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 2021

DEGREE Bachelor of Advanced Science MAJOR Data Science (DSC) - with recommended subjects

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.

	Study Period 1 - SP1	Study Period 2 - SP2
Year 1	**Degree Core:** SC1101 Science Technology and Truth	**Degree Core:** SC1109 Modelling Natural Systems-Advanced **PREREQ: MA1000 OR MA1009**
	Degree Core: MA1000 Mathematical Foundations **PREREQ: MA1020 OR MATHEMATICS B OR MATHS C**	**Degree Core:** MA1003 Mathematical Techniques **PREREQ: MA1000 OR MA1011 OR MA1009**
	Elective/Minor/2nd Major: CP1401 Problem Solving and Programming I-*Required*	**Major Core:** MA1580 Foundations of Data Science **PREREQ: MA1000 OR MA1020 OR MATHS B**
		Major Core: CP1404 Programming II **PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201**

SP3 (Jan-Feb)
Degree Core: CH1020 Preparatory Chemistry # *# This subject is equivalent to chemistry from high school.* *This core subject may be replaced by an elective if you pass the chemistry competency test.*

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	**Degree Core:** SC2209 Quantitative Methods in Science-Advanced **PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS**	**Major Core:** MA2405 Advanced Statistical Modelling **PREREQ: MA1401 OR MA2401 OR SC2202/SC2209**
	Major Core List 1: CP2404 Database Modelling	**Major Core:** MA3405 Statistical Data Mining for Big Data **PREREQ: MA2405 OR MA2000 OR SC2202/SC2209**
	Major Core List 1: MA2830 Data Visualisation	**Elective/Minor/2nd Major:** *MA2210 Linear Algebra - Recommended* ***PREREQ: MA1003***
	Elective/Minor/2nd Major: MA2000 Mathematics for Scientists and Engineers – *Recommended* **PREREQ: MA1003**	**Elective/Minor/2nd Major:** CP2406 Programming III – *Recommended* **PREREQ: CP1404 OR CP1804 OR CP1300**

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	**Degree Core:** SC3008 Professional Placement - *available any SP* **OR** SC3003 Science Research Internship - *available any SP*	
	Major Core: MA3831 Natural Language Processing, Web Scraping and Large Data Processing **PREREQ: CP1404**	**Degree Core List 1:**
	Elective/Minor/2nd Major:	**Major Core:** MA3832 Neural Network & Deep Learning-*Recommended* **PREREQ: MA3405 AND CP1404** **OR** MA3212 Optimisation and Operations Research - *TSV only* **PREREQ: MA2000 AND (MA2210 OR MA2201)**
	Elective/Minor/2nd Major:	**Elective/Minor/2nd Major:** CP3404 Information Security – *Recommended* **PREREQ: 6CP OF CP SUBJECTS AND 12CP OF SUBJECTS**
		Elective/Minor/2nd Major: MA3212 Optimisation and Operations Research - *TSV only – Recommended* **PREREQ: MA2000 AND (MA2210 OR MA2201)**

Further Degree Options:

Major Core List 1:	
Study Period 1 – SP1	**Study Period 2 – SP2**
CP2404 Database Modelling	MA2211 Discrete Mathematics **PREREQ: MATHS B**
MA2830 Data Visualisation	MA2210 Linear Algebra **PREREQ: MA1003**

Degree Core List 1: Advanced Skill Subjects	
Study Period 1 – SP1	**Study Period 2 – SP2**
	BC5203 Advanced Bioinformatics
	BS5260 Modelling Ecological Dynamics
	CH5002 Research Skills and Communication in Chemistry (Adv)
EA5409 Mineralogy and Geophysics – Not currently offered	*PH5014 Research Skills and Communication in Physics (Advanced) – Not currently offered*

SP3 (Jan-Feb)
SC5502 Design and Analyses in Ecological Studies – *This subject will move to SP2 in 2022*