

Bachelor of Engineering (Hons)/ Bachelor of Biotechnology(Hons) 2018 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.

PROGRAM GUIDELINES

You must complete a total of 88 units for both degrees.

Bachelor of Engineering (Hons) Component Requirements:

- ❖ BE(Hons) Dual Degree students are not permitted to enrol in courses offered by other Faculties where there is an equivalent BE(Hons) course. Restrictions apply to enrolment in ECON1050, ECON1310, BISM1201, STAT1201. 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>
- ❖ 52 units from the BE(Hons) Course List, comprising courses as defined for the single major in **Chemical Engineering**. CHEE4020 must be completed as part of the chemical engineering major. If preparatory math or science courses are required (from Part B0 of the BE(Hons) course list i.e. MATH1050, CHEM1090, PHYS1171) these must be completed in addition to the chemical engineering major requirements. Adding Part B0 courses to the program means it may not be possible to complete in the minimum time, although summer semester enrolments and careful selection of Biotechnology courses may assist.
- ❖ BE(Hons)/BBiotech(Hons) students should discuss their enrolment plan with an academic adviser.
- ❖ The list of academic advisers is available at - <http://www.eait.uq.edu.au/eng-academic-advice>

Bachelor of Biotechnology (Hons) Component Requirements:

- ❖ 36 units from the BBiotech(Hons) (Bioprocess Technology) list including all compulsory courses.
- ❖ Study in other fields of the BBiotech 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.

| BACHELOR OF ENGINEERING (HONS) (Chemical Engineering major only) | | BACHELOR OF BIOTECHNOLOGY (HONS) (Bioprocess Technology major only) | |
|---|-------|---|-------|
| Please consult your academic adviser for course selection | Units | Please consult your academic adviser for course selection | Units |
| YEAR ONE | | YEAR ONE | |
| Semester 1 | | Semester 1 | |
| ENGG1100 Engineering Design | 2 | BIOL1020 Genes, Cells & Evolution | 2 |
| MATH1051 ¹ or MATH1071 Calculus & Linear Algebra I | 2 | | |
| CHEM1100 ² | 2 | | |
| Semester 2 | | Semester 2 | |
| ENGG1200 Engineering Modelling & Problem Solving | 2 | | |
| MATH1052 or MATH1072 Multivariate Calculus & ODE's | 2 | | |
| ENGG1500 Engineering Thermodynamics | 2 | | |
| CHEM1200 Chemistry | 2 | | |
| <i>Summer Semester</i> | | <i>Summer Semester</i> | |
| YEAR TWO | | YEAR TWO | |
| Semester 1 | | Semester 1 | |
| CHEE2001 Process Principles | 2 | BIOC2000 Biochem & Molecular Biology | 2 |
| MATH2000 Calculus & Linear Algebra | 2 | Part A BBiotech(Hons) course that is not compulsory towards the BE component: Choose one from CHEE3301 or MATH3104 | 2 |
| Semester 2 | | Semester 2 | |
| CHEE2003 Fluid & Particle Mechanics | 2 | BIOL2202 Genetics | 2 |
| CHEE2010 Engineering Investigation & Statistical Analysis | 2 | BIOT2002 Issues in Biotechnology | 2 |
| <i>Summer Semester</i> | | <i>Summer Semester</i> | |
| YEAR THREE | | YEAR THREE | |
| Semester 1 | | Semester 1 | |
| CHEE3003 Chemical Thermodynamics | 2 | BIOT3009 Quality Management Systems in Biotechnology: GMP, GLP, GCP | 2 |
| CHEE3020 Process Systems Analysis | 2 | | |
| CHEE3002 Heat & Mass Transfer | 2 | | |
| Semester 2 | | Semester 2 | |
| CHEE3004 Unit Operations | 2 | One of: | |
| CHEE3005 Reaction Engineering | 2 | CHEM2002 Physical Chemistry | 2 |
| CHEE3007 Process Modelling & Dynamics | 2 | CHEM2052 Chemical Biology | |
| | | MICR2000 Microbiology & Immunology | |
| <i>Summer Semester</i> | | <i>Summer Semester</i> | |
| YEAR FOUR | | YEAR FOUR | |
| Semester 1 | | Semester 1 | |
| CHEE4002 Impact and Risk in the Process Industries | 2 | BIOL3004 Genomics & Bioinformatics | 2 |
| CHEE4060 Process & Control System Synthesis | 2 | | |
| CHEE4020 Biomolecular Engineering | 2 | | |
| Semester 2 | | Semester 2 | |

| | | | |
|---|-----------|--|------------|
| CHEE4001 Process Engineering Design Project | 4 | BIOT3004 Commercialisation of Biotechnology Part A BBiotech(Hons) course that is not compulsory towards the BE component: Choose one from: BIOC3005 Molecular Systems Biology BIOL3011 Plant Microbe & Insect Interactions BIOL3014 Advanced Bioinformatics CHEE4012 Industrial Wastewater & Solid Waste Management CHEE4028 Metabolic Engineering MICR3001 Microbes & Human Health MICR3004 Microbial Genomics PARA3002 Biomedical Parasitology | 2 2 |
| Part A of the BBiotech is now complete and student is eligible to commence Part C (includes 14 units research project) | | | |
| Summer Semester | | Summer Semester | |
| YEAR FIVE | | YEAR FIVE | |
| Semester 1 | | Semester 1 | |
| | | 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 |
| Semester 2 | | Semester 2 | |
| CHEM2056 Physical Chemistry for Engineering | 2 | Complete Part B or Part C requirements other than RBUS6911 | 6 |
| YEAR SIX | | YEAR SIX | |
| Semester 1 | | Semester 1 | |
| CHEE4009 Transport Phenomena | 2 | RBUS6911 Commerce Honours Seminar | 2 |
| ENGG4900 Professional Practice and the Business Environment | 2 | | |
| 2 units Part B4 advanced elective (other than CHEE4020) | 2 | | |
| | 52 | | 36 |

Please Note: Summer Semester is optional.

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

1: Replace with MATH 1050 if required and defer MATH1051 to the following semester and MATH1052 to summer semester.

2: Replace with CHEM1090 or PHYS1171 if required and defer CHEM1100 to semester 2 and CHEM1200 to summer semester.