

# B.Sc. & B.Sc. (Hons) with Major in Applied Mathematics with Specialization in Operations Research and Financial Mathematics (ORFM)

## Sample Study Plan for Students Admitted in AY2017/18 or after

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>One of the following modules:               <ul style="list-style-type: none"> <li>MA2214 Combinatorics and Graphs I</li> <li>ST2132 Mathematical Statistics</li> <li>ST3131 Regression Analysis<sup>2</sup></li> </ul> </li> </ul>
3000	<ul style="list-style-type: none"> <li>MA3110/MA3110S Mathematical Analysis II</li> <li>MA3111/MA3111S Complex Analysis I</li> <li>MA3236 Nonlinear Programming</li> <li>MA3252 Linear and Network Optimization</li> <li>MA3269 Mathematical Finance I</li> <li>Optional unrestrictive elective module:               <ul style="list-style-type: none"> <li>QF3101 Investment Instruments: Theory and Computation</li> </ul> </li> </ul> <p><i>Note:</i> 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>• MA4254 Discrete Optimization</li><li>• MA4260 Stochastic Operations Research</li><li>• MA4264 Game Theory</li><li>• MA4269 Mathematical Finance II</li><li>• One of the following modules:<ul style="list-style-type: none"><li>– MA4230 Matrix Computation</li><li>– MA4255 Numerical Methods in Differential Equations<sup>1</sup></li><li>– ST4245 Statistical Methods for Finance<sup>2</sup></li></ul></li></ul>

<sup>1</sup> MA4255 requires MA3220 as prerequisite

<sup>2</sup> ST4245 requires ST3131 as prerequisite

*Updated 30 June 2017*