

B.Sc. (Hons) with Major in Mathematics with Specialisation in Operations Research & 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 Operations Research & Analytics (ORA)**, 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. MA1100/MA1100T Basic Discrete Mathematics	4	4
2000	2. Pass all the following courses: <ul style="list-style-type: none"> MA2001 Linear Algebra I MA2002 Calculus MA2101/MA2101S Linear Algebra II MA2104 Multivariable Calculus MA2108/MA2108S Mathematical Analysis I MA2116/MA2216/ST2131 Probability 3. Pass two additional courses coded MA22xx/MA32xx/MA42xx (except MAx288/MAx289/MAx288x/MAx289x/MA4288x)	32-36	36-40
3000	4. Pass *five courses coded MA32xx/MA42xx/MA52xx/MA62xx (except MAx288/MAx289/MAx288x/MAx289x/MA4288x/MA5232/MA5266) 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 ORA <i>The five courses used to satisfy item 6 cannot be concurrently used to satisfy item 3 or 4</i> *MA4288O may be used to replace one of these courses	24	80-86

List ORA

- MA4235 Topics in Graph Theory
- MA4251/ST4238 Stochastic Processes II
- MA4254 Discrete Optimization
- MA4260 Stochastic Operations Research
- MA4264 Game Theory
- MA4270 Data Modelling and Computation
- DSA4212 Optimisation for Large-Scale Data-Driven Inference
- QF4103 Mathematical Models of Financial Derivatives

Published 26 February 2021

Updated 24 September 2021

Updated 9 November 2021

Updated 01 August 2023