# Bachelor of Engineering (Honours) Bachelor of Science (BEHS) - BEng(Hons) BSc

QTAC code (Australian and New Zealand applicants): External: 907365; Toowoomba campus: 907362

CRICOS code (International applicants): 079518F

|                       | On-campus#  | External  |
|-----------------------|---|---|
| Semester intake:      | Semester 1 (February)<br>Semester 2 (July)  | Semester 1 (February)<br>Semester 2 (July)  |
| Campus:               | Springfield, Toowoomba  | -   |
| Fees:                 | 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 |
| Standard duration:    | 5 years full-time, 8 years part-time or external  |   |
| Program articulation: | From: Associate Degree of Engineering; Bachelor of Engineering Science; Bachelor of Engineering (Honours) |   |

#### Notes

See note on part-time study below within Admission requirements.

#### **Footnotes**

#### Contact us

| Future Australian and New Zealand students | Future International students   | <b>Current students</b>             |
|--|---------------------------------|-------------------------------------|
| Ask a question                             | Ask a question                  | Ask a question                      |
| Freecall (within Australia): 1800          | Phone: +61 7 4631 5543          | Freecall (within Australia): 1800   |
| 269 500                                    | Email: international@usq.edu.au | 007 252                             |
| Phone (from outside Australia): +61        | _                               | Phone (from outside Australia): +61 |
| 7 4631 5315                                |                                 | 7 4631 2285                         |
| Email: study@usq.edu.au                    |                                 | Email usq.support@usq.edu.au        |

### **Professional accreditation**

A graduate of this program is eligible to apply for membership of Engineers Australia as a graduate Engineer. After further professional development, a graduate member with a Bachelor of Engineering (Honours) may apply for chartered status as a Professional Engineer and, when granted, may use the post-nominal MIEAust CPEng.

The Bachelor of Engineering (Honours) program is accredited by Engineers Australia and, through an agreement reached between the professional engineering bodies of other countries (the Washington Accord), is also recognised in the United Kingdom, the Unites States of America, Canada, Ireland, Hong Kong, New Zealand and South Africa.

The Computing major of the Bachelor of Science is provisionally accredited at professional level by the Australian Computer Society and through the Seoul Accord is recognised in other countries.

<sup>#</sup> None of the Bachelor of Science majors are available at the Springfield campus. However, Springfield students may be able to take a Science major externally. Accordingly, the Springfield offering is not suitable for International on-campus students.

# **Program aims**

This program provides students with the opportunity to become qualified Engineers with a strong background in one branch of Science. The program offers students a high level of fle

## **Program fees**

## Commonwealth supported place

A Commonwealth supported place is where the Australian Government makes a contribution towards the cost of a students' higher education and students pay a student contribution amount, which varies depending on the courses undertaken. Students 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. Students 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.

Australian citizens, Permanent Humanitarian Visa holders, Permanent Resident visa holders and New Zealand citizens who will be resident outside Australia for the duration of their program pay full tuition fees and are not eligible for FEE-Help.

### International full fee paying place

International students pay full fees. Full fees vary depending on the courses that are taken and whether they are studied on-campus, via distance education/online. Students are able to calculate the fees for a particular course via the Course Fee Finder.

## **Program structure**

The program involves five years of full-time study.

Students may apply for admission to study part-time or externally, however applicants should ensure they are able to complete this program within the maximum duration of ten years. To achieve this, students will need

# Major studies Engineering majors

| 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. |
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| Biology                        |
|--------------------------------|
| Computing ^+                   |
| Environment and Sustainability |
| Food Science                   |
| Human Physiology               |
| Mathematics <sup>+</sup>       |
| Physical Sciences              |
| Wine Science                   |

#### **Footnotes**

- ^ Students undertaking this Science major cannot complete the following Engineering major within 40 units: Mechanical Engineering.
- + Students who select this major cannot undertake CSC1402 as an approved course.

#### Core courses

The eight courses comprising each of the Science majors are listed in the Bachelor of Science section of this Handbook.

Students enrolled in the Bachelor of Engineering (Honours) Bachelor of Science program study all of the Core courses listed in a Science major. Students must also complete the following Core courses for each major; these should be completed early in the program, as noted in the Recommended Enrolment Pattern for the relevant Science major. Students completing ENM1600 Engineering Mathematics and ENM2600 Advanced Engineering Mathematics should additionally refer to the Recommended Enrolment Pattern for their Engineering major.

| Science Major | Core courses to be studied  | Reduction in required number of<br>Approved Courses in Engineering<br>major |
|---------------|---|---|
| Biology       | <ul> <li>ENM1600 Engineering         Mathematics</li> <li>ENM2600 Advanced         Engineering Mathematics</li> <li>CMS1100 Communicating in         the Sciences</li> <li>SCI1001 Succeeding in         Science</li> <li>STA2300 Data Analysis</li> </ul>  | 3   |
| Computing     | <ul> <li>ENM1600 Engineering         Mathematics</li> <li>ENM2600 Advanced         Engineering Mathematics</li> <li>CMS1000 Communication and         Scholarship</li> <li>CSC1401 Foundation         Programming</li> <li>STA2300 Data Analysis</li> <li>MAT1101 Discrete         Mathematics for Computing</li> </ul> | 4   |

| Physical Sciences          | <ul> <li>ENM1600 Engineering         Mathematics</li> <li>ENM2600 Advanced         Engineering Mathematics</li> <li>CMS1100 Communicating in         the Sciences</li> <li>CSC2410 Computational         Thinking with Python</li> <li>STA2300 Data Analysis</li> </ul> | 3 |
|----------------------------|---|---|
| Plant Agricultural Science | <ul> <li>ENM1600 Engineering         Mathematics</li> <li>ENM2600 Advanced         Engineering Mathematics</li> <li>CMS1100 Communicating in         the Sciences</li> <li>SCI1001 Succeeding in         Science</li> <li>STA2300 Data Analysis</li> </ul>              | 3 |
| Wine Science               | <ul> <li>ENM1600 Engineering         Mathematics</li> <li>ENM2600 Advanced         Engineering Mathematics</li> <li>CMS1100 Communicating in         the Sciences</li> <li>SCI1001 Succeeding in         Science</li> <li>STA2300 Data Analysis</li> </ul>              | 3 |

Where a course listed in a student's Science major is also listed as a core course for the Engineering program or in their Engineering major, then the student must select another course from the Science major or, with the approval of the Program Coordinator, another course offered by the Faculty of Health, Engineering and Sciences. Students should consult the Bachelor of Science section of this Handbook for a list of Unsuitable approved courses for their chosen Science major.

### Practical experience

To be eligible to graduate from the Bachelor of Engineering (Honours), students must obtain an aggregate of at least 60 days of suitable work 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 work 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.

Credit or exemptions for ENG4909 Work Experience - Professional 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

## **Course transfers**

Students may enter the program with advanced standing. Students who are enrolled in either the Bachelor of Engineering (Honours) program or the Bachelor of Science program may transfer to the program. If they have completed up to one year of one of those programs they would normally be able to complete the program in