

# Bachelor of Engineering and Bachelor of Business (BEBB) - BEng BBus

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907342

CRICOS code (International applicants): 030308J

**This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area should consider the [Bachelor of Engineering \(Honours\) Bachelor of Business](#) which will be offered from S1 2014.**

	<b>On-campus</b>	<b>Distance education</b>
<b>Semester intake:</b> No	No new admissions	No new admissions

The program offers students a high level of flexibility as they are able to choose wide ranging combinations of an engineering major and a business major that best suits their career aspirations.

For more details of the two programs that comprise this award, applicants are asked to refer to the [Bachelor of Business](#) and [Bachelor of Engineering](#) sections in this Handbook.

## **Program objectives**

## Program structure

The program involves five years of full-time study and to be eligible for the combined award, full-time students must complete the requirements of the program within seven years of their initial enrolment in the program.

Students may apply for admission to study part-time or by distance education once they have completed 16 units of the Bachelor of Engineering program or if they are eligible for advanced standing of 16 or more units. This ensures that they are able to complete the program in the maximum duration of eight years.

Where students intend to complete the program using a combination of full-time and part-time study the maximum time for completion will be calculated on a pro-rata basis.

The combined Bachelor of Engineering and Bachelor of Business degree is a 40 unit program consisting of Academic courses and Practice courses.

**Academic** courses are normally one-unit courses that involve approximately 155 hours of student work per unit.

**Practice** courses are zero unit courses and each involves approximately 50 hours of student work. The only grades available for a Practice Course are Pass (P) and Fail (F). A Practice Course is designed to enable students to acquire specific competencies associated with their Engineering major study. These competencies range from specific practical and communication skills through to generic competencies relating to ethical and social responsibility, awareness of the environment, teamwork, etc. For an external student a Practice Course generally involves attendance on-campus for a one-week [residential school](#).

The components of the program are shown in the following table:

<b>OR</b>		
<a href="#">ECO1000 Economics</a>		
<b>Academic Courses - Engineering</b>		
<a href="#">ENM1600 Engineering Mathematics</a>		1
<a href="#">ENM2600 Advanced Engineering Mathematics</a>		1
		1
<a href="#">ENG1002 Introduction to Engineering and Spatial Science Applications</a>		1
<a href="#">ENG1100 Introduction to Engineering Design</a>		1
<a href="#">ENG1101 Introduction to Engineering Problem Solving</a>		1
<a href="#">ENG2102 Engineering Problem Solving and Analysis</a>		1
<a href="#">ENG4110 Engineering Research Methodology</a>		1
<a href="#">ENG3104 Engineering Simulations and Computations</a>		1
<a href="#">ENG4111 Research Project Part 1</a>		1
<a href="#">ENG4112 Research Project Part 2</a>		1
<b>Practice Courses - Engineering</b>		
<a href="#">ENG1901 Engineering Practice 1</a>		0
<a href="#">ENG3902 Professional Practice 1</a>		0
<a href="#">ENG4903 Professional Practice 2</a>		0
<a href="#">ENG4909 Work Experience - Professional</a>		0

When compared to the Core Studies program in the [Bachelor of Engineering](#) program the following changes have been made:

- the following courses have been deleted from the program: , [ENG2002 Technology, Sustainability and Society](#), and [ENG3003 Engineering Management](#)
- five courses from the [Bachelor of Business](#) have been added to the program.

## Major studies

### Engineering majors

An Engineering major study provides students with knowledge and skills in a particular engineering discipline. Students must select one of the following eight majors as their Engineering major.

<b>Engineering major studies:</b>
Agricultural Engineering
Civil Engineering
Computer Systems Engineering
Electrical and Electronic Engineering
Environmental Engineering
Instrumentation and Control Engineering
Mechanical Engineering
Mechatronic Engineering
Power Engineering

The courses in each of the Engineering majors are listed in the [Bachelor of Engineering](#) section of this Handbook. Students enrolled in the Bachelor of Engineering and Bachelor of Business program only study 16 of the 19 courses listed in an Engineering major.

The three courses that are not studied in each major are listed in the following table:

<b>Engineering Major</b>	<b>Courses to be Deleted from the Major</b>
Agricultural Engineering	2 Electives and either <a href="#">AGR3303 Agricultural Materials and Post-Harvest Technologies</a> OR <a href="#">AGR3305 Precision and Smart Technologies in Agriculture</a>
Civil Engineering	3 Electives
Computer Systems Engineering	1 Elective and <a href="#">ENG4004 Engineering Project and Operations Management</a> and <a href="#">ELE2504 Electronic Design and Analysis</a>
Electrical and Electronic Engineering	2 Electives and <a href="#">ENG4004 Engineering Project and Operations Management</a>
Environmental Engineering	3 Electives
Instrumentation and Control Engineering	1 Elective and the courses <a href="#">ENG4004 Engineering Project and Operations Management</a> and <a href="#">ELE2504 Electronic Design and Analysis</a>
Mechanical Engineering	1 Elective and <a href="#">ENG4004 Engineering Project and Operations Management</a> and <a href="#">MEC3403 Dynamics II</a>
Mechatronic Engineering	1 Elective and <a href="#">ENG4004 Engineering Project and Operations Management</a> and <a href="#">ELE2504 Electronic Design and Analysis</a>
Power Engineering	3 Electives

Students should select any remaining Electives from the appropriate list for their engineering major.

#### Business majors

Students must select a business major from one of the following eight-unit majors:

<b>Business major studies:</b>
Human Resource—Management
Information Technology Management
International Business
Management and Leadership
Marketing
Supply Chain Management
Sustainable Business
Sustainable Economics and Policy
Tourism Management

**Note:** With the permission of the Faculty of Health, Engineering and Sciences, students may select an alternative major from the [Bachelor of Business](#) or the [Bachelor of Commerce](#). The eight courses that comprise each of the business majors are listed in the relevant sections of this Handbook.

#### IT requirements

Access to an up-to-date computer is necessary. On-campus students can access appropriately equipped laboratories, but should consider acquisition of their own computer. External students should be able to access a computer with the following [minimum standards](#) as advised by the University. All students should have access to email and the Internet via a computer running the latest versions of Internet web browsers such as Internet Explorer or Firefox. The University has a wireless network for on-campus students' computers. In order to take advantage of this facility and further enhance their on-campus learning environment, students should consider purchasing a notebook/laptop computer with wireless connectivity. A notebook/laptop may be required for some courses.

#### Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering and Bachelor of Business and who satisfy all of the requirements of either the [Bachelor of Engineering](#), the [Bachelor of Engi](#)

neering Technology, the [Associate Degree of Engineering](#) or the [Diploma of Engineering Studies](#) may be permitted to exit with that award.

## Course transfers

Students who are enrolled in either the [Bachelor of Engineering](#) program or the [Bachelor of Business](#) program may transfer to the program with advanced standing. If they have completed up to one year of one of those programs they would normally be able to complete the program in the minimum time, after four more years of full-time study. Other students may require longer than the minimum time.

## Honours

The Bachelor of Engineering and Bachelor of Business may be awarded with Honours in the engineering component of the award. The class of honours to be awarded to a student is dependant upon:

- the Grade Point Average calculated from the grades achieved in the courses studied in, or transferred to the program;
- the grade achieved by the student in the courses [ENG4111 Research Project Part 1](#) and [ENG4112 Research Project Part 2](#) (unless the student is exempted from these courses).

The minimum levels of achievement normally required for each class of honours are shown in the following table. To be assured of achieving a particular class of honours students must have achieved the specified grade in the research project courses and the minimum GPA requirements for all of the courses studied, for the last 16 courses studied, or for the last eight courses studied.

Class of Honours	GPA Calculated from the Grades Achieved in:			Minimum Grade Achieved in Research Project Courses
	All Courses Studied in the Program	The Last 16 Courses Studied*#	The Last Eight Courses Studied*#	
First Class Honours	<b>6.0</b>	<b>6.2</b>	<b>6.5</b>	<b>A</b>
Second Class Honours - Division A	<b>5.5</b>	<b>5.7</b>	<b>5.9</b>	<b>B</b>
Second Class Honours - Division B	<b>5.0</b>	<b>5.1</b>	<b>5.3</b>	<b>C</b>
Minimum number of courses required	<b>20</b>	<b>16</b>	<b>8</b>	

### Footnotes

- \* The results from courses [ENG4111](#) and [ENG4112](#) must be included (unless the student is exempted from these courses).  
# The best results in a semester are to be used when not all of the results from a semester are required.

## Other information

To be eligible to graduate from the Bachelor of Engineering and Bachelor of Business, students must obtain an aggregate of at least 60 Days of suitable practical experience during their program. This experience may be in an engineering office or laboratory where the student would be working principally with professional engineers and engineering associates. It may, however, be preferable for students to spend some time in field or factory activities to gain insight into industrial practice and to see what is involved in converting designs into finished products. Students are required to enrol in [ENG4909 Work Experience - Professional](#) in the latter part of their program and keep a record of appropriate experience as specified in the Course Specification. The work experience is to be endorsed by an appropriate person in the organisation providing the experience and submitted to the examiner. The student must meet all costs associated with the acquisition of practical experience to satisfy this requirement. The record of work experience must be made available for perusal by the Faculty of Health, Engineering and Sciences upon request. The acceptability or otherwise of employment experience, and the period of that type of experience that may be credited towards the 60 days, will be determined by the Examiner of [ENG4909 Work Experience - Professional](#).

## **Recommended enrolment patterns**

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.

Due to the large number of combinations of engineering and business majors available separate recommended enrolment pattern tables are not printed in this Handbook.