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 2021-2022

DEGREE Bachelor of Engineering (Honours) MAJOR Chemical Engineering (CEM)

NAME _____ MINOR Mathematics (MAT)

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<br>**PREREQ: PH1005 OR (PHYSICS AND MATHS C)** |
| | **Degree Core:** MA1000 Mathematical Foundations<br>**PREREQ: MA1020 OR MATHS B OR MATHS C** | **Degree Core:** EG1012 Electric Circuits |
| | **Degree Core:** PH1005 Advanced Stream Physics 1<br>**PREREQ: MATHS B OR MA1020 OR MA1000 OR MA1008** | **Degree Core:** MA1003 Mathematical Techniques<br>**PREREQ: MA1000 OR MA1011 OR MA1009** |

| | Study Period 1 - SP1 | Study Period 2 - SP2 |
|---|---|---|
| **Year 2** | **Degree Core:** MA2000 Mathematics for Scientists and Engineers<br>**PREREQ: MA1003** | **Major Core:** CH1002 Chemistry: Principles & Applications<br>**PREREQ: CH1001 OR CH1011** |
| | **Major Core:** CH1001 Chemistry: A Central Science<br>**PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY** | **Major Core:** CL2502 Chemical Engineering Thermodynamics<br>**PREREQ: CL2501 AND MA2000** |
| | **Major Core:** CL2501 Process Analysis<br>**PREREQ: EG1010** | **Major Core:** CS3008 Fluid Mechanics<br>**PREREQ: MA2000 AND ME2512** |
| | **Major Core:** ME2512 Thermofluid Mechanics<br>**PREREQ: EG1011** | **Minor Core:** MA2210 Linear Algebra<br>**PREREQ: MA1003** |

| | Study Period 1 - SP1 | Study Period 2 - SP2 |
|---|---|---|
| **Year 3** | **Degree Core:** EG3000 Introduction to Systems Engineering and Project Management<br>**PREREQ: EG1000 AND EG1002 AND EG1010 AND EG1011 AND EG1012 AND MA1000 AND MA1003 AND (PH1005 OR EG1001) OR 36CP** | **Major Core:** CH2103 Analytical Chemistry<br>**PREREQ: CH1001 OR CH1011** |
| | **Major Core:** CL3021 Mass Transfer Operations<br>**PREREQ: CL2501 AND MA2000** | **Major Core:** EE3600 Automatic Control 1<br>**PREREQ: EG1012 AND MA2000** |
| | **Major Core:** CL3030 Reactor Design<br>**PREREQ: CL2501 AND MA2000** | **Major Core:** ME3512 Heat and Mass Transfer<br>**PREREQ: MA2000** |
| | **Minor Core:** MA2211 Discrete Mathematics<br>**PREREQ: MATHS B** | **Major Core:** CL4538 Bioprocess Engineering<br>**PREREQ: CL2502 OR CL3010 AND CL3021 AND CL3030** |

| | Study Period 1 - SP1 | Study Period 2 - SP2 |
|---|---|---|
| Year 4 | **Degree Core:** EG4011 Thesis Part 1 of 2<br>**PREREQ: 72CP** | **Degree Core:** EG4012 Thesis Part 2 of 2<br>**PREREQ: EG4011** |
| | **Major Core:** CL4040 Safety, Environment and Sustainability in the Process Industries<br>**PREREQ: 48CP** | **Major Core:** CL4537 Minerals and Solids Processing<br>**PREREQ: 48CP** |
| | **Major Core:** CL4071 Chemical Engineering Design (Part 1 of 2)<br>**PREREQ: CL3010 AND CL3021 AND CL3030 AND CL4538 AND CS3008 AND ME3512** | **Major Core:** CL4072 Chemical Engineering Design (Part 2 of 2)<br>**PREREQ: CL4071** |
| | **Minor Core List 1:** | **Minor Core List 1:** |

**Further Degree Options:**

| **Minor Core List 1:** | |
|---|---|
| **Study Period 1 – SP1** | **Study Period 2 – SP2** |
| MA3211 Mathematical Modelling and Differential Equations<br>**PREREQ: MA2000 AND (MA2210 OR MA2201)** | MA2405 Advanced Statistical Modelling<br>**PREREQ: MA1401 OR MA2401 OR SC2202/SC2209 AND MA1000** |
| SC2202 Quantitative Methods in Science<br>**PREREQ: SC1102 OR MA1020 OR MA1000 OR MATHS B OR EQUIVALENT** | MA2900 Mathematics Content Knowledge for Lower Secondary School Teaching<br>**PREREQ: MA1000** |
| | MA3210 Probability and Stochastic Processes<br>**PREREQ: MA2000 AND (MA2210 OR MA2201)** |
| | MA3212 Optimisation and Operations Research<br>**PREREQ: MA2000 AND (MA2210 OR MA2201)** |