

# Bachelor of Engineering (Hons)/ Bachelor of Biotechnology(Hons) 2020 Dual Degree Program Structure

It is important that you read and understand the following information.

To be eligible to enrol in a dual degree program you must ensure that you satisfy the entry requirements for both programs.

Once enrolled it is your responsibility to ensure that you complete all the requirements for each section 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. Further information can be found in the Official Rules and Course lists under the **Program Rules and Requirements** link for each program in the Programs and Courses website: <https://my.uq.edu.au/programs-courses/>

You are required to submit this program plan for approval by both faculties. Please contact the relevant Faculty for advice.

***Please note:*** 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.

## PROGRAM GUIDELINES

You must complete a total of 88 units for this dual degree program.

Restrictions apply to enrolment in ECON1050, ECON1310, STAT1201, STAT1301. Details of specific course restrictions are available at: <http://www.eait.uq.edu.au/be-dual-programs> and <https://www.eait.uq.edu.au/bachelor-engineering-electives>

### ***Bachelor of Engineering (Hons) Requirements:***

- ❖ 52 units from the BE(Hons) **Chemical Engineering** course list, comprising–
  - (i) 48 units from part A ; and
  - (ii) 4 units from part B4 or B5 electives, which must include CHEE4020.
- ❖ Study in other fields of the BE(Hons) is not available under these dual degree rules
- ❖ Students must complete no more than 4 units of Level 1 non-engineering courses (i.e. courses not listed on the BE(Hons) course list).
- ❖ 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 (Hons) Requirements:***

- ❖ 36 units from the BBiotech(Hons) course list, comprising–
  - (i) 18 units from part A of the *bioprocess technology* major including all compulsory courses except CHEE2001, CHEE4020, CHEM1100, CHEM1200, MATH1051, MATH1052 and STAT1201; and
  - (ii) 2 units for a Level 1 or 2 elective from Part A of the BBiotech(Hons) course list; and
  - (iii) Either:
    - (A) 16 units from part B; or
    - (B) 16 units from part C.
- ❖ Study in other fields of the BBiotech(Hons) is not available under these dual degree rules.
- ❖ Please note that this dual degree requires careful planning and it is strongly recommended that you discuss the BBiotech(Hons) requirements with the Program Coordinator before commencing. Please contact the Faculty of Science on (07) 3365 1888 for more information.

**BACHELOR OF ENGINEERING (HONS)/BACHELOR OF BIOTECHNOLOGY  
DUAL DEGREE PROGRAM STRUCTURE**

*You can use this outline to plan your program structure.*

<b>BACHELOR OF ENGINEERING (HONS) (Chemical Engineering major only)</b>		<b>BACHELOR OF BIOTECHNOLOGY (HONS) (Bioprocess Technology major only)</b>	
<b>Please consult your academic adviser for course selection</b>	<b>Units</b>	<b>Please consult your academic adviser for course selection</b>	<b>Units</b>
<b>YEAR ONE</b>		<b>YEAR ONE</b>	
<b>Semester 1</b>		<b>Semester 1</b>	
ENGG1100 Engineering Design	2	BIOL1020 Genes, Cells & Evolution	2
MATH1051 <sup>1</sup> Calculus & Linear Algebra I [or MATH1071]	2	or	
CHEM1100 <sup>2</sup> Chemistry 1	2	CHEE1001 Principles of Biological Engineering	
<b>Semester 2</b>		<b>Semester 2</b>	
ENGG1200 Engineering Modelling & Problem Solving	2		
MATH1052 Multivariate Calculus & ODE's [or MATH1072]	2		
ENGG1500 Engineering Thermodynamics	2		
CHEM1200 Chemistry 2	2		
<b>Summer Semester</b>		<b>Summer Semester</b>	
<b>YEAR TWO</b>		<b>YEAR TWO</b>	
<b>Semester 1</b>		<b>Semester 1</b>	
CHEE2001 Process Principles	2	BIOC2000 Biochemistry & Molecular Biology	2
MATH2000 Calculus & Linear Algebra	2	2 units Part A BBiotech(Hons) course at Level 1 or 2 that is not compulsory towards the BE(Hons) component. Suggestions: SCIE1000, BIOL1030 or Level 2 course. <b>Not applicable for students required to complete MATH1050 or CHEM1090.</b>	2
<b>Semester 2</b>		<b>Semester 2</b>	
CHEE2003 Fluid & Particle Mechanics	2	BIOL2202 Genetics	2
CHEE2010 Engineering Investigation & Statistical Analysis	2		
CHEM2056 Physical Chemistry for Engineering	2		
<b>Summer Semester</b>		<b>Summer Semester</b>	
<b>YEAR THREE</b>		<b>YEAR THREE</b>	
<b>Semester 1</b>		<b>Semester 1</b>	
CHEE3003 Chemical Thermodynamics	2		
CHEE3020 Process Systems Analysis	2		
CHEE3002 Heat & Mass Transfer	2		
CHEE4020 Biomolecular Engineering	2		
<b>Semester 2</b>		<b>Semester 2</b>	
CHEE3004 Unit Operations	2	BIOT2002 Introduction to Biotechnology	2
CHEE3005 Reaction Engineering	2		
CHEE3007 Process Modelling & Dynamics	2		
<b>Summer Semester</b>		<b>Summer Semester</b>	

YEAR FOUR		YEAR FOUR	
<b>Semester 1</b>		<b>Semester 1</b>	
CHEE4002 Impact and Risk in the Process Industries	2	BIOL3004 Genomics & Bioinformatics	2
CHEE4060 Process & Control System Synthesis	2	BIOT3009 Quality Management Systems in Biotechnology: GMP, GLP, GCP	2
<b>Semester 2</b>		<b>Semester 2</b>	
CHEE4001 Process Engineering Design Project	4	<b>One of:</b> CHEM2060 Physical Chemistry CHEM2052 Chemical Biology MICR2000 Microbiology & Immunology	2
		BIOT3004 Commercialisation of Biotechnology Products	2
<b>Summer Semester</b>		<b>Summer Semester</b>	
YEAR FIVE		YEAR FIVE	
<b>Semester 1</b>		<b>Semester 1</b>	
CHEE4009 Transport Phenomena	2	<b>Choose one of</b> <sup>3</sup> BIOC3000 Advanced Biochemistry and Molecular Biology	2
ENGG4900 Professional Practice and the Business Environment	2	BIOL3003 Advanced Immunology	
2 units of Part B4/B5 electives	2	CHEE3301 Polymer Engineering	
		MATH3104 Mathematical Biology	
		MICR3002 Virology	
		MICR3003 Molecular Microbiology	
<b>Semester 2</b>		<b>Semester 2</b>	
		Decide if you are completing Part B or Part C, then choose 8 units from either Part B or Part C courses other than RBUS6911	8
YEAR SIX		YEAR SIX	
<b>Semester 1</b>		<b>Semester 1</b>	
		Complete Part B or Part C requirements (other than RBUS6911)	6
		RBUS6911 Commerce Honours Seminar	2
	<b>52</b>		<b>36</b>

**Please Note:** Summer Semester is optional.

<sup>1</sup>: Replace with MATH 1050 if required (toward the BBiotech(Hons) instead of the elective space in Year 2, Semester 1), and defer MATH1051 to the following semester, and MATH1052 to summer semester.

<sup>2</sup>: Replace with CHEM1090 or PHYS1171 if required and defer CHEM1100 to Semester 2 and CHEM1200 to summer semester.

<sup>3</sup>: Advanced courses normally require pre-requisites. Check you have met the pre-requisites before choosing.

**Please ensure your BE(Hons) and BBiotech(Hons) majors are correctly listed on mySI-net**