

RECOMMENDED STUDY PLAN

Mid-Year Entry 2021

DEGREE Bachelor of Science MAJOR Physics (PCS) – TSV only after 1st Semester

NAME _____ MINOR Mathematics (MTM)

To assist you with subject information, we recommend you consult with your CSE Course/Major Advisor and refer to [Subject Search](#). If you would prefer a part-time study plan, please adjust the below planner, reviewing subject prerequisites to ensure you are on track for course completion.

The College of Science and Engineering has implemented screening testing in this degree so that students who are suitably qualified can replace core preparatory subjects with elective subjects. The screening tests **must** be completed even if Senior Chemistry or Maths Methods (or equivalent) have been studied at secondary school.

Year 1	MID-YEAR ENTRY	Study Period 2 - SP2
		Degree Core: <u>CH1020</u> Preparatory Chemistry # <i># This core subject may be replaced by an elective if you pass the chemistry screening test (held during orientation week). The screening test needs to be completed even if Senior Chemistry (or equivalent) has been studied at secondary school.</i>
		Degree Core: <u>MA1020</u> Preparatory Math* <i>* This core subject may be replaced by an elective if you pass the maths screening test (held during orientation week). The screening test needs to be completed even if Maths Methods (or equivalent) has been studied at secondary school.</i>
		Degree Opt Core <u>Breadth-List 1</u>: Elective:

Year 2	Study Period 1 - SP1	Study Period 2 - SP2
	Degree Core: <u>SC1101</u> Science Technology and Truth	Degree Opt Core <u>SC1102</u> Modelling Natural Systems PREREQ: MA1020 OR <u>SC1109</u> Modelling Natural Systems-Advanced^ PREREQ: MA1000 OR MA1009
	Degree Opt Core <u>Breadth-List 1</u>:	Major Core: <u>PH1007</u> Advanced Stream Physics 2 PREREQ: ((MATHS B OR EQUIVALENT OR MA1020) AND PH1005) OR (PHYSICS AND MATHS C)
	Major Core: <u>PH1005</u> Advanced Stream Physics 1 PREREQ: Maths B OR MA1020 OR MA1000 OR MA1008.	Minor Core: <u>MA1003</u> Mathematical Techniques PREREQ: MA1000 OR MA1011 OR MA1009
	Minor Core: <u>MA1000</u> Mathematical Foundations PREREQ: MA1020 OR MATHEMATICS B OR MATHS C	Elective:

^ Note- SC1109 is compulsory in the Advanced BSc Program and should be taken instead of SC1102 if you are considering that pathway.

Year 3	Study Period 1 - SP1	Study Period 2 - SP2
	Degree Core: <u>SC2202</u> Quantitative Methods in Science PREREQ: SC1102 OR MA1020 OR MATH B OR EQUIVALENT OR <u>SC2209</u> Quantitative Methods in Science-Advanced PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS	Degree Opt Core <u>Skill-List 2:</u>
	Major Core: <u>PH2002</u> Classical Mechanisms and Quantum Physics 1 PREREQ: MA1003 AND PH1005 AND (PH1006 OR PH1007 OR (EG1012 AND EG1011))	Major Core: <u>PH2240</u> Atomic and Nuclear Physics PREREQ: PH2002 AND MA1003
	Major Core: <u>PH2019</u> Introduction to Electromagnetism Optics and Early Quantum PREREQ: (EG1012 OR PH1005) AND MA1003	Major Core: <u>PH3002</u> Quantum Physics 2 PREREQ: MA2000 AND PH2002
	Minor Core: <u>MA2000</u> Mathematics for Scientists and Engineers PREREQ: MA1003	Minor Core: <u>MA2210</u> Linear Algebra PREREQ: MA1003

Year 4	Study Period 1 - SP1	Study Period 2 - SP2
	Degree Core: <u>SC3008</u> Professional Placement - <i>available any SP</i>	<p style="text-align: center;"><i>MID-YEAR COMPLETION</i></p>
	Degree Core: <u>SC3010</u> Sensors and Sensing for Scientists PREREQ: SC2202/SC2209	
	Major Core: <u>PH3008</u> Statistical Mechanics and Transport PREREQ: PH2019 AND PH2002 AND MA2000	
	Major Core: <u>PH3019</u> Electromagnetic Phenomena PREREQ: MA2000 and PH2019	

Further Degree Options:

Breadth-List 1:	
Study Period 1 – SP1	Study Period 2 – SP2
<p><u>CP1401</u> Problem Solving and Programming I OR <u>CP1404</u> Programming II PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201 <i>both subjects available in SP1 and SP2 **</i></p>	
<p><u>BM1000</u> Introductory Biochemistry and Microbiology – <i>TSV only</i> PREREQ: CH1020 OR SENIOR CHEMISTRY</p>	<p><u>CH1002</u> Chemistry: Principles & Applications – <i>TSV only</i> PREREQ: CH1001 OR CH1011</p>
<p><u>CH1001</u> Chemistry: A Central Science PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY</p>	<p><u>BS1001</u> Introduction to Biological Processes</p>
<p><u>BS1007</u> Introduction to Biodiversity – <i>TSV only</i> OR <u>BZ1006</u> Diversity of Life – <i>CNS only</i></p>	<p><u>EA1110</u> Evolution of the Earth</p>
<p><u>EG1000</u> Engineering 1</p>	
<p><u>EV1005</u> Environmental Processes & Global Change</p>	

****CP1404 has been added to the structure from 2019. We would prefer if you would take CP1404.**

Skill-List 2:	
Study Period 1 – SP1	Study Period 2 – SP2
<p><u>CP2404</u> Database Modelling</p>	<p><u>EV2502</u> Introduction to Geographic Information Systems PREREQ: 12CP LEVEL 1 SUBJECTS</p>
	<p><u>CH2103</u> Analytical Chemistry – <i>TSV only</i> PREREQ: CH1001 OR CH1011</p>