NUS National University of Singapore | Department of Mathematics Faculty of Science

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

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	• MA1100 Fundamental Concepts of Mathematics • MA1101R Linear Algebra I • MA1102R Calculus • MA1104 Multivariable Calculus • *For students matriculated before AY2010/11*: – CZ1102 Problem Solving and Computation or CS1101/CS1101C/CS1101S Programming Methodology *For students matriculated from AY2010/11 to AY2013/14:* – CS1010/CS1010E/CS1010S Programming Methodology or IT1006 MATLAB Programming for Mathematics
2000	• MA2101/MA2101S Linear Algebra II • MA2108/MA2108S Mathematical Analysis I • MA2213 Numerical Analysis I • MA2216/ST2131 Probability • One of the following modules: – MA2202/MA2202S Algebra I or MA3218 Applied Algebra – MA2214 Combinatorial Analysis (*new title from AY2013/14:* Combinatorics and Graphs I) – ST2132 Mathematical Statistics
3000	• MA3110/MA3110S Mathematical Analysis II • MA3111/MA3111S Complex Analysis I • MA3220 Ordinary Differential Equations • MA3227 Numerical Analysis II • Two of the following modules: – MA3209 Mathematical Analysis III – MA3229 Introduction to Geometric Modelling – MA3236 Nonlinear Programming – MA3252 Linear and Network Optimization – MA3266 Introduction to Fourier Analysis *Note:*

LEVEL	RECOMMENDED MODULES
	One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules
4000	• MA4199 Honours Project in Mathematics • MA4221 Partial Differential Equations • MA4230 Matrix Computation • MA4255 Numerical Partial Differential Equations (*new title from AY2012/13:* Numerical Methods in Differential Equations)[1] • Three of the following modules: – MA4211 Functional Analysis[2] – MA4254 Discrete Optimization[3] – MA4264 Game Theory[4] – MA4268 Mathematics for Visual Data Processing – MA4270 Data Modelling and Computation[5]

[1] MA4255 requires MA3220 as prerequisite
[2] MA4211 requires MA3209 as prerequisite
[3] MA4254 requires MA3252 as prerequisite
[4] MA4264 requires MA3236 or MA3252 as prerequisite
[5] MA4270 requires ST3131 as prerequisite

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