

RECOMMENDED STUDY PLAN

2021

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

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	Degree Core: <u>MA2000</u> Mathematics for Scientists and Engineers PREREQ: MA1003	Degree Core: <u>CP1403</u> Design Thinking
	Degree Core: <u>CP1404</u> Programming II - External PREREQ: CP1801 OR CP1401 OR CP1200 OR EG1002 OR CP2200 OR SC1201	Degree Core: <u>CP2406</u> Programming III PREREQ: CP1404 OR CP1804 OR CP1300
	Major Core: <u>CH1001</u> Chemistry: A Central Science PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY	Major Core: <u>CH1002</u> Chemistry: Principles & Applications PREREQ: CH1001 OR CH1011
	Major Core: <u>CL2501</u> Process Analysis PREREQ: EG1010	Major Core: <u>CL2502</u> Chemical Engineering Thermodynamics PREREQ: CL2501 AND MA2000

	Study Period 1 - SP1	Study Period 2 - SP2
Year 3	Degree Core: <u>CP1402</u> Internet Fundamentals – External	Major Core: <u>CH2103</u> Analytical Chemistry PREREQ: CH1001 OR CH1011
	Degree Core: <u>CP2404</u> Database Modelling	Major Core: <u>CS3008</u> Fluid Mechanics PREREQ: MA2000 AND ME2512
	Major Core: <u>ME2512</u> Thermofluid Mechanics PREREQ: EG1011	<u>List Options:</u> see tables below for details
	<u>List Options:</u> see tables below for details	<u>List Options:</u> see tables below for details

Year 4	Study Period 1 - SP1	Study Period 2 - SP2
	Degree Core: <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	Degree Core: <u>CP3407</u> Advanced Software Engineering PREREQ: CP1404 OR CP1804 AND 18CP OF SUBJECTS
	Major Core: <u>CL3021</u> Mass Transfer Operations PREREQ: CL2501 AND MA2000	Major Core: <u>EE3600</u> Automatic Control 1 PREREQ: EG1012 AND MA2000
	Major Core: <u>CL3030</u> Reactor Design PREREQ: CL2501 AND MA2000	Major Core: <u>ME3512</u> Heat and Mass Transfer PREREQ: MA2000
	List Options: see tables below for details	Major Core: <u>CL4538</u> Bioprocess Engineering PREREQ: CL2502 OR CL3010 AND CL3021 AND CL3030

Year 5	Study Period 1 - SP1	Study Period 2 - SP2
	Degree Core: <u>EG4011</u> Thesis Part 1 of 2 PREREQ: 72CP	Degree Core: <u>EG4012</u> Thesis Part 2 of 2 PREREQ: EG4011
	Major Core: <u>CL4040</u> Safety, Environment and Sustainability in the Process Industries PREREQ: 48CP	Major Core: <u>CL4537</u> Minerals and Solids Processing PREREQ: 48CP
	Major Core: <u>CL4071</u> Chemical Engineering Design (Part 1 of 2) PREREQ: CL3010 AND CL3021 AND CL3030 AND CL4538 AND CS3008 AND ME3512	Major Core: <u>CL4072</u> Chemical Engineering Design (Part 2 of 2) PREREQ: CL4071
	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
<u>CP1406</u> Web Design and Development	<u>CP1407</u> Introductory Machine Learning and Data Science - <i>External</i>
<u>CP2410</u> Algorithms and Data Structures – <i>External</i> PREREQ: 6CP OF CP SUBJECTS	<u>CP2405</u> Collective Intelligence and Entrepreneurship PREREQ: 24CP
<u>CP2411</u> 3D Modelling and Animation – <i>External</i> PREREQ: 6CP OF CP SUBJECTS	<u>CP2408</u> Design Thinking and Creative IT Industries PREREQ: CP1403 OR CP1803 OR SC1201
	<u>CP2409</u> Network Forensics and Data Communications – <i>External</i> PREREQ: CP1402 OR CP2012 OR CP2231 OR CP1802
	<u>CP2412</u> Game Design and Technologies – <i>External</i> PREREQ: 6CP OF CP SUBJECTS

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

List 3: Select 2 subjects*	
Study Period 1 – SP1	Study Period 2 – SP2
<u>CP2410</u> Algorithms and Data Structures – <i>External</i> PREREQ: 6CP OF CP SUBJECTS	<u>CP1407</u> Introductory Machine Learning and Data Science - <i>External</i>
<u>CS2001</u> Engineering Strength of Materials PREREQ: EG1011	<u>EA1110</u> Introductory Machine Learning and Data Science
<u>EV2301</u> Urban Geography and Design PREREQ: 12CP LEVEL 1 SUBJECTS	<u>CC2511</u> Embedded Systems Design PREREQ: EG1002 OR CP1300 OR CP1404
<u>MA2211</u> - Discrete Mathematics – <i>TSV ONLY</i> PREREQ: MATHS B	<u>CP2408</u> Design Thinking and Creative IT Industries PREREQ: CP1403 OR CP1803 OR SC1201
<u>PH2002</u> Classical Mechanics and Quantum Physics 1 PREREQ: MA1003 AND PH1005 AND (PH1006 OR PH1007 OR (EG1012 AND EG1011))	<u>CS2004</u> Surveying and Construction – <i>TSV ONLY, offered ODD years only</i>
<u>PH2019</u> Introduction to Electromagnetism Optics and Early Quantum PREREQ: (EG1012 OR PH1005) AND MA1003	<u>EG2010</u> Materials Science and Engineering – <i>TSV only</i>
<u>EE4000</u> Signal Processing 3 – <i>TSV only</i> PREREQ: 48CP	<u>EV2502</u> Introduction to Geographic Information Systems PREREQ: 12CP LEVEL 1 SUBJECTS
<u>ME4521</u> Bulk Materials Handling – <i>TSV only, offered ODD years only</i> PREREQ: 48CP	<u>MA2210</u> - Linear Algebra PREREQ: MA1003
	<u>ME2525</u> Machine Element Design – <i>TSV ONLY</i> PREREQ: CS2001
	<u>PH2240</u> Atomic and Nuclear Physics – <i>TSV ONLY</i> PREREQ: PH2002 AND MA1003
	<u>CC3501</u> Computer Interfacing and Control PREREQ: CC2511
	SP11 (Nov-Feb)
	<u>EV3502</u> Advanced Geographic Information Systems – <i>TSV ONLY</i> PREREQ: AT LEAST 12CP LEVEL 2 INCLUDING EV2502

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