

Bachelor of Engineering (Honours) [Embedded] (Chemical Engineering) – Bachelor of Science (Science Major)

(MA1020 – Preparatory Mathematics Required)

Useful study planning/enrolment resources:

[Course and Subject Handbook](#)

[Academic Calendars](#)

[Class Registration](#)

[Enrolment Resources](#)

The information in the study planner is current at the time of creation may be subject to future change.

Attention International Student visa holders: To remain compliant with your enrolments requirements as a Student visa holder you are required to enrol in at least one On-Campus, Multi-Modal or WIL subject offering in each compulsory study period and you cannot enrol in more than one third (33%) of your total course load through online or distance learning. To complete your course within your CoE duration students must maintain sufficient subject enrolment.

If you are receiving US Federal Aid, there are further compliance considerations. Please contact financialaid@jcu.edu.au to confirm compliance of your subject selections.

Student Resources: If you require advice about your study plan, choosing electives, or which subjects to enrol in, please contact your major advisor or degree coordinator ([CSE Course and Major Advisors](#)). For information on available elective subject options please also refer to the Study Area guide ([2026 JCU STUDY AREA GUIDE — College of Science & Engineering](#)).

Your plan may include subjects labelled with ****Intensive on-campus requirements***. These subjects involve mandatory on-campus or fieldwork attendance with extended hours over a dedicated face-to-face period. Please check the face-to-face dates for the subject in the [subject handbook](#) and do not enrol in subjects with overlapping face-to-face dates. For more information, see the CSE Student Guide to Succeeding in Trimester 2 Intensives on the CSE [Student Resources](#) webpage.

	TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
2026			EG1010:03 Process Engineering
			EG1012:03 Electric Circuits
			MA1020:03 Preparatory Mathematics

2027	TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
	EG1000:03 Engineering 1	MA1003:03 Mathematical Techniques <i>PREREQ: MA1000 or MA1011 or MA1009</i>	EG1011:03 Statics and Dynamics <i>PREREQ: PH1005</i>
	EG1002:03 Computing and Sensors	PH1005:03 Newtonian Physics <i>PREREQ: Maths B or MA1020 or MA0020 or MA1000 or MA1008 OR admission to 116209, 116409 or 116309. Allow concurrent for MA1020, MA1000 and MA1008</i>	Science Major
	MA1000:03 Mathematical Foundations <i>PREREQ: MA1020 or MA0020 or BR0202 or High school subjects: Mathematical Methods or Specialist Mathematics (or equivalent such as Maths B or Maths C)</i>		Science Major

2028	TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
	MA2000:03 Mathematics for Scientists and Engineers <i>PREREQ: MA1003</i>	Engineering Major CH1001:03 Chemistry: The Central Science <i>PREREQ: BR0301, CH1020, CH0020 or EG1010 or High School Senior Chemistry or admission to 71510 or 116910 or 70309 or 108209 or 70809 or 71809 or 115309 or 119209</i>	Engineering Major CH1002:03 Chemistry: Principles and Applications <i>PREREQ: CH1001 or CH1011 and allow concurrent for CH1011 and CH1001</i>
	SC2202:03 Quantitative Methods in Science <i>PREREQ: SC1102 or SC1109 or admission to Bachelor of Business and Environmental Science or admission to 116209, 116309 OR 116409</i> OR SC2209:03 Quantitative Methods in Science – Advanced <i>PREREQ: MA1003 and ((SC1109 plus 6 credit points of other Level 1 subjects) or admission in 116409)</i>	Engineering Major CP1407:03 Introductory Machine Learning and Data Science	Engineering Major EG2008:03 Fluid Mechanics <i>PREREQ: EG1011 and MA2000</i>
	Science Major		Science Major

2029	TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
	Engineering Major CL2501:03 Process Analysis and Sustainability <i>PREREQ: EG1010</i>	Engineering Major CL2502:03 Chemical Engineering Thermodynamics <i>Only Offered in Even Years</i> <i>PREREQ: CL2501 and MA2000</i>	Engineering Major CH2103:03 Analytical Chemistry <i>PREREQ: CH1001 or CH1011</i>
	Science Major	Engineering Major ME3512:03 Heat and Mass Transfer <i>PREREQ: MA2000</i>	Select 3 credit points of any Level 2 or 3 Science Subject
	Science Major		Select 3 credit points of any Level 2 or 3 Science Subject <i>*Recommended students complete SC3003:03 Science Research Internship or SC3008:03 Professional Placement</i>

2030	Vac work (Dec-Feb)	TRIMESTER 2	TRIMESTER 3
	<i>Time available for work placements with engineering employers</i>	EG4011:03 Thesis Part 1 of 2 <i>PREREQ: 60 credit points</i>	EG4012:03 Thesis Part 2 of 2 <i>PREREQ: EG4011</i>
	BLOCK 2 (Mar-Apr)		
	EG3000:03 Introduction to Systems Engineering and Project Management <i>PREREQ: EG1000 and EG1002 and EG1010 and EG1011 and EG1012 and MA1000 and MA1003 and (PH1005 or EG1001) or 36 credit points of subjects</i>	Engineering Major CL3030:03 Reactor Design <i>Only Offered in Odd Years</i> <i>PREREQ: CL2501 and MA2000</i>	Engineering Major EE3600:03 Automatic Control 1 <i>PREREQ: EG1012 and MA2000</i>
	BLOCK 2 (Mar-Apr)		
	Engineering Major CL3021:03 Mass Transfer Operations <i>PREREQ: CL2501 and MA2000</i>	Engineering Major CL4538:03 Bioprocess Engineering <i>Only offered in Odd Years</i> <i>PREREQ: CL2502 or CL3010 and CL3021 and CL3030</i>	Science Major

2031	Vac work (Dec-Feb)	TRIMESTER 2	TRIMESTER 3
	<i>Time available for work placements with engineering employers</i>	Engineering Major CL4072:03 Chemical Engineering design: (Part 2 of 2) <i>PREREQ: CL4071</i>	
	BLOCK 2 (Mar-Apr)	Engineering Major CL4537:03 Minerals and Solids Processing <i>Only Offered in Even Years</i> <i>PREREQ: Must have completed 48 credit points toward BEng</i>	
	Engineering Major CL4040:03 Safety, Environment and Sustainability in the Process Industries <i>PREREQ: CL2501</i>		
	BLOCK 2 (Mar-Apr)		
	Major CL4071:03 Chemical Engineering Design: (Part 1 of 2) <i>PREREQ: (CL2502 or CL3010) and CL3021 and CL3030 and (CS3008 or EG2008) and ME3512</i>	Science Major	

COURSE HANDBOOK

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