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 Engineering (Honours) – Bachelor of Information Technology

NAME _____   MAJOR Civil Engineering (CVL)

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:** EG1000 Engineering 1	**Degree Core:** EG1010 Process Engineering
	Degree Core: EG1002 Computing and Sensors	**Degree Core:** EG1011 Statics and Dynamics **PREREQ: PH1005 OR (PHYSICS AND MATHS C)**
	Degree Core: MA1000 Mathematical Foundations **PREREQ: MA1020 OR MATHS B OR MATHS C**	**Degree Core:** EG1012 Electric Circuits
	Degree Core: PH1005 Advanced Stream Physics 1 **PREREQ: MATHS B OR MA1020 OR MA1000 OR MA1008**	**Degree Core:** MA1003 Mathematical Techniques **PREREQ: MA1000 OR MA1011 OR MA1009**

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	**Degree Core:** MA2000 Mathematics for Scientists and Engineers **PREREQ: MA1003**	**Degree Core:** CP1403 Design Thinking
	Degree Core: CP1404 Programming II - *External* **PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201**	**Degree Core:** CP2406 Programming III **PREREQ: CP1404 OR CP1804 OR CP1300**
	Major Core: CS2001 Engineering Strength of Materials **PREREQ: EG1011**	**Major Core:** CS2003 Introduction to Structural Design **PREREQ: CS2001**
	Major Core: ME2512 Thermofluid Mechanics **PREREQ: EG1011**	**Major Core:** CS2005 Introduction to Geotechnical Engineering **PREREQ: EG1011**

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	**Degree Core:** CP1402 Internet Fundamentals – *External*	**Major Core:** CS3002 Soil Mechanics and Geology **PREREQ: CS2005**
	Degree Core: CP2404 Database Modelling	**Major Core:** CS3008 Fluid Mechanics **PREREQ: MA2000 AND ME2512**
	Major Core: CS2002 Catchment, Stream and Lake Engineering	**List Options:** *see tables below for details*
	List Options: *see tables below for details*	**List Options:** *see tables below for details*

	Study Period 1 - SP1	Study Period 2 - SP2
Year 4	**Degree Core:** EG3000 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**	**Degree Core:** CP3407 Advanced Software Engineering **PREREQ: CP1404 OR CP1804 AND 18CP OF SUBJECTS**
	Major Core: CS3000 Structural Analysis **PREREQ: CS2003 AND MA2000**	**Major Core:** CS3003 Design of Steel and Concrete Structures **PREREQ: CS2003 AND CS3000**
	Major Core: CS3001 Concrete Engineering **PREREQ: CS2001**	**Major Core:** CS3004 Transportation Engineering – *only offered EVEN years* *
	List Options: *see tables below for details*	**List Options:** *see tables below for details*

*Will need to swap with a List subject depending on the year.

	Study Period 1 - SP1	Study Period 2 - SP2
Year 5	**Degree Core:** EG4011 Thesis Part 1 of 2 **PREREQ: 72CP**	**Degree Core:** EG4012 Thesis Part 2 of 2 **PREREQ: EG4011**
	Major Core: CS4001 Foundation Engineering and Rock Mechanics **PREREQ: CS3002**	**Major Core:** CS4005 Civil Engineering Design **PREREQ: CS3001 AND CS3003 AND CS40001 AND CS4002**
	Major Core: CS4002 Hydraulic and Coastal Engineering **PREREQ: CS3008**	**Major Core:** CS4008 Water and Wastewater Engineering **PREREQ: CS2002 AND EG1010**
	Major Core: CS4010 Finite Element Analysis and Structural Dynamics **PREREQ: EG1002 AND CS3000 AND MA2000**	**List Options:** *see tables below for details*

Further Degree Options:
Select 1 subject from List 1 **AND** Select 3 subjects from List 2 **AND** Select 2 subjects from List 3*

List 1: Select 1 subject	
Study Period 1 – SP1	**Study Period 2 – SP2**
CP1406 Web Design and Development	CP1407 Introductory Machine Learning and Data Science - *External*
CP2410 Algorithms and Data Structures – *External* **PREREQ: 6CP OF CP SUBJECTS**	CP2405 Collective Intelligence and Entrepreneurship **PREREQ: 24CP**
CP2411 3D Modelling and Animation – *External* **PREREQ: 6CP OF CP SUBJECTS**	CP2408 Design Thinking and Creative IT Industies **PREREQ: CP1403 OR CP1803 OR SC1201**
	CP2409 Network Forensics and Data Communications – *External* **PREREQ: CP1402 OR CP2012 OR CP2231 OR CP1802**
	CP2412 Game Design and Technologies – *External* **PREREQ: 6CP OF CP SUBJECTS**

List 2: Select 3 subjects	
Study Period 1 – SP1	**Study Period 2 – SP2**
CP3402 Content Management Systems **PREREQ: (CP1404 OR CP1804 AND CP1406 OR CP1806) OR CP2010, AND 24CP OF CP SUBJECTS**	CP3404 Information Security **PREREQ: 6CP OF CP SUBJECTS AND 12CP OF SUBJECTS**
CP3403 Data Mining **PREREQ: 6CP OF CP SUBJECTS AND 12CP OF SUBJECTS**	CP3405 Design Thinking and Project Management **PREREQ: CP2408**
CP3406 Mobile Computing **PREREQ: CP1404 OR CP1804 AND 18CP OF CP SUBJECTS**	
CP3408 Game Engine and Simulation – *External* **PREREQ: (CP1404 OR CP1804) AND 18 CP OF CP SUBJECTS**	

List 3: Select 2 subjects*	
Study Period 1 – SP1	**Study Period 2 – SP2**
CL2501 Process Analysis **PREREQ: EG1010**	CP1407 Introductory Machine Learning and Data Science - *External*
CP2410 Algorithms and Data Structures – *External* **PREREQ: 6CP OF CP SUBJECTS**	EA1110 Introductory Machine Learning and Data Science
EV2301 Urban Geography and Design **PREREQ: 12CP LEVEL 1 SUBJECTS**	CC2511 Embedded Systems Design **PREREQ: EG1002 OR CP1300 OR CP1404**
MA2211 - Discrete Mathematics – *TSV ONLY* **PREREQ: MATHS B**	CP2408 Design Thinking and Creative IT Industies **PREREQ: CP1403 OR CP1803 OR SC1201**
PH2002 Classical Mechanics and Quantum Physics 1 **PREREQ: MA1003 AND PH1005 AND (PH1006 OR PH1007 OR (EG1012 AND EG1011))**	EG2010 Materials Science and Engineering – *TSV only*
PH2019 Introduction to Electromagnetism Optics and Early Quantum **PREREQ: (EG1012 OR PH1005) AND MA1003**	EV2502 Introduction to Geographic Information Systems **PREREQ: 12CP LEVEL 1 SUBJECTS**
EE4000 Signal Processing 3 – *TSV only* **PREREQ: 48CP**	MA2210 - Linear Algebra **PREREQ: MA1003**
ME4521 Bulk Materials Handling – *TSV only, offered ODD years only* **PREREQ: 48CP**	ME2525 Machine Element Design – *TSV ONLY* **PREREQ: CS2001**
	PH2240 Atomic and Nuclear Physics – *TSV ONLY* **PREREQ: PH2002 AND MA1003**
	CC3501 Computer Interfacing and Control **PREREQ: CC2511**

	SP11 (Nov-Feb)
	EV3502 Advanced Geographic Information Systems – *TSV ONLY* **PREREQ: AT LEAST 12CP LEVEL 2 INCLUDING EV2502**

* If undertaking MA1020 only choose 1 subject from this list.