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

DEGREE Bachelor of Engineering (Honours) – Bachelor of Information Technology

NAME _____   MAJOR Mechanical Engineering (MEN)

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 2 - SP2
Year 1	*MID-YEAR ENTRY*	**Degree Core:** EG1010 Process Engineering
		Degree Core: CP1403 Design Thinking
		Degree Core: EG1012 Electric Circuits
		List Options: *see tables below for details*

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	**Degree Core:** EG1000 Engineering 1	**Degree Core:** MA1003 Mathematical Techniques **PREREQ: MA1000 OR MA1011 OR MA1009**
	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**	**Major Core:** EG2010 Materials Science and Engineering
	Degree Core: PH1005 Advanced Stream Physics 1 **PREREQ: MATHS B OR MA1020 OR MA1000 OR MA1008**	**List Options:** *see tables below for details*

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	**Degree Core:** MA2000 Mathematics for Scientists and Engineers **PREREQ: MA1003**	**Degree Core:** CP2406 Programming III **PREREQ: CP1404 OR CP1804 OR CP1300**
	Degree Core: CP1404 Programming II - *External* **PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201**	**Major Core:** EE3600 Automatic Control 1 **PREREQ: EG1012 AND MA2000**
	Major Core: ME2512 Thermofluid Mechanics **PREREQ: EG1011**	**Major Core:** CS3008 Fluid Mechanics **PREREQ: MA2000 AND ME2512**
	Major Core: CS2001 Engineering Strength of Materials **PREREQ: EG1011**	**Major Core:** ME2525 Machine Element Design **PREREQ: CS2001**

	Study Period 1 - SP1	Study Period 2 - SP2
Year 4	**Degree Core:** CP1402 Internet Fundamentals – *External*	**Degree Core:** CP3407 Advanced Software Engineering **PREREQ: CP1404 OR CP1804 AND 18CP OF SUBJECTS**
	Degree Core: CP2404 Database Modelling	**Major Core:** ME3512 Heat and Mass Transfer **PREREQ: MA2000**
	Major Core: ME2521 Dynamics of Machine Elements **PREREQ: EG1011**	**Major Core:** ME3525 Mechanical Design **PREREQ: ME2525**
	List Options: *see tables below for details*	**List Options:** *see tables below for details*

	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: EG3001 Finite Element Analysis **PREREQ: EG1002 AND EG1011 AND MA2000**	**Major Core:** ME4522 Energy, Conversion and Refrigeration **PREREQ: ME2512**
	Major Core: ME3511 Dynamics and Acoustics **PREREQ: MA2000 AND ME2521**	**Major Core:** ME4515 Advanced Mechanical Engineering Design **PREREQ: ME3525**
	Major Core: ME3515 Advanced Manufacturing Engineering – *offered EVEN years only** **PREREQ: ME2525**	**Major Core:** EG4013 Asset Management, Maintenance and Reliability **PREREQ: (EG1000 AND EG1002 AND EG1010 AND EG1011 AND EG1012 AND MA1000 AND MA1003 AND (PH1005 OR EG1001)) OR 36CP**

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

	Study Period 1 - SP1	
Year 6	**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**	*MID-YEAR COMPLETION*
	Major Core: ME4513 Advanced Fluid Mechanics **PREREQ: CS3008**	
	List Options: *see tables below for details*	
	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))**	CS2004 Surveying and Construction – *TSV ONLY, offered ODD years 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**	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.