The information provided is designed to provide helpful information on your study plan. Changes to subject information after this time may affect your study plan. Please refer to the enrolment resources for up to date information.

# RECOMMENDED STUDY PLAN

**Mid-Year Entry 2021**

DEGREE Bachelor of Science MAJOR Mathematics (MTM) – TSV only after 1st Semester

NAME _____

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.

| | | Study Period 2 - SP2 |
|---|---|---|
| **Year 1** | *MID-YEAR ENTRY* | **Degree Core:** CH1020 Preparatory Chemistry #<br>*# 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.* |
| | | **Degree Opt Core**<br>SC1102 Modelling Natural Systems<br>**PREREQ: MA1020**<br>**OR**<br>SC1109 Modelling Natural Systems-Advanced^<br>**PREREQ: MA1000 OR MA1009** |
| | | **Major Core:** MA1000 Mathematical Foundations<br>**PREREQ: MA1020 OR MATHEMATICS B OR MATHS C** |
| | | **Elective/Minor/2nd Major:**<br>*This would be the Degree Core - MA1020 Preparatory Math but the assumption is the student has passed the screening test and passed relevant Maths at secondary school.*<br><br>*CP1401 Problem Solving and Programming I **OR** CP1404 Programming II - Recommended*<br>***PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201*** |

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

| Year 2 | Study Period 1 - SP1 | Study Period 2 - SP2 |
|---|---|---|
| | **Degree Core:** SC1101 Science Technology and Truth | **Degree Opt Core Breadth-List 1:** |
| | **Degree Core:**<br>SC2202 Quantitative Methods in Science<br>**PREREQ: SC1102 OR MA1020 OR MATH B OR EQUIVALENT**<br>**OR**<br>SC2209 Quantitative Methods in Science-Advanced<br>**PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS** | **Degree Opt Core Skill-List 2:** |
| | **Major Core:** MA2000 Mathematics for Scientists and Engineers<br>**PREREQ: MA1003** | **Major Core:** MA2210 Linear Algebra<br>**PREREQ: MA1003** |
| | **Major Core:** MA2211 Discrete Mathematics<br>**PREREQ: MATHS B** | **Elective/Minor/2nd Major:** |

| **SP3 (Jan-Feb)** |
|---|
| **Major Core:** *MA1003 Mathematical Techniques*<br>***PREREQ: MA1000 OR MA1011 OR MA1009*** |

| Year 3 | Study Period 1 - SP1 | Study Period 2 - SP2 |
|---|---|---|
| | **Degree Core:** SC3010 Sensors and Sensing for Scientists<br>**PREREQ: SC2202/SC2209** | **Major Core:** MA3210 Probability and Stochastic Processes<br>**PREREQ: MA2000 AND (MA2210 OR ~~MA2201 Numerical Mathematics~~)** |
| | **Major Core:** MA3211 Mathematical Modelling and Differential Equations<br>**PREREQ: MA2000 AND (MA2210 OR ~~MA2201 Numerical Mathematics~~)** | **Major Core:** MA3212 Optimisation and Operations Research<br>**PREREQ: MA2000 AND (MA2210 OR ~~MA2201 Numerical Mathematics~~)** |
| | **Elective/Minor/2nd Major:** | **Elective/Minor/2nd Major:** |
| | **Elective/Minor/2nd Major:** | **Elective/Minor/2nd Major:**<br>*MA2405 Advanced Statistical Modelling - Recommended*<br>***PREREQ: MA1401 OR MA2401 OR SC2202/SC2209*** |

| Year 4 | Study Period 1 - SP1 | |
|---|---|---|
| | **Degree Core:** SC3008 Professional Placement - *available any SP* | *MID-YEAR COMPLETION* |
| | **Degree Opt Core Breadth-List 1:** | |
| | **Elective/Minor/2nd Major:** | |

**Further Degree Options:**

| **Breadth-List 1**: | |
|---|---|
| **Study Period 1 – SP1** | **Study Period 2 – SP2** |
| CP1401 Problem Solving and Programming I<br>**OR**<br>CP1404 Programming II<br>**PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201**<br>*both subjects available in SP1 and SP2 ***** | |
| BM1000 Introductory Biochemistry and Microbiology – *TSV only*<br>**PREREQ: CH1020 OR SENIOR CHEMISTRY** | BS1001 Introduction to Biological Processes |
| BS1007 Introduction to Biodiversity –*TSV only*<br>OR<br>BZ1006 Diversity of Life – *CNS only* | EA1110 Evolution of the Earth |
| EG1000 Engineering 1 | PH1007 Advanced Stream Physics 2 – *TSV only*<br>**PREREQ: ((MATHS B OR EQUIVALENT OR MA1020) AND PH1005) OR (PHYSICS AND MATHS C)** |
| EV1005 Environmental Processes & Global Change | |
| PH1005 Advanced Stream Physics 1<br>**PREREQ: Maths B OR MA1020 OR MA1000 OR MA1008.** | |

*****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** |
| CP2404 Database Modelling | EV2502 Introduction to Geographic Information Systems<br>**PREREQ: 12CP LEVEL 1 SUBJECTS** |