

B.Sc. & B.Sc. (Hons) with Major in Applied Mathematics with interest in Financial Mathematics

Sample Study Plan for Students Admitted in AY2007/08 to AY2013/14

Occasionally certain modules listed below may not be offered in a particular year.

LEVEL	RECOMMENDED MODULES
1000	<ul style="list-style-type: none"> • MA1100 Fundamental Concepts of Mathematics • MA1101R Linear Algebra I • MA1102R Calculus • MA1104 Multivariable Calculus • <u>For students matriculated before AY2010/11:</u> <ul style="list-style-type: none"> – CZ1102 Problem Solving and Computation or CS1101/CS1101C/CS1101S Programming Methodology • <u>For students matriculated from AY2010/11 to AY2013/14:</u> <ul style="list-style-type: none"> – CS1010/CS1010E/CS1010S Programming Methodology or IT1006 MATLAB Programming for Mathematics
2000	<ul style="list-style-type: none"> • MA2101/MA2101S Linear Algebra II • MA2108/MA2108S Mathematical Analysis I • MA2213 Numerical Analysis I • MA2216/ST2131 Probability • ST2132 Mathematical Statistics • <u>For students matriculated in or before AY2011/12:</u> Additional unrestrictive elective module: <ul style="list-style-type: none"> – QF2101 Basic Financial Mathematics
3000	<ul style="list-style-type: none"> • MA3110/MA3110S Mathematical Analysis II • MA3111/MA3111S Complex Analysis I • MA3238/ST3236 Stochastic Process I • MA3245 Financial Mathematics I (<i>new module from AY2013/14: MA3269 Mathematical Finance I</i>) • Two of the following modules: <ul style="list-style-type: none"> – MA3220 Ordinary Differential Equations – MA3227 Numerical Analysis II – MA3236 Nonlinear Programming – MA3252 Linear and Network Optimization • Optional unrestrictive elective module: <ul style="list-style-type: none"> – QF3101 Investment Instruments: Theory and Computation

LEVEL	RECOMMENDED MODULES
	<p><u>Note:</u> <i>One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules</i></p>
4000	<ul style="list-style-type: none"> • MA4199 Honours Project in Mathematics • MA4230 Matrix Computation • MA4257 Financial Mathematics II (<i>new module from AY2013/14: MA4269 Mathematical Finance II</i>) • MA4254 Discrete Optimization¹ • MA4255 Numerical Partial Differential Equations (<i>new title from AY2012/13: Numerical Methods in Differential Equations</i>)² • Two of the following modules: <ul style="list-style-type: none"> – MA4221 Partial Differential Equations³ – MA4267 Discrete Time Finance – MA4264 Game Theory⁴ – MA4268 Mathematics for Visual Data Processing • Optional unrestrictive elective module: <ul style="list-style-type: none"> – QF4102 Financial Modeling⁵

¹ MA4254 requires MA3252 as prerequisite

² MA4255 requires MA3220 as prerequisite

³ MA4221 requires MA3220 as prerequisite

⁴ MA4264 requires MA3236 or MA3252 as prerequisite

⁵ QF4102 requires QF3101 as prerequisite

Updated 22 Jul 2014