

# B.Sc. (Hons) with Major in Mathematics with Specialisation in Data Modelling & Analytics

## Graduation Requirements for students admitted in AY2021/2022 or after

To be awarded a **B.Sc.(Hons) with primary major in Mathematics with Specialization in Data Modelling & Analytics (DMA)**, in addition to the University and College requirements, a candidate must satisfy the following:

Course Level	Major Requirements	Level Units	Cumulative Major Units
1000	1. Pass MA1100/MA1100T Basic Discrete Mathematics	4	4
2000	2. Pass all the following courses: <ul style="list-style-type: none"> <li>MA2001 Linear Algebra I</li> <li>MA2002 Calculus</li> <li>MA2101/MA2101S Linear Algebra II</li> <li>MA2104 Multivariable Calculus</li> <li>MA2108/MA2108S Mathematical Analysis I</li> <li>MA2116/MA2216/ST2131 Probability</li> </ul> 3. Pass two additional courses coded MA22xx/MA32xx/MA42xx (except MAx288/MAx289/ <del>MAx288x/MAx289x/MA4288x</del> )	32-36	36-40
3000	4. Pass *five courses coded MA32xx/MA42xx/MA52xx/MA62xx (except MAx288/MAx289/ <del>MAx288x/ MAx289x /MA4288x/MA5232/MA5266</del> ) or ST3236 or ST4238 *At most three courses (12 Units) can be coded MA52xx/MA62xx	20-23	56-62
4000	5. Pass MA4198 Mathematics Capstone Project 6. Pass five* additional courses from List DMA  <i>The five courses used to satisfy item 6 cannot be concurrently used to satisfy item 3 or 4.</i>  *MA4288D may be used to replace one of these courses	24	80-86
<b>List DMA</b>			
<ul style="list-style-type: none"> <li>MA4229 Fourier Analysis and Approximation</li> <li>MA4230 Matrix Computation</li> <li>MA4255 Numerical Methods in Differential Equations</li> <li>MA4261 Coding and Cryptography/ <b>Information and Coding Theory</b></li> <li>MA4268 Mathematics for Visual Data Processing</li> <li>MA4270 Data Modelling and Computation</li> <li><b>MA4274 Fast Iterative Solvers with Applications</b></li> <li><b>QF4102 Financial Modelling and Computation</b></li> </ul>			

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