![NUS logo] **NUS** | Department of Mathematics
National University of Singapore | Faculty of Science

B.Sc. & B.Sc. (Hons) with Major in Applied Mathematics with Specialization in Mathematical Modelling and Data Analytics (MMDA)

Sample Study Plan for Students Admitted in AY2014/15 or AY2015/16

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 - CS1010/CS1010E/CS1010S/CS1010FC/CS1010X Programming Methodology
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 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 - MA3264 Mathematical Modelling - ST3131 Regression Analysis *Note:* *One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules*

LEVEL	RECOMMENDED MODULES
4000	• MA4199 Honours Project in Mathematics • MA4229 Approximation Theory • MA4230 Matrix Computation • MA4255 Numerical Methods in Differential Equations • MA4268 Mathematics for Visual Data Processing • MA4270 Data Modelling and Computation • One of the following modules: – MA4221 Partial Differential Equations – MA4235 Topics in Graph Theory[1] – MA4254 Discrete Optimization[2] – MA4261 Coding and Cryptography[3] – MA4264 Game Theory[4] – MA4272 Mathematical Tools for Data Science

[1] MA4235 requires MA3233 as prerequisite (MA3233 requires MA2214 as prerequisite)
[2] MA4254 requires MA3252 as prerequisite
[3] MA4261 requires MA3218 as prerequisite
[4] MA4264 requires MA3236 or MA3252 as prerequisite

Updated 19 Nov 2016