

# B.Sc. & B.Sc. (Hons) with Major in Applied Mathematics (without specialization, but with interest in Financial Mathematics)

## Sample Study Plan for Students Admitted in AY2017/18 ~~or after~~ and AY2018/19

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

| LEVEL | RECOMMENDED MODULES   |
|-------|---|
| 1000  | <ul style="list-style-type: none"> <li>MA1100 Fundamental Concepts of Mathematics</li> <li>MA1101R Linear Algebra I</li> <li>MA1102R Calculus</li> <li>CS1010/CS1010E/CS1010S/CS1010FC/CS1010X Programming Methodology</li> </ul>   |
| 2000  | <ul style="list-style-type: none"> <li>MA2101/MA2101S Linear Algebra II</li> <li>MA2104 Multivariable Calculus</li> <li>MA2108/MA2108S Mathematical Analysis I</li> <li>MA2213 Numerical Analysis I</li> <li>MA2216/ST2131 Probability</li> <li>ST2132 Mathematical Statistics or MA3238/ST3236 Stochastic Process I</li> </ul>   |
| 3000  | <ul style="list-style-type: none"> <li>MA3110/MA3110S Mathematical Analysis II</li> <li>MA3111/MA3111S Complex Analysis I</li> <li>MA3269 Mathematical Finance I</li> <li>Two* of the following modules:               <ul style="list-style-type: none"> <li>MA3220 Ordinary Differential Equations <sup>2,3</sup></li> <li>MA3227 Numerical Analysis II</li> <li>MA3236 Nonlinear Programming</li> <li>MA3252 Linear and Network Optimization <sup>1,4</sup></li> </ul> </li> <li><i>Optional unrestrictive elective module:</i> <ul style="list-style-type: none"> <li>QF3101 Investment Instruments: Theory and Computation</li> </ul> </li> </ul> <p>*One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules.</p> |

| LEVEL | RECOMMENDED MODULES   |
|-------|---|
| 4000  | <ul style="list-style-type: none"><li>• MA4199 Honours Project in Mathematics</li><li>• MA4230 Matrix Computation</li><li>• MA4269 Mathematical Finance II</li><li>• MA4254 Discrete Optimization<sup>1</sup></li><li>• MA4255 Numerical Methods in Differential Equations<sup>2</sup></li><li>• One of the following modules:<ul style="list-style-type: none"><li>– MA4221 Partial Differential Equations<sup>3</sup></li><li>– MA4264 Game Theory<sup>4</sup></li><li>– MA4268 Mathematics for Visual Data Processing</li></ul></li></ul> <p><u>Notes:</u><br/><sup>1</sup> MA4254 requires MA3252 as prerequisite<br/><sup>2</sup> MA4255 requires MA3220 as prerequisite<br/><sup>3</sup> MA4221 requires MA3220 as prerequisite<br/><sup>4</sup> MA4264 requires MA3236 or MA3252 as prerequisite</p> |

*Updated 30 June 2017*

*Updated 1 July 2019*