

## Bachelor of Engineering Science (BENS) - BEngSci

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907902; Distance education: 907905; Springfield campus: 927902

CRICOS code (International applicants): 079333D

	<b>On-campus</b>	<b>Distance education#</b>
<b>Semester intake:</b>	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
<b>Campus:</b>	Springfield, Toowoomba	-
<b>Fees:</b>	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
<b>Standard duration:</b>	3 years full-time, 6 years part-time or external	

- to enable students to acquire and demonstrate that they possess the specified graduate attributes and capabilities;
- to enable students to acquire an appropriate level of technical competence in one of the following fields: Agricultural Engineering, Infrastructure Management; Civil Engineering; Computer Systems Engineering; Electrical and Electronic Engineering; Environmental Engineering; Mechanical Engineering or Power Engineering;
- to enable students from diverse and non-traditional backgrounds and locations to enrol in the program and to provide them with opportunities to acquire the skills necessary to complete the program in the normal time;
- to enable students to be empowered as learners through the provision of a wide range of teaching and learning styles and modes, in their program;
- to ensure that all students, regardless of the mode of study, have equality of opportunity in acquiring the specified graduate attributes and capabilities;
- to ensure that graduates are eligible for the Engineering Technologist Graduate grade of membership with Engineers Australia, and for membership of other appropriate professional bodies.

## Admission requirements

### Applicants shall normally:

- have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in the Queensland Senior Secondary School subject: English and Mathematics B; or
- be able to demonstrate that they have achieved an equivalent standard in these subjects at another institution and
- **Australian applicants:** have achieved a Queensland Overall Position (OP) band, or an equivalent Rank based on qualifications and previous work experience, at or above the specified cut-off level

Domestic and International Applicants from a non-English speaking background are required to satisfy [English language requirements](#).

If you do not meet the English language requirements you may apply to study a University-approved [English language program](#). On successful completion of the English language program, Applicants may be admitted to an Award Program.

## Program fees

### Commonwealth supported place

A Commonwealth supported place is where the Australian Government makes a contribution towards the cost of your higher education and you as a student pay a [student contribution amount](#), which varies depending on the courses undertaken. You are able to calculate the fees for a particular course via the [Course Fee Finder](#). Commonwealth Supported students may be eligible to defer their fees through a Government loan called [HECS-HELP](#).

### Domestic full fee paying place

Domestic full fee paying places are funded entirely through the full fees paid by the student. Full fees vary depending on the courses that are taken. You are able to calculate the fees for a particular course via the [Course Fee Finder](#).

Domestic full fee paying students may be eligible to defer their fees through a Government loan called [FEE-HELP](#) provided they meet the residency and citizenship requirements.

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of experience that may be credited towards the 45 days, will be determined by the Examiner of [ENG3909 Work Experience - Technologist](#).

Credit or exemptions for [ENG3909 Work Experience - Technologist](#) will not normally be considered.

## 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. Specialist software is required for some courses.

## Residential schools

Students are required to undertake practical and professional activities relevant to their program through enrolment in a series of **Practice courses** in the program. Practice courses are **zero** unit courses that may be undertaken in either on-campus or external mode and the final grades available are Pass (P)/Fail (F) only. They are a compulsory part of the program and do not attract a student contribution charge for Australian residents or a tuition fee for international students. The recommended enrolment schedule for Practice courses is shown in the Recommended Enrolment Pattern for the program in this Handbook.

External students must attend a number of residential schools during their program to obtain experience in practical and professional activities appropriate to the program. The residential schools are included in Practice courses which are conducted in Semester 3 or during the recess periods. The dates for each residential school Practice course are shown in the [Residential School schedule](#) in this Handbook and external students should ensure they are able to attend the residential school prior to enrolling in a Practice course. Personal protective equipment is compulsory in many engineering, construction and spatial science laboratories, student should confirm the requirements before attending residential schools for Practice courses.

Student who enrol in on-campus mode for Practice courses normally undertake a series of weekly activities and/or attend a compulsory residential school.

## Articulation

Students who have completed a Bachelor of Engineering Science program, or equivalent, may articulate to the [Bachelor of Engineering \(Honours\)](#). The amount of credit granted depends upon the field of study and Electives completed in the Bachelor of Engineering Science program and the field of study selected in the Bachelor of Engineering (Honours) and is maximised for students undertaking the pathway to Bachelor of Engineering (Honours).

## Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering Science and who satisfy all of the requirements of either the [Associate Degree of Engineering](#) or the [Diploma of Engineering Studies](#) may be permitted to exit with that award.

## Credit

Exemptions/credit will be assessed based on the [USQ Credit and Exemption Procedure](#).

## Other information

### Engineering Pathways

A special Pathway has been developed for students who intend to study the Bachelor of Engineering (Honours) once they have completed the Bachelor of Engineering Science program. Pathway to the [Bachelor of Engi](#)

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^ On-campus students should enrol in the external mode.

## **Civil Engineering Major recommended enrolment pattern (Toowoomba and Springfield campus)**

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.

To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for both Toowoomba and Springfield campuses. Students following a non-standard enrolment pattern should consult the [course synopses](#) section of this Handbook to ascertain if a course is offered in another term.

### **Pathways**

It is recommended that students wishing to continue into the [BENH Bachelor of Engineering \(Honours\)](#) (Civil Engineering) program using a pathway should have completed at least eight courses. Pathway students should enrol in [CIV3703 Transport Engineering](#) instead of [CIV2702 Municipal Services](#), and enrol in [ENM2600 Advanced Engineering Mathematics](#) and [ENG3104 Engineering Simulations and Computations](#) and an approved [Bachelor of Engineering \(Honours\)](#) (Ci



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#### Footnotes

- # Please refer to [Other Information — Engineering Pathways](#) at the beginning of this program section.
- † The semester 3 offering of this course is offered in odd numbered years only.
- ^^ **ENG1901 Engineering Practice 1** is the first in a series of **Practice Courses** designed to enable students to acquire engineering and professional practice skills, including practical and teamwork skills, problem solving and engineering judgement. It is designed principally to cater for the needs of recent school leavers and those lacking any significant experience of the engineering workforce. **Students who have a trade certificate and who have been employed in the engineering industry for some time may be able to claim exemption from the course.**
- ^ On-campus students should enrol in the external offering of this course.
- ‡ The semester 3 offering of this course is offered in even numbered years only.

## Computer Systems Engineering Major recommended enrolment pattern

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.

To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for our Toowoomba campus. Students following a non-standard enrolment pattern should consult the [course synopses](#) section of this Handbook to ascertain if a course is offered in another term.

With approval from the Faculty of Health, Engineering and Sciences, students may also enrol in courses from other engineering, sciences or business programs. A maximum of one unit may be selected.

On entering the Bachelor of Engineering Science in Computer Systems Engineering, external students are required to purchase a kit of tools comprising an electronic soldering iron, wire strippers, long nose pliers, diagonal cutter, safety glasses and an electronic prototyping 'breadboard'. These will first be required for [ELE2501 Electronic Workshop and Production](#) and [ELE1502 Electronic Circuits](#), and further details will be provided on commencement of these courses. Additionally, all students enrolled in course [ELE2501](#) will be required to purchase an electronic kit.

Students who have been granted an exemption in the course [ELE1801 Electrical Technology](#)

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#### Footnotes

- # Please refer to [Other Information — Engineering Pathways](#) at the beginning of this program section.
- † The semester 3 offering of this course is offered in odd numbered years only.
- ^^ [ENG1901 Engineering Practice 1](#) is the first in a series of **Practice Courses** designed to enable students to acquire engineering and professional practice skills, including practical and teamwork skills, problem solving and engineering judgement. It is designed principally to cater for the needs of recent school leavers and those lacking any significant experience of the engineering workforce. **Students who have a trade certificate and who have been employed in the engineering industry for some time may be able to claim exemption from the course.**
- ^ On-campus students should enrol in the external mode.
- ‡ The semester 3 offering of this course is offered in even numbered years only.

### Electrical and Electronic Engineering Major recommended enrolment pattern

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.

To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for both Toowoomba and Springfield campuses. Students following a non-standard enrolment pattern should consult the [course synopses](#) section of this Handbook to ascertain if a course is offered in another term.

Students wishing to further their knowledge of software may be allowed to choose one Elective from courses offered by the School of Agricultural, Computational and Environmental Sciences. Interested students should peruse the [course synopses](#) to see what is available and then seek permission to undertake the course from the Faculty of Health, Engineering and Sciences. A maximum of one unit may be selected.

On entering the Bachelor of Engineering Science in Electrical and Electronic Engineering eled in.

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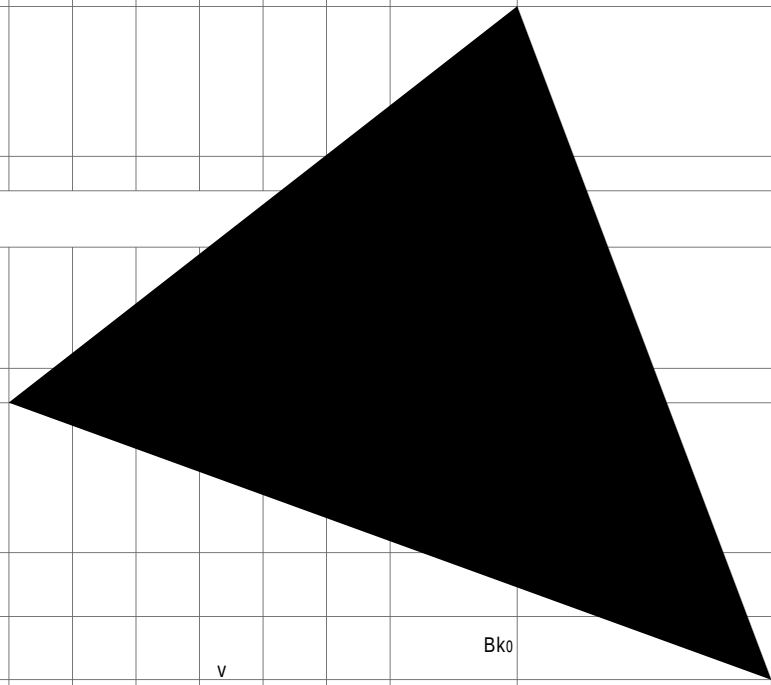
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To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for our Toowoomba campus. Students following a non-standard enrolment pattern should consult the [course synopses](#) section of this Handbook to ascertain if a course is offered in another term.

### **Pathways**

It is recommended that students wishing to continue into the [Bachelor of Engineering \(Honours\)](#) (Environmental Engineering) program using a Pathway should have completed at least eight courses. Pathway students should enrol in [ENM2600 Advanced Engineering Mathematics](#), and [ENG3104 Engineering Simulations and Computations](#) and choose an approved course from the [Bachelor of Engineering \(Honours\)](#) (Environmental Engineering) as an elective.

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needs of recent school leavers and those lacking any significant experience of the engineering workforce. **Students who have a trade certificate and who have been employed in the engineering industry for some time may be able to claim exemption from the course.**

^ On-campus students should enrol in the external mode.

‡ The semester 3 offering of this course is offered in even numbered years only.

## Mechanical Engineering Major recommended enrolment pattern

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.

To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for our Toowoomba campus. Students following a non-standard enrolment pattern should consult the [course synopses](#) section of this Handbook to ascertain if a course is offered in another term.

### Pathways

It is recommended that students wishing to continue into the [Bachelor of Engineering \(Honours\)](#) (Mechanical Engineering) program using a Pathway should have completed at least eight courses. Pathway students should enrol in [MEC2401 Dynamics I](#) instead of [MEC2405 Machine Dynamics](#), [MEC3102 Fluid Mechanics](#) instead of [MEC2106 Introduction to Thermo-Fluids](#), and enrol in [ENM2600 Advanced Engineering Mathematics](#) and [ENG3104 Engineering Simulations and Computations](#) and an approved [Bachelor of Engineering \(Honours\)](#) (Mechanical Engineering) course as an elective.

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**Footnotes**

- # Please refer to [Other Information — Engineering Pathways](#) at the beginning of this program section.
- † The semester 3 offering of this course is offered in odd numbered years only.
- ^^ **ENG1901 Engineering Practice 1** is the first in a series of **Practice Courses** designed to enable students to acquire engineering and professional practice skills, including practical and teamwork skills, problem solving and engineering judgement. It is designed principally to cater for the needs of recent school leavers and those lacking any significant experience of the engineering workforce. **Students who have a trade certificate and who have been employed in the engineering industry for some time may be able to claim exemption from the course.**
- ^ On-campus students should enrol in the external mode.
- ‡ The semester 3 offering of this course is offered in even numbered years only.

**Power Engineering Major recommended enrolment pattern**

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.

To satisfy the requirements of the program students must complete all of the Academic and Practice Courses in the following table that shows the recommended enrolment patterns for on-campus and external students for our Toowoomba campus. Students follo







