

## RECOMMENDED STUDY PLAN

2021-2022

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

NAME \_\_\_\_\_ MINOR Data Science (DSC)

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

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	<b>Degree Core:</b> <u>MA2000</u> Mathematics for Scientists and Engineers PREREQ: MA1003	<b>Major Core:</b> <u>CH1002</u> Chemistry: Principles & Applications PREREQ: CH1001 OR CH1011
	<b>Major Core:</b> <u>CH1001</u> Chemistry: A Central Science PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY	<b>Major Core:</b> <u>CL2502</u> Chemical Engineering Thermodynamics PREREQ: CL2501 AND MA2000
	<b>Major Core:</b> <u>CL2501</u> Process Analysis PREREQ: EG1010	<b>Major Core:</b> <u>CS3008</u> Fluid Mechanics PREREQ: MA2000 AND ME2512
	<b>Major Core:</b> <u>ME2512</u> Thermofluid Mechanics PREREQ: EG1011	<b>Minor Core:</b> <u>MA1580</u> Foundations of Data Science PREREQ: MA1000 OR MA1020 OR MATHS B

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	<b>Degree Core:</b> <u>EG3000</u> 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	<b>Major Core:</b> <u>CH2103</u> Analytical Chemistry PREREQ: CH1001 OR CH1011
	<b>Major Core:</b> <u>CL3021</u> Mass Transfer Operations PREREQ: CL2501 AND MA2000	<b>Major Core:</b> <u>EE3600</u> Automatic Control 1 PREREQ: EG1012 AND MA2000
	<b>Major Core:</b> <u>CL3030</u> Reactor Design PREREQ: CL2501 AND MA2000	<b>Major Core:</b> <u>ME3512</u> Heat and Mass Transfer PREREQ: MA2000
	<b>Minor Core:</b> <u>SC2202</u> Quantitative Methods in Science PREREQ: SC1102 OR MA1020 OR MATHS B OR EQUIVALENT	<b>Major Core:</b> <u>CL4538</u> Bioprocess Engineering PREREQ: CL2502 OR CL3010 AND CL3021 AND CL3030

<b>Year 4</b>	<b>Study Period 1 - SP1</b>	<b>Study Period 2 - SP2</b>
	<b>Degree Core:</b> <u>EG4011</u> Thesis Part 1 of 2 PREREQ: 72CP	<b>Degree Core:</b> <u>EG4012</u> Thesis Part 2 of 2 PREREQ: EG4011
	<b>Major Core:</b> <u>CL4040</u> Safety, Environment and Sustainability in the Process Industries PREREQ: 48CP	<b>Major Core:</b> <u>CL4537</u> Minerals and Solids Processing PREREQ: 48CP
	<b>Major Core:</b> <u>CL4071</u> Chemical Engineering Design (Part 1 of 2) PREREQ: CL3010 AND CL3021 AND CL3030 AND CL4538 AND CS3008 AND ME3512	<b>Major Core:</b> <u>CL4072</u> Chemical Engineering Design (Part 2 of 2) PREREQ: CL4071
	<b>Minor Core List 1:</b>	<b>Minor Core:</b> <u>MA2405</u> Advanced Statistical Modelling PREREQ: MA1401 OR MA2401 OR SC2202/SC2209 AND MA1000

**Further Degree Options:**

<b>Minor Core List 1:</b>	
<b>Study Period 1 – SP1</b>	<b>Study Period 2 – SP2</b>
<u>MA3831</u> Natural Language Processing, Web Scraping and Large Data Processing PREREQ: CP1404 AND MA3405	<u>MA3405</u> Statistical Data Mining for Big Data PREREQ: MA2405 OR MA2000 OR SC2202/SC2209
	<u>MA3832</u> Neural Network and Deep Learning PREREQ: MA3405 OR MA5405 AND CP1404