THE UNIVERSITY OF QUEENSLAND AUSTRALIA CREATE CHANGE

Bachelor of Engineering (Honours) and Master of Engineering

Chemical and Bioprocess Engineering Field of Study

Undergraduate Program - Consists of 80 units Suggested Study Plans from **2025** Commencement Onwards

Program and Course requirements

For the **Bachelor of Engineering (Honours) and Master of Engineering** full program and course requirements, <u>click here</u>. Make sure to check your program's rules to ensure you are compliant with requirements.

Prerequisite Courses

Students are expected to be aware if a course has prerequisites and must have successfully completed any required prerequisites before enrolling. A prerequisite course provides the foundational knowledge needed to progress to the next course and may be high school subjects or university-level study/courses.

Prerequisites are listed on the course profile and the course page on the <u>Programs and</u> Courses website.

Electives

Depending on your program, you may need to complete compulsory and elective courses.

Electives are courses you can choose, while compulsory courses are mandatory courses that you must study. You must successfully complete all the required units of elective and compulsory courses to meet the program requirements. Your program rules outline how many electives you can study and the types of electives you can choose from.

Search <u>Programs and Courses website</u> for your program to confirm program rules and elective options.

Academic Advice

Academic advisors provide specialist help in course selection and can look at your individual study history to make personalised recommendations on your study plan.

If you need assistance with your program, you can seek Academic Advice.

Additional Information

Course profiles are underlined and hyperlinked to their relevant course page which can be accessed by clicking the underlined text.

CRICOS: 00025B TEQSA: PRV12080

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The following is a colour reference guide, including notes around course offerings and units:

Core Courses

Field of Study

Program Electives

General Electives

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Course offered in both Semester 1 & 2

X units

This course does not consist of 2 units

Sem 2 July ENGG1001 Programming for Engineers MATH1052 Multivariate Calc & Ordinary Differential Equations YEAR 2 Sem 1 Feb CHEE2001 Process Principles CHEE2003 Fluid and Particle Mechanics CHEE2010 Engineering Investigation and Statistical Analysis CHEM2056 Physical Chemistry for Engineering	General Elective	25			consist of 2 units			
Professional Engineering Calculus and Linear Algebra Chemistry PROGRAM ELECTIVE			YEAR 1					
Professional Engineering Calculus and Linear Algebra Chemistry PROGRAM ELECTIVE	Sem 1	ENGG1100	MATH1051	CHEM1100	GENERAL ELECTIVE			
Sem 2 July Programming for Engineers Multivariate Caic & Ordinary Differential Equations YEAR 2 Sem 1 Feb Process Principles Process Principles Process Equipment and Control Systems Sem 2 July Process Equipment and Control Systems Sem 1 Feb Unit Operations Process Systems Analysis Sem 2 July Process Modelling and Control Systems Sem 2 July Process Industries Process Systems Analysis Sem 2 July Process Industries Process Industries Process Engineering Process Engineering Sem 2 July Process Modelling and Control Systems Process Industries Process Industries Process Engineering Process Engineering Sem 1 Feb CHEE3007 Process Modelling and Control Systems Analysis Process Systems Analysis Process Industries Process Industries Process Industries Process Engineering Process	Feb				PROGRAM ELECTIVE			
YEAR 2 Sem 1 CHEE2001 Process Principles Plud and Particle Mechanics Process Principles Physical Chemistry for Engineering Investigation and Statistical Analysis Process Equipment and Control Systems Sem 2 CHEE2030 Chemical Thermodynamics CHEE2040 Heat and Mass Transfer PROGRAM ELECTIVE PROGR		ENGG1001		ENGG1500	GENERAL ELECTIVE			
Sem 1 Feb Process Principles Fluid and Particle Mechanics Sem 2 July Frocess Equipment and Control Systems CHEE2030 Chemical Thermodynamics Feb Process Equipment and Control Systems CHEE3005 Reaction Engineering Fluid and Particle Mechanics CHEE2040 Heat and Mass Transfer FROGRAM ELECTIVE PROGRAM ELECTIVE READTH ELECTIVE READTH ELECTIVE Sem 2 July Frocess Modelling and Control Feb READTH ELECTIVE Sem 1 Feb READTH ELECTIVE Sem 2 July Frocess Industries BIOC2000 Biochemistry & Molecular Biology Fluid Medelling Fluid Advanced Process and System Medelling Feb Advanced Process and System Medelling Feb READTH ELECTIVE Sem 2 July FRA 5 Sem 1 Feb Advanced Process and System Medelling Feb Readth Elective Fluid Advanced Process and Management Floid System Medelling Fluid Statistical Individual Statistical Individ	July	Programming for Engineers	Differential Equations		PROGRAM ELECTIVE *			
CHEE2001			YEAR 2					
Sem 2 July Process Equipment and Control Systems YEAR 3 Sem 1 Feb CHEE3004 Unit Operations CHEE3005 Reaction Engineering CHEE3005 Reaction Engineering CHEE3006 Process Systems Analysis Sem 2 July Sem 1 Feb CHEE3007 Process Modelling and Control Sem 2 July Sem 1 Feb CHEE3008 Reaction Engineering CHEE3020 Process Systems Analysis Feb Sem 1 Feb CHEE4002 Risk in Process Industries BIOC2000 Ricchemistry & Molecular Biology BIOT3009 Quality Management Systems in Biotechnology BIOE4020 Riorhamstered Safety Design and System Modelling Sem 2 July CHEE7111 Advanced Process and System Modelling Sem 2 CHEE7113 Advanced Process and System Modelling Sem 2 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7103 CHEE7105 CHEE7105 CHEE7105 CHEE7105 CHEE7105 CHEE7105 CHEE7105 CHEE7106 CHEE7107 CHEE7107 CHEE7108 CH				Engineering Investigation	Physical Chemistry for			
Sem 1 Feb CHEE3004 Unit Operations CHEE3005 Reaction Engineering CHEE3020 Process Modelling and Control Sem 1 Feb CHEE4002 Feb CHEE4002 Risk in Process Industries Sem 2 July Sem 2 July Sem 3 Feb CHEE4002 Risk in Process Industries BIOC2000 Biochemistry & Molecular Biology BIOC3009 Biochemistry & Molecular Biology Sem 3 July Sem 4 Sem 5 Sem 1 Feb CHEE4002 Risk in Process Industries CHEE4002 Risk in Process Industries Sem 2 July Sem 3 Feb CHEE4002 Risk in Process Industries CHEE4002 Risk in Process Industries Sem 4 Feb CHEE4002 Risk in Process Industries Sem 5 Feb CHEE7113 Advanced Process and System Modelling Sem 1 Feb CHEE7113 Advanced Process and System Modelling Sem 2 Sem 2 Luly CHEE7103 CHEE7103 A units CHEE7103 CHEE7103 A units ENGG49022 Professional Practice and the Matabolic Engineering BIOE4020 Bioprocess Engine	Sem 2				GENERAL ELECTIVE			
Sem 1 Feb Unit Operations CHEE3005 Reaction Engineering Placement B Sem 2 July Process Modelling and Control Sem 1 Feb CHEE4002 Risk in Process Industries Placement B Sem 2 July CHEE4002 Risk in Process Industries CHEE4004 Risk in Process Industries CHEE4005 Reaction Engineering BlOL2202 Risk in Process Industries BlOC2000 Riochemistry & Molecular Systems in Biotechnology Bioprocess Engineering BloE4020 Risk in Process Industries Riology Sem 2 Risk in Process Industries CHEE7112 Richard Ri	July		Chemical Thermodynamics	Heat and Mass Transfer	PROGRAM ELECTIVE			
Sem 2	YEAR 3							
Sem 2 July CHEE3007 Process Modelling and Control CHEE3020 Process Systems Analysis Feb CHEE4002 Risk in Process Industries BIOC2000 Biochemistry & Molecular Biology BIOT3009 Quality Management Systems in Biotechnology BIOE4020 Bioprocess Engineering BIOT3009 Quality Management Systems in Biotechnology BIOE4020 Bioprocess Engineering BIOT3009 Quality Management Systems in Biotechnology BIOE4020 Bioprocess Engineering BIOT3009 Quality Management Systems in Biotechnology BIOE4020 Bioprocess Engineering BIOT3009 BIOT3009 BIOT3009 BIOT3009 BIOT3								
Sem 1 Feb CHEE7111 Advanced Process and System Modelling System Modelling CHEE7112 Integrated Safety Design and System Modelling CHEE7103 Chemical Engineering ME Design Project Chemical Engineering ME Design Project Chemical Engineering Chemical Enginee	Feb	Unit Operations	Reaction Engineering		BREADTH ELECTIVE			
Sem 1 Feb Risk in Process Industries BIOC2000 Biochemistry & Molecular Biology Sem 2 July Feb Risk in Process Industries Figure 1 Feb Risk in Process Industries BIOC2000 Biochemistry & Molecular Systems in Biotechnology BIOE4020 Bioprocess Engineering Feb Runits Feb Runits YEAR 5 CHEE7111 Advanced Process and System Modelling CHEE7112 Integrated Safety Design and Management Sem 2 Luly CHEE7103		Process Modelling and						
Feb Risk in Process Industries Biochemistry & Molecular Systems in Biotechnology Bioprocess Engineering Sem 2 July Engineering Placement B YEAR 5 Sem 1 Feb CHEE7111 Advanced Process and System Modelling CHEE7112 Integrated Safety Design and Management Sem 2 CHEE7103 Chemical Engineering ME Design Project Sem 2 CHEE7103 Chemical Engineering ME Design Project Biochemistry & Molecular Systems in Biotechnology Risk in Process Industries Biochemistry & Molecular Systems in Biotechnology Bioprocess Engineering Bioprocess Engineering Sem 1 CHEE7113 Whole of Process Optimisation and Control BE(Hons)/ME BREADTH ELECTIVE Sem 2 CHEE7103 Chemical Engineering ME Design Project	YEAR 4							
Sem 2 July Fingineering Placement B YEAR 5 Sem 1 Feb CHEE7111 Advanced Process and System Modelling CHEE7112 Integrated Safety Design and Management CHEE7113 Whole of Process Optimisation and Control BE(Hons)/ME BREADTH ELECTIVE 4 units ENGG49022 Professional Practice and the Matabolic Engineering			Biochemistry & Molecular	Quality Management	· ·			
Sem 1 Feb CHEE7111 Advanced Process and System Modelling CHEE7112 Integrated Safety Design and Management CHEE7113 Whole of Process Optimisation and Control BE(Hons)/ME BREADTH ELECTIVE 4 units ENGG4902 Professional Practice and the Matabolic Engineering	~ ~ —				8 units			
Advanced Process and System Modelling Advanced Process and System Modelling Advanced Process and System Modelling Integrated Safety Design and Management Whole of Process Optimisation and Control BREADTH ELECTIVE 4 units ENGG4902 ² Professional Practice and the Matabolic Engineering	YEAR 5							
		Advanced Process and	Integrated Safety Design and	Whole of Process				

NOTES

Published: July 2025

¹ May choose to do <u>BIOL1020</u>, <u>Genes</u>, <u>Cells & Evolution</u> as an alternative

² Offered in Semester 1 under the course code ENGG4901, Professional Practice and the Business Environment A

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Program Electives

General Electives



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This course does not consist of 2 units

Jeneral Elective	es			consist of 2 units			
		YEAR 1					
Sem 2	ENGG1100 Professional Engineering	MATH1051 Calculus and Linear Algebra I	CHEM1100	GENERAL ELECTIVE			
July			Chemistry 1	PROGRAM ELECTIVE			
Sem 1 Feb	ENGG1001 Programming for Engineers	MATH1052 Multivariate Calc & Ordinary	ENGG1500 Thermodynamics: Energy	OR			
i eb	Programming for Engineers	Differential Equations	and the Environment	PROGRAM ELECTIVE			
	,	YEAR 2					
Sem 2 July	CHEE2001 Process Principles	CHEE2020 Process Equipment and Control Systems	CHEE2030 Chemical Thermodynamics	CHEE2040 Heat and Mass Transfer			
Sem 1	CHEE2003	CHEE2010 Engineering Investigation	CHEM2056 Physical Chemistry for	BIOE1001 ¹ Principles of Biomedical and			
Feb	Fluid and Particle Mechanics	and Statistical Analysis	Engineering	Bioprocess Engineering			
	YEAR 3						
Sem 2	CHEE3007 Process Modelling and Control	CHEE3020 Process Systems Analysis	BIOL2202 Genetics	GENERAL ELECTIVE			
July				PROGRAM ELECTIVE			
Sem 1 Feb	CHEE3004 Unit Operations	CHEE3005 Reaction Engineering	BIOC2000 Biochemistry & Molecular Biology	BIOE4020 Bioprocess Engineering			
YEAR 4							
Sem 2 July	CHEE7103 Chemical Engineering ME Design	4 units	BIOE6028 Metabolic Engineering	BE(Hons)/ME BREADTH ELECTIVE			
Sem 1 Feb	ENGG4901 ² Professional Practice and the Business Environment A	CHEE4002 Risk in Process Industries	BIOT3009 Quality Management Systems in Biotechnology	BE(Hons)/ME BREADTH ELECTIVE			
	YEAR 5						
Sem 2 July	ENGG7292 Engineering Placement B			8 units			
Sem 1 Feb	CHEE7111 Advanced Process and System Modelling	CHEE7112 Integrated Safety Design and Management	CHEE7113 Whole of Process Optimisation and Control	BE(Hons)/ME BREADTH ELECTIVE			
		NOTES					

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¹ May choose to do <u>BIOL1020</u>, <u>Genes</u>, <u>Cells & Evolution</u> as an alternative

² Offered in Semester 2 under the course code <u>ENGG4902, Professional Practice and the Business Environment B</u>