Bachelor of Advanced Science

MAJOR Mathematics

SECOND MAJOR Physics

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

	STUDY PERIOD 1	STUDY PERIOD 2
Year 1	Course **SC1101**:03 Science, Technology and Truth	Course **MA1003**:03 Mathematical Techniques *PREREQ: MA1000 or MA1011 or MA1009*
	Course **MA1000**:03 Mathematical Foundations *PREREQ: MA1020 or MA0020 or Maths C*	Course **SC1109**:03 Modelling Natural Systems-Advanced *PREREQ: MA1000 or MA1009*
	Major **MA2211**:03 Discrete Mathematics *PREREQ: Maths B or MA1020 or MA0020*	Course **CH1020**:03 Preparatory Chemistry *(or any Level 1, 2, 3 or 5 subject if already satisfied via previous study)*
	Second Major **PH1005**:03 Advanced Stream Physics 1 *PREREQ: Maths B or MA1020 or MA0020 or MA1000 or Allow concurrent for MA1000 and MA1008*	Second Major **PH1007**:03 Advanced Stream Physics 2 *PREREQ: ((Maths B or equivalent or MA1020 or MA0020) and PH1005) or (Physics and Maths C)*

	STUDY PERIOD 1	STUDY PERIOD 2
Year 2	Course **SC2209**:03 Quantitative Methods in Science-Advanced *PREREQ: MA1003 and (SC1109 plus 6 credit points of other Level 1 subjects)*	Course Select 3 credit points of subjects from **List 1 (Advanced Skill Subject)**
	Major **MA2000**:03 Mathematics for Scientists and Engineers *PREREQ: MA1003*	Major **MA2210**:03 Linear Algebra *PREREQ: MA1003*
	Second Major **PH2019**:03 Intro to Electromagnetism Optics and Early Quantum *PREREQ: (EG1012 or PH1005) and MA1003*	Major Select 3 credit points of subjects from **List 1 (Breadth Subjects)**
	Second Major **PH2002**:03 Classical Mechanics and Quantum Physics 1 *PREREQ: MA1003 and PH1005 and (PH1006 or PH1007 or (EG1012 and EG1011))*	Second Major **PH3002:**03 Quantum Physics 2 *PREREQ: MA2000 and PH2002*

	STUDY PERIOD 1	STUDY PERIOD 2
Year 3	SC3003:03 Science Research Internship (SP1, SP2, SP3, SP7, SP11) *PREREQ: 15 credit points of AQ, BC, BS, BZ, CH, EV, EA, MA, MB, PH or SC science level 2 subjects* **OR** SC3008:03 Professional Placement (SP1, SP2, SP3, SP7, SP11) *PREREQ: Must have successfully completed 12 second year credit points. Enrolment is restricted to students with an approved placement*	
	Major Select 3 credit points of subjects from **List 1 (Breadth Subjects)**	Major **MA3212**:03 Optimisation and Operations Research *PREREQ: MA2000 and (MA2210 or MA2201)*
	Major **MA3211**:03 Mathematical Modelling and Differential Equations *PREREQ: MA2000 and (MA2210 or MA2201)*	Major **MA3210:**03 Probability and Stochastic Processes *PREREQ: MA2000 and (MA2210 or MA2201)*
	Second Major **PH3021**:03 Physics of the Earth, Solar System, and Universe *PREREQ: MA2000 and PH2002 and PH2019*	Second Major **PH2048**:03 Medical and Radiation Physics *PREREQ: PH1007 and MA1003*
	Second Major **PH3008**:03 Statistical Mechanics and Transport *PREREQ: PH2019 and PH2002 and MA2000*	

BREADTH SUBJECTS - LIST 1	
STUDY PERIOD 1	**STUDY PERIOD 2**
BM1000:03 Introductory Biochemistry and Microbiology *PREREQ: Allow concurrent enrolment in CH1020, CH0020 or Senior Chemistry*	CH1002:03 Chemistry: Principles and Applications *PREREQ: CH1001 OR CH1011 and allow concurrent for Ch1011 and CH1001*
CH1001:03 Chemistry: A Central Science *PREREQ: CH1020, CH0020 or EG1010 or High School Senior Chemistry*	EA1110:03 Evolution of the Earth
EG1000:03 Engineering 1	MA1003:03 Mathematical Techniques *PREREQ: MA1000 or MA1011 or MA1009*
EV1005:03 Environmental Processes and Global Change	MA1580:03 Foundations of Data Science *PREREQ: MA1000 or MA1020 or MA0020 or Maths B*
MA1000:03 Mathematical Foundation *PREREQ: MA1020 or MA0020 or Maths B or Maths C*	PH1007:03 Advanced Stream Physics 2 *PREREQ: ((Maths B or equivalent or MA1020 or MA0020) and PH1005) or (Physics and Maths C)*
PH1005:03 Advanced Stream Physics 1 *PREREQ: MA1000*	

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
CP1401:03 Problem Solving and Programming I	CP1401:03 Problem Solving and Programming I **External*	CP1404:03 Programming II *PREREQ: CP1801 or CP1401 or CP1200 or EG1002 or CP2200 or SC1201*
	CP1404:03 Programming II **External*	

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 *PREREQ: MA1003*	CH5002:03 Research Skills and Communication in Chemistry (Advanced) *PREREQ: Satisfactory completion of 9 credit points of Level 2, 3 or 5 CH subjects*
~~EA5409:03 Mineralogy and Geophysics~~	SC5502:03 Design and Analyses in Ecological Studies
~~PH5014:03 Research Skills and Communication in Physics (Advanced)~~	

ADDITIONAL INFORMATION

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.

COURSE HANDBOOK

Bachelor of Advanced Science Handbook
Mathematics Major
Physics Major