN21020 and BMAN21040.

If you did not take MATH20201 in your second year you must take it in your third year (please speak to your Year Tutor and fill in the relevant application form). For BMAN21020 students must have obtained at least 40% in BMAN10621, for BMAN21040 students must have obtained at least 40% in BMAN10632.

Course descriptions on each course unit includes information on assessment criteria's, lecturer, syllabus, learning outcomes, etc., and they are available from the 'My Course' tab in 'My Manchester' by searching the subject code or you can browse them from the Schools 'Study' website.

Please check the timetables before selecting course units.

Level 3 course units

Description	Semester	Requirement	Credit Rating	Level
MATH20201 - Algebraic Structures 1	1	Optional	10	2
MATH30011 - Project (Semester One)	1	Optional	10	3
MATH31001 - Linear Analysis	1	Optional	10	3
MATH32001 - Group Theory	1	Optional	10	3
MATH32011 - Commutative Algebra	1	Optional	10	3
MATH32071 - Number Theory	1	Optional	10	3
MATH32091 - Combinatorics and Graph Theory	1	Optional	10	3

Description	Semester	Requirement	Credit Rating	Level
MATH33011 - Mathematical Logic	1	Optional	10	3
MATH34001 - Applied Complex Analysis	1	Optional	10	3
MATH34011 - Asymptotic Expansions & Perturbation Methods	1	Optional	10	3
MATH35001 - Viscous Fluid Flow	1	Optional	10	3
MATH35021 - Elasticity	1	Optional	10	3
MATH36001 - Matrix Analysis	1	Optional	10	3
MATH36041 - Essential Partial Differential Equations	1	Optional	10	3
MATH36061 - Convex Optimization	1	Optional	10	3
MATH37001 - Martingales with Applications to Finance	1	Optional	10	3
MATH38001 - Statistical Inference	1	Optional	10	3
MATH38141 - Regression Analysis	1	Optional	10	3
MATH38161 - Multivariate Statistics and Machine Learning	1	Optional	10	3
MATH38181 - Extreme Values and Financial Risk	1	Optional	10	3
MATH30002 - Mathematics Education	2	Optional	10	3
MATH30022 - Project (Semester 2)	2	Optional	10	3
MATH31042 - Fractal Geometry	2	Optional	10	3
MATH31052 - Topology	2	Optional	10	3

Description	Semester	Requirement	Credit Rating	Level
MATH31082 - Riemannian Geometry	2	Optional	10	3
MATH32032 - Coding Theory	2	Optional	10	3
MATH32052 - Hyperbolic Geometry	2	Optional	10	3
MATH32062 - Algebraic Geometry	2	Optional	10	3
MATH34032 - Green's Functions, Integral Equations and Applications	2	Optional	10	3
MATH35012 - Wave Motion	2	Optional	10	3
MATH35032 - Mathematical Biology	2	Optional	10	3
MATH35082 - Symmetry in Geometry and Nature	2	Optional	10	3
MATH36022 - Numerical Analysis II	2	Optional	10	3
MATH36032 - Problem Solving by Computer	2	Optional	10	3
MATH37012 - Markov Processes	2	Optional	10	3
MATH38032 - Time Series Analysis	2	Optional	10	3
MATH38052 - Generalised Linear Models	2	Optional	10	3
MATH38072 - Medical Statistics	2	Optional	10	3
MATH39032 - Mathematical Modelling in Finance	2	Optional	10	3
BMAN21020 - Financial Reporting and Accountability	1 and 2	Optional	20	3
BMAN21040 - Intermediate Management Accounting	1 and 2	Optional	20	3

Description	Semester	Requirement	Credit Rating	Level
MATH30000 - Double Project	1 and 2	Optional	20	3