JAMES COOK UNIVERSITY AUSTRALIA

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 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

	Study Period 2 - SP2
MID-YEAR ENTRY	**Degree Option Core** SC1102 Modelling Natural Systems **PREREQ: MA1020** **OR** SC1109 Modelling Natural Systems-Advanced^ **PREREQ: MA1000 OR MA1009**
	Degree Core: MA1020 Preparatory Math* **Mathematics B or equivalent* **OR** **Elective -** *if student has completed high school level Mathematics B or equivalent*
	Elective:

Trimester 3 (Sept-Dec)
Degree Core: CP1403 Design Thinking

^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
Degree Core: SC1101 Science Technology and Truth	**Major Core:** MA1580 Foundations of Data Science **PREREQ: MA1000 OR MA1020 OR MATHS B**
Major Option Core: MA1000 Mathematical Foundations **PREREQ: MA1020 OR MATHEMATICS B OR MATHS C** **OR** ~~CP1404 Programming II TR3~~ ~~**PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200**~~	**Major Core:** MA2405 Advanced Statistical Modelling **PREREQ: MA2401 OR SC2202/SC2209 AND MA1000**
	Major Core: MA3405 Statistical Data Mining for Big Data **PREREQ: MA2405 OR MA2000 OR SC2202/SC2209**

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

Trimester 3 (Sept-Dec)
Degree Option Core: CP1404 Programming II **PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200** **OR** ~~CP1401 Problem Solving and Programming~~

Year 3

Study Period 1 - SP1	Study Period 2 - SP2
Degree Option Core: SC2202 Quantitative Methods in Science **PREREQ: SC1102 OR MA1020 OR MATH B OR EQUIVALENT** **OR** SC2209 Quantitative Methods in Science-Advanced **PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS**	**Major Option Core:** MA3832 Neural Network and Deep Learning **PREREQ: MA3405 AND CP1404** **OR** ~~MA3212 Optimisation and Operations Research - *TSV only*~~ ~~**PREREQ: MA2000 AND (MA2210 OR MA2201)**~~
Degree Core: MA2830 Data Visualisation	**Major Core List 1:** *MA2210 Linear Algebra* ***PREREQ: MA1003***
Elective:	**Degree Core:** EV2502 Introduction to Geographic Information Systems **PREREQ: 12CP LEVEL 1 SUBJECTS**

Trimester 3 (Sept-Dec)
Degree Core: BX3173 Innovation Driven Entrepreneurship **PREREQ: 18CP OF SUBJECTS**
Major Core List 1: *CP2404 Database Modelling – Recommended*

Year 4

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

Further Degree Options:

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

Trimester 3 (Sept-Dec)
CP2404 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