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

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

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>RECOMMENDED MODULES</th>
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</table>
| 1000  | • MA1100 Fundamental Concepts of Mathematics  
       • MA1101R Linear Algebra I  
       • MA1102R Calculus  
       • CS1010/CS1010E/CS1010S/CS1010FC/CS1010X Programming Methodology |
| 2000  | • MA2101/MA2101S Linear Algebra II  
       • MA2104 Multivariable Calculus  
       • MA2108/MA2108S Mathematical Analysis I  
       • MA2213 Numerical Analysis I  
       • MA2216/ST2131 Probability  
       • ST2132 Mathematical Statistics or MA3238/ST3236 Stochastic Process I |
| 3000  | • MA3110/MA3110S Mathematical Analysis II  
       • MA3111/MA3111S Complex Analysis I  
       • MA3269 Mathematical Finance I  
       • Two of the following modules:  
         – MA3220 Ordinary Differential Equations\(^{2,3}\)  
         – MA3227 Numerical Analysis II  
         – MA3236 Nonlinear Programming  
         – MA3252 Linear and Network Optimization\(^{1,4}\)  
       • Optional unrestrictive elective module:  
         – QF3101 Investment Instruments: Theory and Computation |

Note: One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules
## LEVEL 4000 RECOMMENDED MODULES

- MA4199 Honours Project in Mathematics
- MA4230 Matrix Computation
- MA4269 Mathematical Finance II
- MA4254 Discrete Optimization
- MA4255 Numerical Methods in Differential Equations
- One of the following modules:
  - MA4221 Partial Differential Equations
  - MA4264 Game Theory
  - MA4268 Mathematics for Visual Data Processing

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

*Updated 30 June 2017*