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.

<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  
         ─ MA3227 Numerical Analysis II  
         ─ MA3236 Nonlinear Programming  
         ─ MA3252 Linear and Network Optimization  
       • *Optional unrestrictive elective module:*  
         ─ QF3101 Investment Instruments: Theory and Computation |

*One may need to take additional Level 3000 modules as unrestrictive elective modules to serve as prerequisites for certain Level 4000 modules.
<table>
<thead>
<tr>
<th>LEVEL</th>
<th>RECOMMENDED MODULES</th>
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<tbody>
<tr>
<td>4000</td>
<td>MA4199 Honours Project in Mathematics</td>
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<tr>
<td></td>
<td>MA4230 Matrix Computation</td>
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<tr>
<td></td>
<td>MA4269 Mathematical Finance II</td>
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<tr>
<td></td>
<td>MA4254 Discrete Optimization¹</td>
</tr>
<tr>
<td></td>
<td>MA4255 Numerical Methods in Differential Equations²</td>
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<td>One of the following modules:</td>
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<tr>
<td></td>
<td>– MA4221 Partial Differential Equations³</td>
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<td></td>
<td>– MA4264 Game Theory⁴</td>
</tr>
<tr>
<td></td>
<td>– MA4268 Mathematics for Visual Data Processing</td>
</tr>
</tbody>
</table>

**Notes:**

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*

*Updated 1 July 2019*