# B.Sc. & B.Sc. (Hons) with Major in Mathematics

**Sample Study Plan for Students Admitted in AY2019/20 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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| 1000  | - MA1100 Basic Discrete Mathematics  
       | - MA1101R Linear Algebra I  
       | - MA1102R Calculus  
       | - CS1010/CS1010E/CS1010S/CS1010X/CS1101S Programming Methodology |
| 2000  | - MA2101/MA2101S Linear Algebra II  
       | - MA2104 Multivariable Calculus  
       | - MA2108/MA2108S Mathematical Analysis I  
       | - MA2202/MA2202S Algebra I  
       | - MA2216/ST2131 Probability  
       | - One of the following modules:  
         - MA2214 Combinatorics and Graphs I  
         - MA2219 Introduction to Geometry |
| 3000  | - MA3201 Algebra II  
       | - MA3209 Metric and Topological Spaces  
       | - MA3210 Mathematical Analysis II  
       | - MA3211 Complex Analysis I  
       | - One* of the following modules:  
         - MA3205 Set Theory  
         - MA3220 Ordinary Differential Equations ¹  
         - MA3265 Introduction to Number Theory |

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

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| 4000  | • MA4199 Honours Project in Mathematics  
       | • MA4203 Galois Theory  
       | • MA4262 Measure and Integration  
       | • MA4271 Differential Geometry of Curves and Surfaces  
       | • Two of the following modules:  
       |   – MA4207 Mathematical Logic  
       |   – MA4221 Partial Differential Equations ¹  
       |   – MA4229 Fourier Analysis and Approximation  
       |   – MA4273 Algebraic Geometry of Curves and Surfaces |

### Notes:

¹ MA4221 requires MA3220 as prerequisite

*Updated 01 July 2019*