

Master of Advanced Engineering (MAEN) - MAdvEng

| | Online |
|------------------------------|---|
| Semester intake: | Semester 1 (February) Semester 2 (July) |
| Fees: | Domestic full fee paying place International full fee paying place |
| Standard duration: | 1.5 - 2 years part-time |
| Program articulation: | From: Graduate Certificate of Advanced Engineering |

Contact us

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

Professional accreditation

The Master of Advanced Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The aim of the Master of Advanced Engineering program is to produce graduates who are equipped with essential management knowledge and skills or advanced knowledge in a specialisation. The program allows students to manage complex technological or engineering practices and enhance their knowledge of a particular specialisation for theoretical application, research and professional practice.

Program objectives

Students who successfully complete the Master of Advanced Engineering should be able to:

- Identify and apply theoretical knowledge to address engineering management issues within a global and cross-cultural context
- Analyse, interpret and design innovative solutions in management, within an engineering context, to satisfy diverse and complex stakeholder requests
- Evaluate and apply advanced technical knowledge and skills to identify problems and propose a range of alternative solutions within the context of the specialisation
- Exhibit and communicate advanced knowledge of research principles, ethics and methods applicable to an engineering specialisation.

Australian Qualifications Framework

The Australian Qualifications Framework (AQF) is a single national, comprehensive system of qualifications offered by higher education institutions (including universities), vocational education and training institutions and secondary schools. Each AQF qualification has a set of descriptors which define the type and complexity

of knowledge, skills and application of knowledge and skills that a graduate who has been awarded that qualification has attained, and the typical volume of learning associated with that qualification type.

This program is at AQF Qualification Level 09. Graduates at this level will have specialised knowledge and skills for research, and/or professional practice and/or further learning.

The full set of levels criteria and qualification type descriptors can be found by visiting www.aqf.edu.au.

Admission requirements

To be eligible for admission, applicants must satisfy the following requirements:

- Completion of an Australian university four year Bachelor degree in the area of engineering in a relevant cognate specialisation (major), or equivalent.
- English Language Proficiency requirements for Category 3.

All students are required to satisfy the applicable [English language requirements](#).

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

Program fees

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 Master of Advanced Engineering consists of 8 units of study comprising of 4 core units and a 4 unit specialisation.

Students must undertake:

- Two courses from Schedule A (core courses);
- Four courses from Schedule B (related to the specialisation); and
- An Industry Project course in Schedule C (2 units).

Specialisation

The specialisation study provides students with knowledge and skills in a specific discipline. The specialisation study areas in the Master of Advanced Engineering are:

- Structural Engineering Design
- Engineering and Project Management

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. 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.

Articulation

Students who have completed the [Graduate Certificate of Advanced Engineering](#) (Advanced Structural Engineering Design, Engineering Management and Engineering Project Management specialisations) are able to apply to articulate into the Master of Advanced Engineering degree, if they satisfy admission requirements.

The standing of degrees awarded by an overseas institution will be determined by reference to the National Office of Overseas Skills Recognition (NOOSR).

Exit points

Students who have completed four courses in the program may satisfy the requirements to be awarded the [GCAE Graduate Certificate of Advanced Engineering](#) and apply to exit the Master of Advanced Engineering program with that award.

Credit

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

Structural Engineering Design specialisation 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.

| Course | Year of program and semester in which course is normally studied | | | | | | Enrolment requirements |
|--|--|-----|----------------|-----|--------------|-----|------------------------|
| | On-campus (ONC) | | External (EXT) | | Online (ONL) | | |
| | Year | Sem | Year | Sem | Year | Sem | |
| Schedule A: Core Courses | | | | | | | |
| Students must complete the two courses in this schedule: | | | | | | | |
| ENG8001 Engineering Research Methods ** | | | 1,2,3 | | | | 1,2 |
| ENG8104 Asset Management in an Engineering Environment | | | | | | | 1 |
| Schedule B: Specialisation Courses | | | | | | | |
| Students must complete the four courses in this schedule: | | | | | | | |
| CIV8801 Code-Based Structural Design | | | | | | | 1 |
| CIV8803 Advanced Mechanics and Technology of Fibre Composites | | | | | | | 1 |
| CIV8804 Advanced Design Practice using Finite Element Analysis | | | | | | | 2 |
| CIV8802 Advanced Prestressed Concrete] | | | | | | | 2 |
| Schedule C Capstone Project | | | | | | | |

| Course | Year of program and semester in which course is normally studied | | | | | | Enrolment requirements |
|---|--|-----|----------------|-----|--------------|-----|--|
| | On-campus (ONC) | | External (EXT) | | Online (ONL) | | |
| | Year | Sem | Year | Sem | Year | Sem | |
| Students must complete this course: | | | | | | | |
| ENG8308 Industry Project [#] | | | | | | 2 | Pre-requisite: (ENG8300 and ENG8311) or Students must be enrolled in the following program: MAEN |

Footnotes

- ** [ENG8001 Engineering Research Methods](#) may be used as an exit course in the [GCAE Graduate Certificate of Advanced Engineering](#) program.
] Offered odd years only
2 units

Engineering and Project Management specialisation 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.

| Course | Year of program and semester in which course is normally studied | | | | | | Enrolment requirements |
|--|--|-----|----------------|-----|--------------|-----|---|
| | On-campus (ONC) | | External (EXT) | | Online (ONL) | | |
| | Year | Sem | Year | Sem | Year | Sem | |
| Schedule A: Core Courses | | | | | | | |
| Students must complete the two courses in this schedule: | | | | | | | |
| ENG8001 Engineering Research Methods ^{**} | | | 1,2,3 | | | | 1,2 |
| ENG8104 Asset Management in an Engineering Environment | | | | | | | 1 |
| Schedule B: Specialisation Courses | | | | | | | |
| Students must complete four courses in this schedule: | | | | | | | |
| ENG8111 Project Requirements Management | | | | | | | 2 |
| ENG8101 Technological Impact and its Management | | | | | | | 1 |
| ENG8208 Advanced Engineering Project Management | | | | | | | 1 |
| ENG8205 Project Management Practice | | | | | | | 2 |
| ENG8207 Technological Innovation and Development | | | | | | | 2 |
| ENG8103 Management of Technological Risk | | | | | | | 2 |
| MGT8022 Project-Based Management | | | | | | | 1,3 |
| Schedule C Capstone Project | | | | | | | |
| Students must complete an Industry Project from this schedule: | | | | | | | |
| ENG8308 Industry Project [#] | | | | | | | 2 Pre-requisite: (ENG8300 and ENG8311) or Students must be enrolled in the following program: MAEN |

Footnotes

- ** [ENG8001 Engineering Research Methods](#) may be used as an exit course in the [GCAE Graduate Certificate of Advanced Engineering](#) program.
2 units