JAMES COOK UNIVERSITY AUSTRALIA

RECOMMENDED STUDY PLAN   2022

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

NAME _____   MAJOR Chemical Engineering (CEM)

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**

*Students may be required to take MA1020 in SP3 which will count as an elective line.

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	**Degree Core:** MA2000 Mathematics for Scientists and Engineers **PREREQ: MA1003**	**Major Core:** CH1002 Chemistry: Principles & Applications **PREREQ: CH1001 OR CH1011**
	Major Core: CH1001 Chemistry: A Central Science **PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY**	**Major Core:** CL2502 Chemical Engineering Thermodynamics **PREREQ: CL2501 AND MA2000**
	Major Core: CL2501 Process Analysis **PREREQ: EG1010**	

Trimester 1 (Feb-May)
Degree Core: CP1402 Internet Fundamentals

Trimester 3 (Sept-Dec)
Degree Core: CP1403 Design Thinking
Degree Core: CP1404 Programming II **PREREQ: CP1401 OR EG1002**

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	**Major Core:** ME2512 Thermofluid Mechanics **PREREQ: EG1011**	**Major Core:** CH2103 Analytical Chemistry **PREREQ: CH1001 OR CH1011**
	List Options: *see tables below for details*	**Major Core:** CS3008 Fluid Mechanics **PREREQ: MA2000 AND ME2512**

	Trimester 3 (Sept-Dec)
	Degree Core: CP2404 Database Modelling

Trimester TBA		
List Options: *see tables below for details*	**Degree Core:** CP2406 Programming III **PREREQ: CP1404**	**Degree Core:** CP3407 Advanced Software Engineering **PREREQ: CP1404 AND 18CP OF SUBJECTS**

	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**	**Major Core:** EE3600 Automatic Control 1 **PREREQ: EG1012 AND MA2000**
	Major Core: CL3021 Mass Transfer Operations **PREREQ: CL2501 AND MA2000**	**Major Core:** ME3512 Heat and Mass Transfer **PREREQ: MA2000**
	Major Core: CL3030 Reactor Design **PREREQ: CL2501 AND MA2000**	**Major Core:** CL4538 Bioprocess Engineering **PREREQ: CL2502 OR CL3010 AND CL3021 AND CL3030**

Trimester TBA	
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: CL4040 Safety, Environment and Sustainability in the Process Industries **PREREQ: 48CP**	**Major Core:** CL4537 Minerals and Solids Processing **PREREQ: 48CP**
	Major Core: CL4071 Chemical Engineering Design (Part 1 of 2) **PREREQ: (CL2502 OR CL3010) AND CL3021 AND CL3030 AND CL4538 AND CS3008 AND ME3512**	**Major Core:** CL4072 Chemical Engineering Design (Part 2 of 2) **PREREQ: CL4071**
	List Options: *see tables below for details*	

Trimester TBA
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 any 2 undergraduate subjects OR if required to take MA1020 select 1 undergraduate subject.

List 1: Select 1 subject		
Trimester 1 (Feb-May)	**Trimester 2 (Jun-Aug)**	**Trimester 3 (Sept-Dec)**
CP1406 Web Design and Development	CP1407 Introductory Machine Learning and Data Science	
Trimester TBA		
CP2410 Algorithms and Data Structures **PREREQ: 6CP OF CP SUBJECTS**	CP2405 Collective Intelligence and Entrepreneurship **PREREQ: 24CP**	CP2409 Network Forensics and Data Communications **PREREQ: CP1402**
CP2411 3D Modelling and Animation **PREREQ: 6CP OF CP SUBJECTS**	CP2408 Design Thinking and Creative IT Industries **PREREQ: CP1403**	CP2412 Game Design and Technologies **PREREQ: 6CP OF CP SUBJECTS**

List 2: Select 3 subjects		
Trimester TBA		
CP3402 Content Management Systems **PREREQ: (CP1404 OR CP1804 AND CP1406 OR CP1806) OR CP2010, AND 24CP OF CP SUBJECTS**	CP3404 Information Security **PREREQ: 18CP OF SUBJECTS, INLCUDING CP1402**	CP3406 Mobile Computing **PREREQ: CP1404 OR CP1804**
CP3403 Data Mining **PREREQ: (CP2403 AND CP2404) OR (18 CREDIT POINTS OF UNDERGRADUATE SUBJECTS INCLUDING 6 CREDIT POINTS OF CP SUBJECTS)**	CP3405 Design Thinking and Project Management **PREREQ: CP2408**	CP3408 Game Engine and Simulation **PREREQ: (CP1404 OR CP1804) AND 18 CP OF CP SUBJECTS**