



# Bachelor of Advanced Science MAJOR Mathematics

## MAJOR Choose a second major\*

This study plan should be used as a general guide for your course. We recommend you consult with your [CSE Course/Major Advisor](#) and particularly if your intended enrolment varies from this plan.

The information in the study plan is current at the time of creation and may be subject to future change. If you would prefer a part-time study plan, please adjust the below study planner; reviewing subject prerequisites to ensure you are on track for course completion.

Useful study planning/enrolment resources:

To search for information on subjects: [Subject Search](#)

To register for your classes: [Class Registration](#)

For important dates check: [Academic Calendars](#)

Further enrolment resources: [Enrolment Resources](#)

*\*NOTE-This second major study plan should NOT be used to map a double major with physics or data science.*

*These double majors have specific study plans that should be used instead.*

	STUDY PERIOD 1	STUDY PERIOD 2
Year 1		Course <b>CH1020:03</b> Preparatory Chemistry or <b>Elective</b> (only if already satisfied via previous study)
		Course <b>MA1000:03</b> Mathematical Foundations <i>PREREQ: MA1020 or MA0020 or Maths B or Maths C</i>
		Second Major
		Second Major

	STUDY PERIOD 1	STUDY PERIOD 2
Year 2	Course <b>MA1003:03</b> Mathematical Techniques -(Availability SP3) <i>PREREQ: MA1000 or MA1011 or MA1009</i>	Course <b>SC1109:03</b> Modelling Natural Systems-Advanced <i>PREREQ: MA1000 or MA1009</i>
	Course <b>SC1101:03</b> Science Technology and Truth	Major Select 3 credit points of subjects from <b>List 1 (Breadth Subjects)</b>
	Major Select 3 credit points of subjects from <b>List 1 (Breadth Subjects)</b>	Major <b>MA2210:03</b> Linear Algebra <i>PREREQ: MA1003</i>
	Second Major	Second Major

<b>Year 3</b>	<b>STUDY PERIOD 1</b>		<b>STUDY PERIOD 2</b>	
	Course <b>SC2209:03</b> Quantitative Methods in Science-Advanced <i>PREREQ: MA1003 and SC1109 plus 6 credit points of Level 1 subjects</i>		Major <b>MA3212:03</b> Optimisation and Operations Research <i>PREREQ: MA2000 and (MA2210 or MA2201)</i>	
	Major <b>MA2000:03</b> Mathematics for Scientists and Engineers <i>PREREQ: MA1003</i>		Major <b>MA3210:03</b> Probability and Stochastic Processes <i>PREREQ: MA2000 and (MA2210 or MA2201)</i>	
	Second Major		Second Major	
			Second Major	
	<b>TRIMESTER 1</b>		<b>TRIMESTER 2</b>	
Major <b>MA2211:03</b> Discrete Mathematics <i>PREREQ: Maths B or MA1020 or MA2000</i>				

<b>Year 4</b>	<b>STUDY PERIOD 1</b>		<b>STUDY PERIOD 2</b>	
	Course Select Availability in Study Period 1, 2, 3, 7 or 11 <b>SC3003:03</b> Science Research Internship <i>PREREQ: 15 credit points of AQ, BC, BS, BZ, CH, EV, EA, MA, MB, PH or SC Level 2 subjects</i> OR <b>SC3008:03</b> Professional Placement <i>PREREQ: Students must have successfully completed 12 credit points of second year subjects. Enrolment is restricted to students with an approved placement</i>			
	Course Select an ADVANCED SKILL subject- <b>List 1</b>			
	Major <b>MA3211:03</b> Mathematical Modelling and Differential Equations <i>PREREQ: MA2000 and (MA2210 or MA2201)</i>			
Second Major				

<b>BREADTH SUBJECTS - LIST 1</b>	
<b>STUDY PERIOD 1</b>	<b>STUDY PERIOD 2</b>
BM1000:03 Introductory Biochemistry and Microbiology	BS1001:03 Introduction to Biological Processes
BS1007:03 Introduction to Biodiversity	CH1002:03 Chemistry: Principles and Applications
CH1001:03 Chemistry: A Central Science	EA1110:03 Evolution of the Earth
EG1000:03 Engineering 1	<del>MA1003:03 Mathematical Techniques</del>
EV1005:03 Environmental Processes and Global Change	MA1580:03 Foundations of Data Science
<del>MA1000:03 Mathematical Foundation</del>	PH1007:03 Advanced Stream Physics 2
PH1005:03 Advanced Stream Physics 1	
<b>TRIMESTER 1</b>	<b>TRIMESTER 3</b>
CP1401:03 Problem Solving and Programming I	CP1404:03 Programming II

## ADVANCED SKILL SUBJECTS - LIST 1

STUDY PERIOD 1	STUDY PERIOD 2
BS5260:03 Modelling Ecological Dynamics	BC5203:03 Advanced Bioinformatics
MA2000:03 Mathematics for Scientists and Engineers <i>PREREQ: MA1003</i>	CH5002:03 Research Skills and Communication in Chemistry (Advanced) <i>PREREQ: Satisfactory completion of 9 credit points of Level 2, 3 or 5 CH subjects</i>
<sup>^</sup> EA5409:03 Mineralogy and Geophysics	SC5502:03 Design and Analyses in Ecological Studies
<sup>^</sup> PH5014:03 Research Skills and Communication in Physics (Advanced)	

<sup>^</sup>Note: EA5409 and PH5014 are not offered in 2023

### COURSE NOTES

A maximum of 30 credit points may be taken at Level 1.

A minimum of 18 credit points of science subjects must be taken at Level 3 or higher.

### ADDITIONAL INFORMATION

[Bachelor of Advanced Science Handbook](#)  
[Mathematics Major](#)