

Important Information

It is your responsibility to ensure that you complete all the requirements for each component of this dual program in order to graduate with both degrees. The following information is designed to help you plan your enrolment to meet this goal.

Program Requirements

The Program Rules outline the requirements to complete the dual program and should be read in conjunction with the course list for each component of the dual program. The program rules are available on UQ's Programs and Courses website for the program.

Program Guidelines

Bachelor of Engineering (Honours) (BE(Hons)) component:

- Students without Queensland Senior Maths C should complete MATH1050 before MATH1051.
- Students must complete a specialisation in *chemical engineering*.
- All common core and compulsory courses must be counted towards the BE(Hons) component of the dual program and substituted in the BBiotech course list by a course at the same level or higher.
- First Year BE(Hons) students can find further program planning information via the Faculty current student resources page: <https://www.eait.uq.edu.au/plan-your-program-bachelor-engineering-honours>
- BE(Hons) students should discuss their enrolment plan with an academic adviser. The list of academic advisers is available at: <https://www.eait.uq.edu.au/dual-program-academic-advice>

Bachelor of Biotechnology (BBiotech) component:

- Students must complete an extended major.
- Where a BBiotech extended major requires BIOL1040, CHEM1200 or FOOD1001 as a prerequisite course, it must be counted towards the BE(Hons) component as either a program elective within the specialisation or a chemical engineering breadth elective.

Cross-listed Courses

A course can only count towards one dual program component. If the course is compulsory in one program, it must be counted towards that program component and you should select another course from the other course list at the same level or higher. If a course is compulsory in both program's plans, you may select which program it will count towards, and follow the special rules that outline how to select another course at the same level or higher.

Please check the special rules for the dual program as they may outline specific requirements for course substitutions.

Regardless of any possible cross-listing between programs, to meet the program requirements for the BBiotech component of your dual program the extended major must include 12 units of courses level 3 or higher taken from and counting only towards that extended major's course list.

Selecting Plans in mySI-net

A plan is a prescribed combination of courses within a program being either a field of study, major, extended major, specialisation, minor or extended minor.

Ensure the plans for your program are correctly listed in [mySI-net](#). If you require assistance selecting your plan(s), follow these [instructions](#).

Exiting Early

Students exiting early with one component of a dual degree must complete the single degree requirements of that component. Students will then be required to follow the single degree rules to complete the remaining component from that dual degree.

Global Experience

If you are planning on completing an overseas exchange, you may have to amend this plan. Students who would like an exchange experience in their program are encouraged to seek advice early in their program and be aware of the exchange deadlines: <https://employability.uq.edu.au/global-experiences>.

Require Further Assistance?

If you require assistance planning your program or have concerns about meeting program requirements, contact the relevant Faculty for advice:

Program	Faculty	Contact Information
Bachelor of Engineering (Honours)	Faculty of Engineering, Architecture and Information Technology	enquiries@eait.uq.edu.au
Bachelor of Biotechnology	Faculty of Science	enquire@science.uq.edu.au

Study Planners

1. [Semester 1 Commencement | Full Time Study Planner – BBiotech component – Agricultural Biotechnology Extended Major](#)
2. [Semester 1 Commencement | Full Time Study Planner – BBiotech component – Chemical and Nano Biotechnology Extended Major](#)
3. [Semester 1 Commencement | Full Time Study Planner – BBiotech component – Medical Biotechnology Extended Major](#)
4. [Semester 1 Commencement | Full Time Study Planner – BBiotech component – Molecular and Microbial Biotechnology Extended Major](#)
5. [Semester 1 Commencement | Full Time Study Planner – BBiotech component – Synthetic Biology and Industrial Biotechnology Extended Major](#)

Dual Degree Study Planner

Bachelor of Engineering (Honours) / Bachelor of Biotechnology



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Semester 1 Commencement | Full Time Study Planner

BACHELOR OF ENGINEERING (HONOURS)				BACHELOR OF BIOTECHNOLOGY Agricultural Biotechnology		
	Course Code	Course Name	Units	Course Code	Course Name	Units
Year 1 Semester 1	ENGG1100	Professional Engineering	2			
	MATH1051 or MATH1071	Calculus & Linear Algebra I or Advanced Calculus & Linear Algebra I	2			
	ENGG1500	Thermodynamics: Energy and the Environment	2			
	BIOE1001 Or BIOL1020	Principles of Biomedical & Bioprocess Engineering (Extension Course)	2			
Year 1 Semester 2	ENGG1001	Programming for Engineers	2	BIOT2002	Introduction to Biotechnology	2
	MATH1052 or MATH1072	Multivariate Calculus & Ordinary Differential Equations or Advanced Multivariate Calculus & Ordinary Differential Equations	2			
	CHEM1100	Chemistry 1	2			
Year 2 Semester 1	CHEE2001	Process Principles	2	BIOC2000	Biochemistry & Molecular Biology	2
	CHEE2003	Fluid & Particle Mechanics	2			
	CHEE2010	Engineering Investigation & Statistical Analysis	2			
Year 2 Semester 2	CHEE2020	Process Equipment and Control Systems	2			
	CHEE2030	Chemical Thermodynamics	2			
	CHEE2040	Heat and Mass Transfer	2			
	CHEM2056	Physical Chemistry for Engineering	2			

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Year 3	Semester 1		BE(Hons) Breadth Elective (BIOL1040 or FOOD1001)	2	BIOL1030	Global Challenges in Biology	2
		CHEE3004	Unit Operations	2	Level 2 Course	Level 2 course from extended major list (BIOL2200, FOOD2000)	2
	Semester 2	CHEE3007	Process Modelling & Dynamics	2	BIOL2202	Genetics	2
		CHEE3020	Process Systems Analysis	2	Level 2 Course	Level 2 course from extended major list (BIOL2203, CHEM2003, MICR2000, MICR2001)	2
Year 4	Semester 1	CHEE3005	Reaction Engineering	2	BIOT3009	Quality Management Systems in Biotechnology	2
		CHEE4002	Risk in Process Industries	2	Level 3 Course	Level 3 course from extended major list (BIOL3213, BIOL3303, FOOD3023)	2
	Semester 2		Chemical Engineering Program Elective (BIOL1040 here or other)	2	BIOT3004	Commercialisation of Biotechnology Products	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	Level 3 Course	Level 3 course from extended major list (BIOL3011, BIOL3320, FOOD3008)	2
Year 5	Semester 1	ENGG4900	Professional Practice and the Business Environment	2	Level 3 Course	Level 3 course from extended major list (BIOL3213, BIOL3303, FOOD3023, BIOL3003, BIOL3201, BIOL3209)	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	Level 3 Course	Level 3 course from extended major list (BIOL3213, BIOL3303, FOOD3023, BIOL3003, BIOL3201, BIOL3209)	2
	Semester 2		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2			
		CHEE4001	Process Engineering Design Project	4			
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2				

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Bachelor of Engineering (Honours) / Bachelor of Biotechnology



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Semester 1 Commencement | Full Time Study Planner

BACHELOR OF ENGINEERING (HONOURS)				BACHELOR OF BIOTECHNOLOGY Chemical and Nano Biotechnology			
	Course Code	Course Name	Units	Course Code	Course Name	Units	
Year 1 Semester 1	ENGG1100	Professional Engineering	2				
	MATH1051 or MATH1071	Calculus & Linear Algebra I or Advanced Calculus & Linear Algebra I	2				
	ENGG1500	Thermodynamics: Energy and the Environment	2				
	CHEM1100	Chemistry 1	2				
Semester 2	ENGG1001	Programming for Engineers	2	BIOT2002	Issues in Biotechnology	2	
	MATH1052 or MATH1072	Multivariate Calculus & Ordinary Differential Equations or Advanced Multivariate Calculus & Ordinary Differential Equations	2	CHEM1200	Chemistry 2	2	
Year 2 Semester 1	BIOE1001	Principles of Biomedical & Bioprocess Engineering (Extension Course)	2				
	CHEE2001	Process Principles	2				
	CHEE2003	Fluid & Particle Mechanics	2				
	CHEE2010	Engineering Investigation & Statistical Analysis	2				
	Semester 2	CHEE2020	Process Equipment and Control Systems	2			
		CHEE2030	Chemical Thermodynamics	2			
		CHEE2040	Heat and Mass Transfer	2			
		CHEM2056	Physical Chemistry for Engineering	2			
Year 3 Semester 1				BIOC2000	Biochemistry & Molecular Biology	2	
	CHEE3004	Unit Operations	2	CHEM2050	Intermediate Chemistry 1	2	
				CHEM2054	Experimental Chemistry 1	2	
	Semester 2	CHEE3007	Process Modelling & Dynamics	2			
		CHEE3020	Process Systems Analysis	2	CHEM2060	Intermediate Chemistry 2	2
			BE(Hons) Breadth or Program Elective (BIOL1040, FOOD1001 or other)	2			

Dual Degree Study Planner

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Year 4	Semester 1	CHEE3005	Reaction Engineering	2	BIOT3009	Quality Management Systems in Biotechnology	2
		CHEE4002	Risk in Process Industries	2	Level 3 Course	Level 3 course from extended major list (CHEM3001 ¹ , CHEM3010 ¹ , CHEM3004 ²)	2
	Semester 2		Chemical Engineering Program Elective	2	BIOT3004	Commercialisation of Biotechnology Products	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	CHEM3016	Experimental Chemistry 2	2
Year 5	Semester 1		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	Level 3 Course	Level 3 course from extended major list (CHEM3001 ¹ , CHEM3010 ¹ , CHEM3004 ²)	2
		ENGG4900	Professional Practice and the Business Environment	2			
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2			
	Semester 2		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	Level 3 Course	Level 3 course from extended major list (CHEM3011 ¹ , CHEM3020 ² , CHEM3030 ²)	2
		CHEE4001	Process Engineering Design Project	4			
<ol style="list-style-type: none"> Choose 2 units from CHEM3001, CHEM3010, CHEM3011 Choose 4 units from CHEM3004, CHEM3020, CHEM3030 							

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Semester 1 Commencement | Full Time Study Planner

BACHELOR OF ENGINEERING (HONOURS)				BACHELOR OF BIOTECHNOLOGY Medical Biotechnology		
	Course Code	Course Name	Units	Course Code	Course Name	Units
Year 1 Semester 1	ENGG1100	Professional Engineering	2			
	MATH1051 or MATH1071	Calculus & Linear Algebra I or Advanced Calculus & Linear Algebra I	2			
	ENGG1500	Thermodynamics: Energy and the Environment	2			
	CHEM1100	Chemistry 1	2			
Semester 2	ENGG1001	Programming for Engineers	2	BIOT2002	Issues in Biotechnology	2
	MATH1052 or MATH1072	Multivariate Calculus & Ordinary Differential Equations or Advanced Multivariate Calculus & Ordinary Differential Equations	2	CHEM1200	Chemistry 2	2
Year 2 Semester 1	BIOL1020	Genes, cells & evolution (OR BIOE1001, Extension Course)	2			
	CHEE2001	Process Principles	2			
	CHEE2003	Fluid & Particle Mechanics	2			
	CHEE2010	Engineering Investigation & Statistical Analysis	2			
Semester 2	CHEE2020	Process Equipment and Control Systems	2			
	CHEE2030	Chemical Thermodynamics	2			
	CHEE2040	Heat and Mass Transfer	2			
	CHEM2056	Physical Chemistry for Engineering	2			
Year 3 Semester 1	BIOL1040	BE(Hons) Breadth Elective	2	BIOC2000	Biochemistry & Molecular Biology	2
	CHEE3004	Unit Operations	2	CHEM2050	Intermediate Chemistry 1	2
	CHEE3007	Process Modelling & Dynamics	2	BIOM2402	Principles of Pharmacology	2
	CHEE3020	Process Systems Analysis	2	Level 2 Course	*Level 2 course from extended major list (BIOL2202)	2

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Year 4	Semester 1	CHEE3005	Reaction Engineering	2	BIOT3009	Quality Management Systems in Biotechnology	2
		CHEE4002	Risk in Process Industries	2	BIOM3401	Systems Pharmacology	2
	Semester 2		*Chemical Engineering Program Elective	2	BIOT3004	Commercialisation of Biotechnology Products	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	BIOM3402	Experimental Pharmacology	2
Year 5	Semester 1		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	BIOT3002	Drug Design & Development	2
		ENGG4900	*Professional Practice and the Business Environment	2			
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2			
	Semester 2		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	CHEM3020	Medicinal Chemistry & Chemical Biology	2
		CHEE4001	Process Engineering Design Project	4			

*If a student wished to do BIOL2200 or CHEM2054 instead of BIOL2202 they could move ENGG4900 from Sem 1, Year 5 to Sem 2, Year 4 and the Chem Eng Program Elect from Sem 2, Year 4 to Sem 2, Year 3. This would then allow the student to do BIOL2200 or CHEM2054 in Sem 1, Year 5.

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Semester 1 Commencement | Full Time Study Planner

BACHELOR OF ENGINEERING (HONOURS)				BACHELOR OF BIOTECHNOLOGY Molecular and Microbial Biotechnology			
	Course Code	Course Name	Units	Course Code	Course Name	Units	
Year 1 Semester 1	ENGG1100	Professional Engineering	2				
	MATH1051 or MATH1071	Calculus & Linear Algebra I or Advanced Calculus & Linear Algebra I	2				
	ENGG1500	Thermodynamics: Energy and the Environment	2				
	BIOE1001 or BIOL1020 or CHEM1100	Principles of Biomedical & Bioprocess Engineering (Extension Course)	2				
Year 1 Semester 2	ENGG1001	Programming for Engineers	2		CHEM1200 (Chemistry 2) or BIOL1040 (Cells to organisms) Best to do CHEM1100 in Sem 1 Year 1 if wish to do CHEM1200 in Sem 2 Year 1. You must then do BIOL1020 in Sem 2, year 1.	2	
	MATH1052 or MATH1072	Multivariate Calculus & Ordinary Differential Equations or Advanced Multivariate Calculus & Ordinary Differential Equations	2				
	CHEM1100 or BIOL1020	Chemistry 1	2				
Year 2 Semester 1	CHEE2001	Process Principles	2	BIOC2000	Biochemistry & Molecular Biology	2	
	CHEE2003	Fluid & Particle Mechanics	2				
	CHEE2010	Engineering Investigation & Statistical Analysis	2				
	Year 2 Semester 2	CHEE2020	Process Equipment and Control Systems	2			
		CHEE2030	Chemical Thermodynamics	2			
		CHEE2040	Heat and Mass Transfer	2			
		CHEM2056	Physical Chemistry for Engineering	2			
Year 3 Semester 1		BE(Hons) Breadth Elective (BIOL1040 or CHEM1200 or Program elective.)	2	BIOT3009	Quality Management Systems in Biotechnology	2	
	CHEE3004	Unit Operations	2	BIOL2200 ¹	Molecular Cell Biology I	2	
	Year 3 Semester 2	CHEE3007	Process Modelling & Dynamics	2	BIOL2202 ¹	Genetics	2
		CHEE3020	Process Systems Analysis	2	MICR2000 ¹	Microbiology & Immunology	2

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Year 4		Semester 1		Semester 2		
	CHEE3005	Reaction Engineering	2	Level 3 Course	Level 3 course from extended major list ² (BIOC3000 ³ , BIOC3003, BIOL3003, BIOL3303, MICR3002, MICR3003)	2
	CHEE4002	Risk in Process Industries	2	Level 3 Course	Level 3 course from extended major list ² (BIOC3000 ³ , BIOC3003, BIOL3003, BIOL3303, MICR3002, MICR3003)	2
		Chemical Engineering ¹ Program Elective	2	Level 3 Course	Level 3 course from extended major list ² (MICR3001 ³ , BIOC3005, BIOC3006, BIOL3006, CHEM3020, MICR3004, PARA3002)	2
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	BIOT2002	Issues in Biotechnology	2
Year 5		Semester 1		Semester 2		
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	Level 3 Course	Level 3 course from extended major list ² (BIOC3000 ³ , BIOC3003, BIOL3003, BIOL3303, MICR3002, MICR3003)	2
	ENGG4900	Professional Practice and the Business Environment	2			
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2			
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	BIOT3004	Commercialisation of Biotechnology Products	2
	CHEE4001	Process Engineering Design Project	4			

1. If a student prefers to do CHEM2052 rather than BIOL2200, they can move the Chem Eng Program Elective from Sem 2 Year 4 to Sem 1, Year 3. They can then do CHEM2052 in Sem 2 Year 3 and move MICR2000 to Sem 2 year 4. This allows the student the option to do CHEM3020 in Sem 2, Year 4. For this option the student must have done CHEM1200 in Sem 2, Year 1..
2. Choose 4 to 6 units from BIOC3003, BIOC3005, BIOC3006, BIOL3003, BIOL3006, BIOL3303, MICR3002, MICR3003, MICR3004, PARA3002
3. Choose 2 to 4 units from BIOC3000 and MICR3001

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Semester 1 Commencement | Full Time Study Planner

BACHELOR OF ENGINEERING (HONOURS)				BACHELOR OF BIOTECHNOLOGY Synthetic Biology and Industrial Biotechnology		
	Course Code	Course Name	Units	Course Code	Course Name	Units
Year 1 Semester 1	ENGG1100	Professional Engineering	2	BIOT2002	Issues in Biotechnology	2
	MATH1051 or MATH1071	Calculus & Linear Algebra I or Advanced Calculus & Linear Algebra I	2			
	ENGG1500	Thermodynamics: Energy and the Environment	2			
	BIOE1001 OR BIOL1020	Principles of Biomedical & Bioprocess Engineering (Extension Course)	2			
Semester 2	ENGG1001	Programming for Engineers	2			
	MATH1052 or MATH1072	Multivariate Calculus & Ordinary Differential Equations or Advanced Multivariate Calculus & Ordinary Differential Equations	2			
	CHEM1100	Chemistry 1	2			
Year 2 Semester 1	CHEE2001	Process Principles	2	BIOC2000	Biochemistry & Molecular Biology	2
	CHEE2003	Fluid & Particle Mechanics	2			
	CHEE2010	Engineering Investigation & Statistical Analysis	2			
Semester 2	CHEE2020	Process Equipment and Control Systems	2			
	CHEE2030	Chemical Thermodynamics	2			
	CHEE2040	Heat and Mass Transfer	2			
	CHEM2056	Physical Chemistry for Engineering	2			

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Year 3	Semester 1		BE(Hons) Breadth or Program Elective (BIOL1040, FOOD1001 or other)	2		Course ¹ from BBiotech course list	2
		CHEE3004	Unit Operations	2	Level 2 course	Level 2 course ² from BBiotech course list or Level 2 course from extended major list (SCIE2100 ³)	2
	Semester 2	CHEE3007	Process Modelling & Dynamics	2	BIOL2202	Genetics	2
		CHEE3020	Process Systems Analysis	2		Course ² from BBiotech course list or Level 2 course from extended major list (MICR2000 ³) or Level 3 course from extended major list (SCIE3100 ⁴)	2
Year 4	Semester 1	CHEE3005	Reaction Engineering	2	BIOC3000	Level 3 course from extended major list	2
		CHEE4002	Risk in Process Industries	2	BIOT3009	Level 3 course from extended major list	2
	Semester 2		Chemical Engineering Program Elective	2	BIOC3005	Level 3 course from extended major list	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2	BIOT3004	Level 3 course from extended major list	2
Year 5	Semester 1	ENGG4900	Professional Practice and the Business Environment	2	CHEE4020	Level 3 course from extended major list	2
			Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2		Course ² from BBiotech course list or Level 3 course from extended major list (MICR3003 ⁴)	2
	Semester 2		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives	2			
		CHEE4001	Process Engineering Design Project	4			
		Chemical Engineering Advanced Electives or Chemical Engineering Research Electives (Recommend BIOE6028)	2				
<ol style="list-style-type: none"> Course from BBiotech course list at Level 1 or higher (in place of ENGG1500, which counts towards BE(Hons) component) Course from BBiotech course list at Level 2 or higher (in place of CHEE2001, which counts towards BE(Hons) component) Choose 2 units from MICR2000, SCIE2100 (Recommend SCIE2100) Choose 2 units from MICR3003, MICR3004, SCIE3100 (Recommend SCIE3100) 							