

## RECOMMENDED STUDY PLAN

Mid-Year Entry **2022**

DEGREE Bachelor of Technology and Innovation MAJOR Data Science (DSC)

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.

### Year 1

<b>MID-YEAR ENTRY</b>	<b>Study Period 2 - SP2</b>
	<b>Degree Option Core</b> <u>SC1102</u> Modelling Natural Systems <b>PREREQ: MA1020</b> <b>OR</b> <u>SC1109</u> Modelling Natural Systems-Advanced^ <b>PREREQ: MA1000 OR MA1009</b>
	<b>Degree Core: <u>MA1020</u> Preparatory Math*</b> <i>*This subject is equivalent to QLD-Maths Methods from high school.</i> <b>OR</b> <b>Elective - if student has completed high school level Mathematics B or equivalent</b>
	<b>Elective:</b>
	<b>Trimester 3 (Sept-Dec)</b>
	<b>Degree Core: <u>CP1403</u> Design Thinking</b>

^SC1109 has more math-based tutorials and requires MA1000. It may be taken as an alternative to SC1102 if you would prefer. It is a required subject in the Advanced Science program if you are considering that pathway.

## Year 2

Study Period 1 - SP1	Study Period 2 - SP2
<b>Degree Core:</b> <u>SC1101</u> Science Technology and Truth	<b>Major Core:</b> <u>MA1580</u> Foundations of Data Science PREREQ: MA1000 OR MA1020 OR MATHS B
<b>Major Option Core:</b> <u>MA1000</u> Mathematical Foundations PREREQ: MA1020 OR MATHEMATICS B OR MATHS C <b>OR</b> <u>CP1404</u> Programming II TR3 PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200	<b>Major Core:</b> <u>MA2405</u> Advanced Statistical Modelling PREREQ: MA2401 OR SC2202/SC2209 AND MA1000
	<b>Major Core:</b> <u>MA3405</u> Statistical Data Mining for Big Data PREREQ: MA2405 OR MA2000 OR SC2202/SC2209

Study Period 3 (Jan-Feb)
<b>Elective:</b> <u>MA1003</u> Mathematical Techniques – Recommended PREREQ: MA1000 OR MA1011 OR MA1009
Trimester 1 (Feb-May)
<b>Elective: Additional Degree Requirement - CP1401</b> Problem Solving and Programming I – Required

Trimester 3 (Sept-Dec)
<b>Degree Option Core:</b> <u>CP1404</u> Programming II PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 <b>OR</b> <u>CP1401</u> Problem Solving and Programming

## Year 3

Study Period 1 - SP1	Study Period 2 - SP2
<b>Degree Option Core:</b> <u>SC2202</u> Quantitative Methods in Science PREREQ: SC1102 OR MA1020 OR MATH B OR EQUIVALENT <b>OR</b> <u>SC2209</u> Quantitative Methods in Science-Advanced PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS	<b>Major Option Core:</b> <u>MA3832</u> Neural Network and Deep Learning PREREQ: MA3405 AND CP1404 <b>OR</b> <u>MA3212</u> Optimisation and Operations Research – TSV only PREREQ: MA2000 AND (MA2210 OR MA2201)
<b>Degree Core:</b> <u>MA2830</u> Data Visualisation	<b>Major Core List 1:</b> <u>MA2210</u> Linear Algebra PREREQ: MA1003
<b>Elective:</b>	<b>Degree Core:</b> <u>EV2502</u> Introduction to Geographic Information Systems PREREQ: 12CP LEVEL 1 SUBJECTS
	<b>Trimester 3 (Sept-Dec)</b>
	<b>Degree Core:</b> <u>BX3173</u> Innovation Driven Entrepreneurship PREREQ: 18CP OF SUBJECTS
	<b>Major Core List 1:</b> <u>CP2404</u> Database Modelling – Recommended

## Year 4

<b>Study Period 1 - SP1</b>	<b>MID-YEAR COMPLETION</b>
<b>Degree Core:</b> <u>SC3008</u> Professional Placement - available any SP	
<b>Degree Core:</b> <u>EG3000:03</u> Introduction to Systems Engineering and Project Management <b>PREREQ:</b> EG1000 AND EG1002 AND EG1010 AND EG1011 AND EG1012 AND MA1000 AND MA1003 AND (PH1005 OR EG1001) OR 36CP	
<b>Major Core:</b> <u>MA3831</u> Natural Language Processing, Web Scraping and Large Data Processing <b>PREREQ:</b> CP1404 AND MA3405	
<b>Elective:</b>	

### Further Degree Options:

<b>Major Core List 1:</b>	
<b>Study Period 1 – SP1</b>	<b>Study Period 2 – SP2</b>
<del><u>MA2830</u> Data Visualisation – this subject is core in this degree and as such is not available in this list</del>	<u>MA2210</u> Linear Algebra <b>PREREQ:</b> MA1003
<u>MA2211</u> Discrete Mathematics – TSV only <b>PREREQ:</b> MATHS B	

  

<b>Trimester 3 (Sept-Dec)</b>
<u>CP2404</u> Database Modelling

### COURSE INCLUDES MANDATORY PROFESSIONAL PLACEMENT(S)

This course includes prescribed professional placements. Students may be required to undertake such placements away from the campus at which they are enrolled, at their own expense.

### ADDITIONAL INFORMATION

[Bachelor of Technology and Innovation course handbook](#)  
[Data Science major handbook](#)