International Standard Serial Number
ISSN 1037-1818

Handbook 2023

Engineering and Built Environment

The University of Southern Queensland

Postal address:
The University of Southern Queensland
Toowoomba QLD 4350
Australia

Telephone + 61 7 4631 2100

www.unisq.edu.au

ABN: 40 234 732 081

This version produced 20 Jul 2023.

Programs

Undergraduate programs

Undergraduate Certificate of Engineering Fundamentals (UCCE) - UCertEngFun

	Online
Start:	Semester 1 (February) Semester 2 (July)
Fees:	Commonwealth supported place
Standard duration:	0.5 year full-time
Program articulation:	To: Diploma of University Studies; Associate Degree of Engineering; Bachelor of Engineering Science; Bachelor of Engineering (Honours)

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Contact us

Future Australian and New Zealand 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 Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Program aims

This program is designed for people interested in pursuing a career in engineering. Students will build knowledge across engineering systems including foundational concepts in engineering, engineering design, engineering materials and mathematics.

Program objectives

On completion of this program graduates should be able to:

- utilise foundation knowledge, skills and competencies in engineering
- reflect on the nature of award-level study
- use effective communication and interpersonal skills

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 05. Graduates at this level will have specialised knowledge and skills for skilled/paraprofessional work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Admission into this short program is available to eligible Commonwealth Supported applicants, who are aged 17 years or over. UniSQ assumes your knowledge is equivalent to senior high school English (Units 3 & 4, C).

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 Schedules.

Commonwealth Supported students may be eligible to defer their fees through a Government loan called HECS-HELP.

Program structure

Students must successfully complete four compulsory core courses before they are able to graduate with the Undergraduate Certificate of Engineering Fundamentals.

Required time limits

Students have a maximum of 1 year to complete this program.

Core courses

There are four compulsory courses:

- ENG1002 Introduction to Engineering and Built Environment Applications
- ENG1100 Introduction to Engineering Design
- MEC1201 Engineering Materials
- DIP1003 Essential Mathematics OR ENM1500 Introductory Engineering Mathematics[#]

Enrolment involves the completion of an online diagnostic test to determine the appropriate mathematics course

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

Successful completion of this program will enable four courses of credit towards the Diploma of University Studies. It will also provide entry to, and up to four courses credit towards the Associate Degree of Engineering and enable students to progress to the Bachelor of Engineering Science or Bachelor of Engineering (Honours) in a range of engineering specialisations.

Recommended enrolment pattern

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	
ENG1002 Introduction to Engineering and Built Environment Applications					1	1,2	
ENG1100 Introduction to Engineering Design					1	1,2	
MEC1201 Engineering Materials					1	1,2,3	
Choose **one** of the following two courses:							
DIP1003 Essential Mathematics#					1	1,2,3	
ENM1500 Introductory Engineering Mathematics#§					1	1,2,3	Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed

Footnotes

Enrolment involves the completion of an online diagnostic test to determine the appropriate mathematics course

§ Unavailable online in S3 2023

Undergraduate Certificate of Spatial Science Fundamentals (UCCS) - UCertSpatScFun

	Online
Start:	Semester 1 (February) Semester 2 (July)
Fees:	Commonwealth supported place
Standard duration:	0.5 year full-time
Program articulation:	To: Diploma of University Studies; Associate Degree of Spatial Science; Bachelor of Spatial Science Technology; Bachelor of Spatial Science (Honours)

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Contact us

Future Australian and New Zealand 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 Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Program aims

This program is designed for people interested in pursuing a career as a surveyor or geospatial scientist. Students will build foundational knowledge across the broader discipline skills of surveying, digital mapping, satellite positioning, problem solving and mathematics.

Program objectives

On successful completion of this program graduates should be able to:

- utilise foundation knowledge, skills and competencies in engineering
- reflect on the nature of award-level study
- use effective communication and interpersonal skills

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 05. Graduates at this level will have specialised knowledge and skills for skilled/paraprofessional work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Admission into this short program is available to eligible Commonwealth Supported applicants, who are aged 17 years or over. UniSQ assumes your knowledge is equivalent to senior high school English (Units 3 & 4, C).

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 Schedules.

Commonwealth Supported students may be eligible to defer their fees through a Government loan called HECS-HELP.

Program structure

Students must successfully complete four compulsory core courses before they are able to graduate with the Undergraduate Certificate of Spatial Science Fundamentals.

Required time limits

Students have a maximum of 1 year to complete this program.

Core courses

There are four compulsory courses:

- ENG1002 Introduction to Engineering and Built Environment Applications
- GIS1401 Geographic Data Presentation OR GIS1402 Geographic Information Systems[£]
- SVY1110 Introduction to Global Positioning System OR SVY1102 Surveying A
- DIP1003 Essential Mathematics OR ENM1500 Introductory Engineering Mathematics[#]

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Enrolment involves the completion of an online diagnostic test to determine the appropriate mathematics course

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

Successful completion of this program will enable four courses of credit towards the Diploma of University Studies. It will also provide entry to, and up to four courses credit towards the Associate Degree of Spatial Science and enable students to progress to the Bachelor of Spatial Science Technology or Bachelor of Spatial Science (Honours).

Recommended enrolment pattern

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	
ENG1002 Introduction to Engineering and Built Environment Applications					1	1,2	

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	
Choose one of the following two courses:							
GIS1402 Geographic Information Systems£					1	1,3	
GIS1401 Geographic Data Presentation					1	2	
Choose one of the following two courses:							
SVY1102 Surveying A					1	1	
SVY1110 Introduction to Global Positioning System					1	2	
Choose one of the following two courses:							
DIP1003 Essential Mathematics#					1	1,2,3	
ENM1500 Introductory Engineering Mathematics#§					1	1,2,3	Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Enrolment involves the completion of an online diagnostic test to determine the appropriate mathematics course

§ Unavailable online in S3 2023

Diploma of Engineering and Spatial Science Foundations (DESF) - DipESSF

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 FDUS Foundation Diploma of University Studies which will be offered from Semester 2, 2016.

	Online #
Start:	No new admissions
Fees:	Commonwealth supported place Domestic full fee paying place International full fee paying place
Standard duration:	1 year full-time, 3 years part-time
Program articulation:	To: Associate Degree of Engineering, ; Associate Degree of Spatial Science,

Notes:

Details of the Engineering and Spatial Science on-campus and distance mode offerings can be obtained from undergraduate Engineering programs.

Footnotes

The first four courses are compulsory and are only available online.

Contact us

	Current students
	Ask a question Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Program aims

The principal aim of this program is to equip students with the necessary skills to successfully respond to the numeracy, literacy, and e-literacy demands of both higher education studies and the professional workplace, as well as assisting students to successfully manage the complexities of life/work balance. The diploma program provides students with a broad introduction to engineering and spatial science as a science and profession, and the concepts of systems and real world teamwork. Problem solving skills, and advanced mathematical and physics competencies are developed and the program will appeal to those who want to enhance and develop their broad study skills prior to sampling a range of engineering and spatial science courses in order to determine whether to embark on a more specialised associate degree program from the Faculty of Health, Engineering and Sciences.

Program objectives

On the successful completion of the Diploma of Engineering and Spatial Science Foundations graduates will have:

- demonstrated an ability to successfully pursue an associate degree program of study in the Faculty of Health, Engineering and Sciences
- acquired sufficient knowledge about engineering and surveying programs of study to make an informed choice about further undergraduate study in the Faculty of Health, Engineering and Sciences
- developed an enhanced awareness of the nature of study in the Faculty of Health, Engineering and Sciences
- developed foundation engineering knowledge, skills and competencies in a series of first year engineering degree courses

Admission requirements

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

There is no specified minimum educational achievement entrance standard.

Normally, to be eligible for enrolment in the program a person will have attained an age of at least 18 years in the year of the proposed enrolment.

Students will need to complete the online application form for entry to the Diploma Programs. All applicants are required to complete online diagnostic tests in Mathematics, e-literacy, and English Communication Skills. Applicants will then be given advice detailing whether the Diploma Program is the most appropriate pathway for them to undertake. Some students may be advised to undertake the Tertiary Preparation Pathway .

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

This program consists of four core courses followed by four courses of specialisation in Engineering and/or Spatial Science. Students must successfully complete the four core courses before they will be enrolled in the four courses of specialisation.

Core courses

There are four compulsory courses:

- DIP1000 E-Literacy for Contemporary Society
- DIP1001 Academic and Professional English
- DIP1002 Strategies for Successful Study
- DIP1003 Essential Mathematics

DIP1000 E-Literacy for Contemporary Society and DIP1002 Strategies for Successful Study are co-requisites: they must be studied together, and they must be the first courses undertaken.

For part-time students, DIP1001 Academic and Professional English and DIP1003 Essential Mathematics must be studied after DIP1000 and DIP1002. All four courses can be taken in a single semester for those pursuing full-time studies.

Foundation Studies in Engineering and Spatial Sciences courses

After completing the four compulsory courses students can select four courses from the following selection:

- CIV1500 Applied Mechanics
- ENG1002 Introduction to Engineering and Built Environment Applications
- ENG1101
- ENM1500 Introductory Engineering Mathematics
- ENG1100 Introduction to Engineering Design
- SVY1500 Spatial Science for Engineers
- MEC1201 Engineering Materials
- SVY1110 Introduction to Global Positioning System

To maximise future credit and articulation into an Associate Degree program in the Faculty of Health, Engineering and Sciences, students should choose courses that are relevant to that Associate Degree program.

Program completion requirements

To successfully complete the Diploma of Engineering and Spatial Science Foundations students must successfully complete the four compulsory core courses, and also four courses of specialisation.

Required time limits

Students have a maximum of three years to complete this program.

IT requirements

Students must have reliable and ready access to email and the Internet. Broadband access is required for the four compulsory core courses. Students should have access to a scanner for DIP1003 Essential Mathematics. For information technology requirements, please see the minimum computing standards.

Students undertaking the Diploma of Engineering and Spatial Science Foundations must complete the four compulsory courses first. The recommended enrolment pattern is as follows:

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	
DIP1000 E-Literacy for Contemporary Society					1	1,2,3	
DIP1001 Academic and Professional English					1	1,2,3	
DIP1002 Strategies for Successful Study					1	1,2,3	
DIP1003 Essential Mathematics					1	1,2,3	
Plus the four Engineering and Spatial Science courses referred to in the Program Structure.							

Associate Degree of Construction (ADCN) - ADegConstruction

QTAC code (Australian and New Zealand applicants): External: 907075; Springfield campus: 927071

CRICOS code (International applicants): 089495C

This program is currently undergoing internal reaccreditation. This may result in changes to the program for 2023.

	On-campus	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Springfield	-
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:	2 years full-time, 4 years part-time	
Program articulation:	To: Bachelor of Construction (Honours)	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

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

Program aims

The program aims to produce para-professional standard graduates for entry level management positions in the building and construction industry who have a broad range of relevant technical skills and well developed skills in communication and team work.

The program is designed to capitalise on growing demand for this level of expertise on construction projects and the program's primary aims are to:

- enable graduates to attain a diverse range of practical skills and competence to successfully coordinate and supervise a wide range of construction processes;
- develop skills in planning, monitoring and controlling the technical and logistical aspects associated with building and construction projects;
- take an active role in planning, managing and organising people and other resources on construction projects in the built environment to support other construction management professionals.

Program objectives

At the completion of the program the graduate will be able to.

- apply building principles and methods;
- prepare documentation for building development and construction;
- liaise with other members of the building team, clients and other external stakeholders;
- apply relevant legislation and technical standards at the appropriate level in building construction;
- accept a level of responsibility for the practical and logistical aspects of the human relations, resources, scheduling, quality control, environmental factors and social impacts involved in a building project.

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 06. Graduates at this level will have broad knowledge and skills for paraprofessional/highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **62.7**, or equivalent qualification.^

- English Language Proficiency requirements for Category 2

Applicants are advised to also note the following:

- Assumed knowledge expectations: English; General Mathematics
- Recommended Prior Study: Mathematical Methods (Units 3 & 4, C) or equivalent

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Associate Degree of Construction is a 16 unit program consisting of Academic courses and Practice courses comprising a core major study component and a minor study. The Associate Degree of Construction comprises either two years of full-time study or four years of part-time study.

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

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Major Study	12	12	3	0
Minor Study	4	4		
Total	16	16	3	0

Required time limits

Students have a maximum of 6 years to complete this program.

Core courses

The courses that comprise the core major study program are listed in the following table:

Courses	Units
Academic Courses	
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENM1500 Introductory Engineering Mathematics[§]	1
CMG1001 Introduction to Construction Management and the Built Environment	1
ENG1100 Introduction to Engineering Design	1
ENG1003 Problem Solving in Engineering and the Built Environment[$]	1
CMG1002 Residential Construction: Methods, Materials and Management	1
CMG2001 Job Organisation	1

SVY1500 Spatial Science for Engineers	1
LAW1501 Business Law and Ethics	1
CIV2605 Construction Engineering	1
CMG2003 Construction Production Management	1
CMG2002 Cost Management: Estimating, Measurement and Cost Control	1
Practice Courses	
ENG1901 Engineering Practice 1	0
CIV3906 Civil Materials Practice	0
ENG2909 Work Experience - Associate	0

Footnotes

§ Unavailable online in S3 2023
$ Unavailable online in S2 2023

Major studies

The Associate Degree of Construction consists of a core major study component in Construction Management and a minor study. The major study provides students with knowledge and skills in a specific discipline.

Minor Studies

The Associate Degree of Construction consists of a core major component and a minor study. The minor study provides students with knowledge and skills in a specific area or specialisation. A minor study in a program is a group of four units of courses that provides students an appropriate breadth of study in an area of specialisation. Students must complete four (4) units from one of the minors listed below.

The minor studies available are:

- Building
- Civil
- Transdisciplinary

Please refer to the recommended enrolment pattern for details.

Practical experience

To be eligible to graduate from the Associate Degree of Construction, students must obtain an aggregate of at least 30 days of suitable work experience in an architectural, engineering or construction organisation. Students are required to enrol in ENG2909 Work Experience - Associate in the latter part of the program and maintain a record of their practical experience as specified by the Course Specification. The record of work experience must be made available for perusal by the Faculty of Health, Engineering and Sciences upon request. Work experience is to be certified by an appropriate person in the organisation that is providing the workplace experience and to be submitted to the examiner. The student must meet all costs associated with the acquisition of work experience to satisfy this requirement.

Credit or exemptions for ENG2909 Work Experience - Associate will not normally be considered.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

Students 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 articulate into the Bachelor of Construction (Honours) program.

Exit points

Students who, for whatever reason, are unable to complete the Associate Degree of Construction, and who satisfy all of the requirements of the Diploma of Engineering Studies may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Associate Degree of Construction program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG2909 Work Experience - Associate practice course.

Honours

Honours will not be awarded in this program.

Other information

Full-time, on-campus students may, with the permission of the Faculty of Health, Engineering and Sciences, undertake courses by online study. This may be desirable if students wish to extend the range of courses open to them in the Approved course areas.

In exceptional cases, the Faculty may permit a student to enrol in an approved course other than those specified for the accredited program, provided the course is drawn from another accredited associate degree program in the area of Engineering and Built Environment. **Students who wish to enrol in courses other than those listed, must obtain written approval prior to enrolling in the course.**

To satisfy the requirements of the program students must complete all of the Academic courses and the Practice courses in the following tables that show the recommended enrolment patterns for on-campus and external students. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term

Construction Management Major recommended enrolment pattern

Major study: Construction Management (Major Study Code: 17529)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1			2	1,2		
ENM1500 Introductory Engineering Mathematics*§	1	1			1	1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1			2	1,2		
CMG1001 Introduction to Construction Management and the Built Environment#	1	1			1	1		
CMG1002 Residential Construction: Methods, Materials and Management#	1	2			2	2		Pre-requisite: CMG1001
ENG1100 Introduction to Engineering Design	1	2			1	2,1		
Minor Study (Select from the Minor list)	1	2	2	2				
SVY1500 Spatial Science for Engineers	1	2			1	2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1	2	2,3			M	
Academic Courses Year 2								
CIV2605 Construction Engineering	2	1			3	1		
Minor study (Select from the Minor list)	2	1	3	1				
Minor study (Select from the Minor list)	2	1	4	1				
CMG2002 Cost Management: Estimating, Measurement and Cost Control#	2	1			4	1		Pre-requisite: CMG1001 and ENG1100
CMG2001 Job Organisation	2	2			3	2		
LAW1501 Business Law and Ethics	2	2			3	2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
CMG2003 Construction Production Management#	2	2			4	2		Pre-requisite: CMG1002
Minor study (Select from the Minor list)	2	2	4	2				
Practice Courses Year 2								
CIV3906 Civil Materials Practice	2	1	3	3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
ENG2909 Work Experience - Associate					3	1,3		

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online in S2 2023

\# On-campus mode not available in Toowoomba.

Building Minor recommended enrolment pattern

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 undertaking a Building minor must complete the following two courses:							
CIV2502 Structural and Building Technology		2		2			
CMG3003 Building Services: Methods, Materials and Management						1	Pre-requisite: CMG1001 and CIV2502 or Students must be enrolled in the following Program: MEPR
Plus any two courses from the following list:							
URP1001 Introduction to Urban and Regional Planning		1				1	
URP3201 Sustainable Urban Design and Development		2				2	
URP2001 Planning Structures and Statutory Planning		1				1	
URP2002 Local Government Planning Practice and Technology		2				2	
MGT3203 Project Management Processes		2				2	Enrolment is not permitted in MGT3203 if MGT2203 has been previously completed.

Civil Minor recommended enrolment pattern

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 undertaking a Civil minor must complete the following two courses:							
CIV2701 Road Design and Location		1				1	Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
CIV3603 Construction Methods						2	
Plus any two courses from the following list:							
CIV1500 Applied Mechanics§		1				1,3	Pre-requisite or Co-requisite: ENM1500 or ENM1600
CIV3703 Transport Engineering		2				2	
CIV2403 Geology and Geomechanics		2				2	Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV3403 Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV1501 Engineering Statics		2				2,3	Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials		1				1,2,3	
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENV3105 Hydrology		2				2	

Footnotes

§ Unavailable online in S3 2023

Transdisciplinary Minor recommended enrolment pattern

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 undertaking a Transdisciplinary minor should choose four (4) courses from the other two minors, subject to any requisite requirements:							
Choose any four (4) courses from the other two minors:							
Choose a course from the other two minors		2		2			
Choose a course from the other two minors		1		1			
Choose a course from the other two minors		1		1			
Choose a course from the other two minors		2		2			

Associate Degree of Engineering (ADNG) - AssocDegEng

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907051; External: 907055; Springfield campus: 927051

CRICOS code (International applicants): 054271G

	On-campus^+	External*#
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
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:	2 years full-time, 4 years part-time	
Program articulation:	From: Foundation Diploma of University Studies (Engineering or Spatial Science specialisation) To: Bachelor of Engineering Science; Bachelor of Engineering (Honours)	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ The only majors available on-campus at UniSQ Springfield are Civil Engineering, Electrical and Electronic Engineering and Mechanical Engineering.
+ The Instrumentation Control and Automation Engineering major is only available via external study.
* External students must be able to attend mandatory and highly recommended residential schools at a UniSQ campus.
# The semester 3 intake is only available via external study.

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: studyeng@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

All majors (except Agricultural and Mining Engineering) in this program have received full accreditation from Engineers Australia. Provisional accreditation has been granted for the Agricultural and Mining Engineering majors. Graduates of this program are eligible to apply for membership of Engineers Australia as an Engineering Associate (Officer). After further professional development, a graduate member with an Associate Degree may apply for chartered status as an Engineering Officer and, when granted, may use the post-nominal AMIEAust CEngO.

Graduates of this program in the Mining Engineering major are eligible to apply for Associate Grade membership of AusIMM (Australasian Institute of Mining and Metallurgy).

Program aims

The Associate Degree of Engineering is a tertiary level program designed to educate engineering associates in the theory, methods and practices necessary to support professional engineers. It is also designed so that students are eligible for membership of Engineers Australia (as an Engineering Associate) and other appropriate professional bodies. To this end, the program is designed to provide a general understanding of a broad field of knowledge, with specified electives (approved courses) available in most majors in the final stages of the program to allow a measure of specialisation.

Program objectives

Upon successful completion of the degree, students should be able to:

- Display broad knowledge that underpins relevant engineering practice.
- Identify the social purpose of engineering and the relationship between human-made products and systems, and community needs.
- Apply established tools and techniques to solve a range of well-defined engineering problems in diverse environmental, technical and social contexts.
- Apply relevant management and design procedures to contribute to the delivery of engineering projects within given constraints.
- Make guided judgements when identifying and responding to cultural, ethical and social issues, including those relevant to indigenous peoples.
- Communicate effectively in English using oral, written and technology-based approaches; and apply effective competencies as a team member and individual within the practice domain.
- Engage in lifelong learning through reflection, and be accountable for their personal and professional actions by managing personal performance.

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 06. Graduates at this level will have broad knowledge and skills for paraprofessional/highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **62.7**, or equivalent qualification.^

- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- Assumed knowledge expectations: English; General Mathematics
- Recommended Prior Study: Mathematical Methods (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Associate Degree of Engineering is a 16-unit program consisting of Academic Courses and Practice Courses. Students undertake a major of study, including approved courses which students are able to select.

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

Practice courses are zero unit courses and each involves approximately 50 hours of student work.

Required time limits

Students have a maximum of 6 years to complete this program.

Core courses

The courses that comprise the core studies program are shown in the following table:

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
ENG1002 Introduction to Engineering and Built Environment Applications	1,2	1,2		1,2
ENG1003 Problem Solving in Engineering and the Built Environment*	1	1		1,2
ENG1100 Introduction to Engineering Design	1,2	1,2		1,2
ENG2111 Engineering Associate Degree Design Project	2	2		2
ENM1500 Introductory Engineering Mathematics§	1,2	1,2		1,2,3
Practice Courses				
ENG1901 Engineering Practice 1	1,2	1	2,3	
ENG2909 Work Experience - Associate				1,2

Footnotes

* Unavailable online in S2 2023

§ Unavailable online in S3 2023

Major studies

The Associate Degree of Engineering consists of a core component and a series of major studies. All students must complete the core courses and one of the major studies. The major study provides students with knowledge and skills in a specific discipline. The major study areas in the UniSQ Associate Degree of Engineering are listed below. The Instrumentation Control and Automation Engineering major is designed for process technologists in industry who wish to upgrade their qualifications. As such, the program will normally be undertaken by external study.

Major	On-Campus Toowoomba	On-Campus Springfield	External
Agricultural Engineering	Yes	**No**	Yes
Civil Engineering	Yes	Yes	Yes
Electrical and Electronic Engineering	Yes	Yes	Yes
Instrumentation Control and Automation Engineering	**No**	**No**	Yes
Mechanical Engineering	Yes	Yes	Yes
Mining Engineering	Yes	**No**	Yes

Agricultural Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
AGR2301 Agricultural Science	2			2
AGR2302 Agricultural Machinery	1			1
CIV1500 Applied Mechanics§	1	1		1,3

CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV3105 Hydrology	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
SVY1500 Spatial Science for Engineers	2	2		2
Approved courses (x2)				
Practice Courses				
AGR2902 Field Practice			3	
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Footnotes

§ Unavailable online in S3 2023

Civil Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
CIV1500 Applied Mechanics[§]	1	1		1,3
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
CIV2502 Structural and Building Technology	2	2	2	
CIV2605 Construction Engineering	1	1		1
CIV2701 Road Design and Location	1	1		1
CIV2702 Municipal Services	2	2		2
ENV2103 Hydraulics I	1	1		1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
SVY1500 Spatial Science for Engineers	2	2		2
Approved course (x1)				
Practice Courses				
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
CIV3906 Civil Materials Practice	1	1	3	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Footnotes

§ Unavailable online in S3 2023

Electrical and Electronic Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
ELE1301 Computer Engineering	1	1		1

ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology[§]	2	2		2,3
ELE2101 Control and Instrumentation	2	2		2
ELE2501 Electronic Workshop and Production	2	2		2
ELE2503 Electronic Systems	2	2		2
ELE2601 Telecommunications Principles	1	1		1
ELE2702 Electrical Measurement and Analysis	1	1		1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
Approved Courses (x2)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A[~‡]	2	2	3	
ELE2912 Electrical and Electronic Practice B[‡]	1	1	3	
ELE2913 Electrical and Electronic Practice C				2

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Instrumentation Control and Automation Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
CIV1500 Applied Mechanics[§]	1	1		1,3
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology[§]	2	2		2,3
ELE2101 Control and Instrumentation	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC1501 Introduction to Industrial Processes				2
MEC2106 Introduction to Thermofluids	2	2		2
MEC2501 Process Control Systems				2
Approved Courses (x2)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A[~‡]	2	2	3	
MEC2901 Mechanical Practice 1	1	1	3	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Mechanical Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
CIV1500 Applied Mechanics§	1	1		1,3
CIV1501 Engineering Statics	2	2		2,3
ELE1801 Electrical Technology§	2	2		2,3
ENM1600 Engineering Mathematics	1,2	1,2		1,2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2106 Introduction to Thermofluids	2	2		2
MEC2202 Manufacturing Processes	1	1		1
MEC2301 Design of Machine Elements	2	2		2
MEC2402 Stress Analysis	1	1		1
MEC2405 Machine Dynamics	1	1		1
Approved Course (x1)				
Practice Courses				
MEC2901 Mechanical Practice 1	1	1	3	
MEC2902 Mechanical Practice 2	1	1	1	
MEC3903 Mechanical Practice 3	2	2	3	

Footnotes

§ Unavailable online in S3 2023

Mining Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
CIV1500 Applied Mechanics§	1	1		1,3
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
CIV2605 Construction Engineering	1	1		1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MIN2001 Mining Technology and Mineral Processing				1
MIN2002 Mine Planning and Design				2
MIN2003 Mine Operations and Management				2
SVY1500 Spatial Science for Engineers	2	2		2
Approved courses (x2)				
Practice Courses				
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
MIN2901 Mining Practice*			3	

Footnotes

§ Unavailable online in S3 2023

* offered in Semester 3 in odd years only e.g. 2019, 2021 etc

Practical experience

To be eligible to graduate from the Associate Degree of Engineering, students must obtain an aggregate of at least 30 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 ENG2909 Work Experience - Associate 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 30 days, will be determined by the Examiner of ENG2909 Work Experience - Associate.

Credit or exemptions for ENG2909 Work Experience - Associate will not normally be considered.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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 mid-semester 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. Students should confirm the requirements before attending residential schools for Practice courses.

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

Agricultural Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- AGR2902 Field Practice

Civil Engineering

- ENG1901 Engineering Practice 1

- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- CIV3906 Civil Materials Practice

Electrical and Electronic Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A
- ELE2912 Electrical and Electronic Practice B
- CHE1110 Chemistry 1 (Elective)

Instrumentation Control and Automation Engineering

- ENG1901 Engineering Practice 1
- MEC2901 Mechanical Practice 1
- ELE1911 Electrical and Electronic Practice A
- CHE1110 Chemistry 1 (Elective)
- CHE2120 Chemistry 2 (Elective)

Mechanical Engineering

- ENG1901 Engineering Practice 1
- MEC2901 Mechanical Practice 1
- MEC2902 Mechanical Practice 2
- MEC3903 Mechanical Practice 3

Mining Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- MIN2901 Mining Practice

Articulation

Students who have completed an Associate Degree of Engineering program, or equivalent, may articulate to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours). The amount of credit granted depends upon the field of study and approved courses completed in the Associate Degree of Engineering program and the field of study selected in the Bachelor of Engineering Science or Bachelor of Engineering (Honours) and is maximised for students undertaking the relevant pathway.

Engineering Pathways

A special Pathway has been developed for students who intend to study the Bachelor of Engineering Science or the Bachelor of Engineering (Honours) once they have completed the Associate Degree of Engineering program. Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours) maximises the advanced standing (exemptions) students will receive in these programs. A Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours) has been developed for each of the following Associate Degree of Engineering majors into the equivalent major:

- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Instrumentation Control and Automation Engineering [only into the Bachelor of Engineering (Honours)]
- Mechanical Engineering

In addition, students enrolled in the Civil Engineering major may articulate into the following Bachelor of Engineering Science or Bachelor of Engineering (Honours) major:

- Environmental Engineering

In addition, students enrolled in the Mining Engineering major may articulate into the following Bachelor of Engineering Science or Bachelor of Engineering (Honours) major:

- Civil Engineering

In addition, students enrolled in the Electrical and Electronic Engineering major may articulate into the following Bachelor of Engineering Science or Bachelor of Engineering (Honours) majors:

- Computer Systems Engineering
- Power Engineering

Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours) has been specially developed for students who study part-time. Full-time students may seek approval to follow the Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours), but it is not timetabled for on-campus students.

Students must have the approval of the Faculty of Health, Engineering and Sciences to undertake the Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours). Students are strongly advised to consider and apply for approval for this Pathway as soon as possible in order to maximise the credit they will receive in the Bachelor of Engineering Science or the Bachelor of Engineering (Honours). This should be done prior to the commencement of the second year of studies if possible, and after successful completion of at least eight (8) academic courses in the Associate Degree, including any courses specified as a major Pathway.

The Faculty will take into consideration a student's GPA before granting approval. Once approval is granted, the Faculty will advise students of the courses they should study when granting approval for them to follow the Pathway to the Bachelor of Engineering Science or the Bachelor of Engineering (Honours).

Pathways to the Engineering Majors

The following tables list the changes to the courses in each major which should be observed to undertake a Pathway into either the Bachelor of Engineering Science or the Bachelor of Engineering (Honours). Pathway students should seek advice from the Faculty of Health, Engineering and Sciences before selecting their approved courses.

Agricultural Engineering (BENS or BENH)

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their Approved courses.

Civil Engineering (BENS or BENH)

Course(s) to NOT be studied	Substitute course(s)
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics
CIV2702 Municipal Services	CIV3703 Transport Engineering
1 Approved Course	ENV4203 Public Health Engineering

Computer Systems Engineering (BENH)

Students wishing to articulate to this major should enrol in the Associate Degree of Engineering (Electrical and Electronic Engineering).

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
CSC1401 Foundation Programming[£]	1,2,3	1,2		1,2,3

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Electrical and Electronic Engineering (BENS or BENH)

Course(s) to NOT be studied	Substitute course(s)
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics
ELE2101 Control and Instrumentation	ELE2103 Linear Systems and Control
ELE2503 Electronic Systems	ELE2504 Electronic Design and Analysis

Students should contact the Faculty of Health, Engineering and Sciences before they have completed their first semester regarding the selection of their Approved courses. Students enrolled in this major may need to complete their Recommended Enrolment Pattern out of sequence in order to satisfy the pre-requisites for the Pathway courses.

Environmental Engineering (BENS or BENH)

Students wishing to articulate to this major should enrol in the Associate Degree of Engineering (Civil Engineering).

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their Approved courses.

Instrumentation Control and Automation Engineering (BENH)

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	ENM1600 Engineering Mathematics

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their Approved courses.

Mechanical Engineering (BENS or BENH)

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	Additional Approved course

and students should contact the Faculty of Health, Engineering and Sciences before they have completed their first semester regarding the selection of their Approved courses. Students enrolled in this major may need to complete their Recommended Enrolment Pattern out of sequence in order to satisfy the pre-requisites for the Pathway courses.

Power Engineering (BENH)

Students wishing to articulate to this major should enrol in the Associate Degree of Engineering (Electrical and Electronic Engineering).

Course to NOT be studied	Substitute course
ENM1500 Introductory Engineering Mathematics	Additional Approved course

Students should contact the Faculty of Health, Engineering and Sciences before they have completed their first semester regarding the selection of their Approved courses. Students enrolled in this major may need to complete their Recommended Enrolment Pattern out of sequence in order to satisfy the pre-requisites for the Pathway courses.

Exit points

Students who, for whatever reason, are unable to complete the Associate Degree of Engineering, and who satisfy all of the requirements of the Diploma of Engineering Studies may be permitted to exit with that award.

Credit

Applications for exemptions/credit will be assessed and based upon the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Associate Degree of Engineering program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG2909 Work Experience - Associate practice course.

Other information

The Faculty of Health, Engineering and Sciences may permit a student to enrol in an approved course other than those listed for the accredited program. **Students who wish to enrol in approved courses other than those listed, must obtain written approval from the Program Director prior to enrolling in the course.**

To satisfy the requirements of the program students must complete all Academic and Practice courses in the following recommended enrolment patterns. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

Agricultural Engineering major full-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Agricultural Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Agricultural Engineering (Major Study Code: 16245)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1500 Introductory Engineering Mathematics#*§	1	1				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
CIV1500 Applied Mechanics§	1	1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600

Major study: Agricultural Engineering (Major Study Code: 16245)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
AGR2302 Agricultural Machinery	2	1				1		
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
Approved course (Select from the approved course list)	2	1				1		
Approved course (select from the approved course list)	2	1				1		
AGR2301 Agricultural Science	2	2				2		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
ENV3105 Hydrology	2	2				2		
ENG2111 Engineering Associate Degree Design Project	2	2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or elective courses as approved by the Program Director								
AGR3304 Soil Science#		1				1		
AGR3305 Precision and Smart Technologies in Agriculture#		2				2		
CLI2201 Climate Change and Variability						2		
ENG2002 Technology, Sustainability and Society#		1,2				1,2,3		
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR

Major study: Agricultural Engineering (Major Study Code: 16245)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GDNS or MENS or GEPR
ENV2201 Land Studies		1				1		
AGR3303 Agricultural Materials and Post-Harvest Technologies#		1				1		

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

Agricultural Engineering major part-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Agricultural Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Agricultural Engineering (Major Study Code: 16245)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1500 Introductory Engineering Mathematics#*§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 2								
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
MEC1201 Engineering Materials		1,2				1,2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
AGR2302 Agricultural Machinery		1				1		
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be

Major study: Agricultural Engineering (Major Study Code: 16245)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								enrolled in the following Program: GCEN or GEPR
AGR2301 Agricultural Science		2				2		
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
Year 4								
Approved course (select from the approved course list)								
Approved course (select from the approved course list)								
ENV3105 Hydrology		2				2		
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Year 4 Practice Courses								
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or elective courses as approved by the Program Director								
AGR3304 Soil Science#		1				1		
AGR3305 Precision and Smart Technologies in Agriculture#		2				2		
CLI2201 Climate Change and Variability						2		
ENG2002 Technology, Sustainability and Society#		1,2				1,2,3		
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV2201 Land Studies		1				1		
AGR3303 Agricultural Materials and Post-Harvest Technologies#		1				1		

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

Civil Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Civil Engineering or Environmental Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Civil Engineering (Major Study Code: 15433)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2				1,2		
ENM1500 Introductory Engineering Mathematics#*§	1	1				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
CIV1500 Applied Mechanics§	1	1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
ENG1100 Introduction to Engineering Design	1	2				1,2		
MEC1201 Engineering Materials	1	2				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
Approved course (select from the approved course list)	2	1				1		
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
CIV2701 Road Design and Location	2	1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
CIV2605 Construction Engineering	2	1				1		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2502 Structural and Building Technology	2	2		2				
CIV2702 Municipal Services#	2	2				2		Pre-requisite: ENV2103 or ENV1101
ENG2111 Engineering Associate Degree Design Project	2	2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)

Major study: Civil Engineering (Major Study Code: 15433)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
CIV3906 Civil Materials Practice	2	1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
CIV3603 Construction Methods						2		
CIV3703 Transport Engineering#		2				2		
CMG2001 Job Organisation		2				2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
GIS1402 Geographic Information Systems£		1				1,3		
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
ENV3105 Hydrology		2				2		
ENV4203 Public Health Engineering#		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Civil Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Civil Engineering or Environmental Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Civil Engineering (Major Study Code: 15433)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1500 Introductory Engineering Mathematics#*§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 2								
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
Approved course (select from the approved course list)								
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2502 Structural and Building Technology		2		2				
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 4								
CIV2701 Road Design and Location		1				1		Pre-requisite: ENM1500 or ENM1600 or Students must

Major study: Civil Engineering (Major Study Code: 15433)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
CIV2605 Construction Engineering		1				1		
CIV2702 Municipal Services#		2				2		Pre-requisite: ENV2103 or ENV1101
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Year 4 Practice Courses								
CIV3906 Civil Materials Practice		1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
CIV3603 Construction Methods						2		
CIV3703 Transport Engineering#		2				2		
CMG2001 Job Organisation		2				2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
GIS1402 Geographic Information Systems£		1				1,3		
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
ENV3105 Hydrology		2				2		
ENV4203 Public Health Engineering#		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Electrical and Electronic Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

On entering the Associate Degree of Engineering (Electrical and Electronic 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 Electronic Workshop and Production will be required to purchase an electronic kit. For external students in the course ELE2702 Electrical Measurement and Analysis, access to a digital multimeter and hook-up wire is required, together with the purchase of some electronic components.

Students who wish to complete a Pathway to another degree in Electrical and Electronic Engineering or Computer Systems Engineering or Power Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
ENM1500 Introductory Engineering Mathematics#*§	1	1				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
MEC1201 Engineering Materials	1	1,2				1,2,3		
Approved course (select from the approved course list)	1	2				2		
ELE1801 Electrical Technology§	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
ELE1911 Electrical and Electronic Practice A~‡	1	2		3			M	
Academic Courses Year 2								
ENG1100 Introduction to Engineering Design	2	1				1,2		
ELE2702 Electrical Measurement and Analysis	2	1				1		Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE2601 Telecommunications Principles	2	1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
Approved course (Select from the approved course list)	2	1				1		

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2501 Electronic Workshop and Production	2	2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ELE2101 Control and Instrumentation#	2	2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ELE2503 Electronic Systems#	2	2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previous ly completed
ENG2111 Engineering Associate Degree Design Project	2	2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B‡	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ELE2103 Linear Systems and Control#		2				2		
ELE2303 Embedded Systems Design#		1				1		Pre-requisite: ELE1301
ELE2504 Electronic Design and Analysis#		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: MEPR or GCEN or METC or GEPR
ELE3506 Electronic Measurement#		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GCEN or METC or MEPR or MENS
ELE3803 Electrical Plant#		1				1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
CSC1401 Foundation Programming£##		1,2,3				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MEC3204 Production Engineering		2				2		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ENG3003 Engineering Management†		1,3				1,3		
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

$ Unavailable online S2 2023

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

~ Unavailable in On-Campus mode in S2 2023

‡ Unavailable in External mode in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

This is a Pathway course for students intending to complete the Bachelor of Engineering (Honours) (Computer Systems Engineering). Please refer to Engineering pathways under Articulation

† The semester 3 offering of this course is offered in odd numbered years only.

^ CHE1110 Chemistry 1 has a highly recommended residential school component in external mode.

Electrical and Electronic Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

On entering the Associate Degree of Engineering (Electrical and Electronic 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 Electronic Workshop and Production will be required to purchase an electronic kit. For external students in the course

ELE2702 Electrical Measurement and Analysis, access to a digital multimeter and hook-up wire is required, together with the purchase of some electronic components.

Students who wish to complete a Pathway to another degree in Electrical and Electronic Engineering or Computer Systems Engineering or Power Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1003 Problem Solving in Engineering and the Built Environment[$]		1				1,2		
ENM1500 Introductory Engineering Mathematics[#*§]		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 2								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
Approved course (select from the approved course list)								
ELE1801 Electrical Technology[§]		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
ELE1911 Electrical and Electronic Practice A[~‡]		2		3			M	
Year 3								
ENG1100 Introduction to Engineering Design		1,2				1,2		
Approved course (Select from the approved course list)								
ELE2501 Electronic Workshop and Production		2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ELE2101 Control and Instrumentation[#]		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 3 Practice Courses								
ELE2912 Electrical and Electronic Practice B[‡]		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4								
ELE2702 Electrical Measurement and Analysis		1				1		Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2503 Electronic Systems#		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previous ly completed
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Year 4 Practice Courses								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ELE2103 Linear Systems and Control#		2				2		
ELE2303 Embedded Systems Design#		1				1		Pre-requisite: ELE1301
ELE2504 Electronic Design and Analysis#		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: MEPR or GCEN or METC or GEPR
ELE3506 Electronic Measurement#		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS

Major study: Electrical and Electronic Engineering (Major Study Code: 15435)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE3803 Electrical Plant#		1				1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENM1600 Engineering Mathematics#		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
CSC1401 Foundation Programming£##		1,2,3				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MEC3204 Production Engineering		2				2		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ENG3003 Engineering Management†		1,3				1,3		
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

$ Unavailable online S2 2023

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

~ Unavailable in On-Campus mode in S2 2023

‡ Unavailable in External mode in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

This is a Pathway course for students intending to complete the Bachelor of Engineering (Honours) (Computer Systems Engineering). Please refer to Engineering pathways under Articulation

† The semester 3 offering of this course is offered in odd numbered years only.

^ CHE1110 Chemistry 1 has a highly recommended residential school component in external mode.

Instrumentation Control and Automation Engineering major full-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Instrumentation Control and Automation Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1500 Introductory Engineering Mathematics*#§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
MEC1201 Engineering Materials		1,2				1,2,3		
ENG1100 Introduction to Engineering Design		1,2				1,2		
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Practice Courses Year 1								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Academic Courses Year 2								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
Approved course (Select from the approved course list)		1				1		
Approved course (Select from the approved course list)		1				1		
ELE2101 Control and Instrumentation		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses Year 2								
MEC2901 Mechanical Practice 1		1		3			M	
ELE1911 Electrical and Electronic Practice A~‡		2		3			M	
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2501 Electronic Workshop and Production		2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
MEC3204 Production Engineering		2				2		
CSC1401 Foundation Programming£		1,2,3				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
CHE1110 Chemistry 1^		1		1			HR	
CHE2120 Chemistry 2^		2		2			HR	Pre-requisite: CHE1110
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

\# This is a Pathway course. Please refer to Engineering pathways under Articulation.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

~ Unavailable in On-Campus mode in S2 2023

‡ Unavailable in External mode in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ Chemistry courses have a highly recommended residential school component in external mode.

Instrumentation Control and Automation Engineering major part-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Instrumentation Control and Automation Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1500 Introductory Engineering Mathematics*#§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previous ly completed

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
Academic Courses Year 2								
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
ENG1100 Introduction to Engineering Design		1,2				1,2		
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Practice Courses Year 2								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Academic Courses Year 3								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
ELE2101 Control and Instrumentation		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
Practice Courses Year 3								
MEC2901 Mechanical Practice 1		1		3			M	
ELE1911 Electrical and Electronic Practice A~‡		2		3			M	
Academic Courses Year 4								
Approved course (Select from the approved course list)		1				1		
Approved course (Select from the approved course list)		1				1		
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses Year 4								
ENG2909 Work Experience - Associate						1,2		

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2501 Electronic Workshop and Production		2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
MEC3204 Production Engineering		2				2		
CSC1401 Foundation Programming[£]		1,2,3				1,2,3		

Major study: Instrumentation Control and Automation Engineering (Major Study Code:)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
CHE1110 Chemistry 1^		1		1			HR	
CHE2120 Chemistry 2^		2		2			HR	Pre-requisite: CHE1110
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

\# This is a Pathway course. Please refer to Engineering pathways under Articulation.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

~ Unavailable in On-Campus mode in S2 2023

‡ Unavailable in External mode in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ Chemistry courses have a highly recommended residential school component in external mode.

Mechanical Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Mechanical Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
ENM1500 Introductory Engineering Mathematics*#§	1	1				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previous ly completed
CIV1500 Applied Mechanics§	1	1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses								
ENG1901 Engineering Practice 1	1	1		2,3			M	
MEC2901 Mechanical Practice 1	1	1		3			M	
Academic Courses								
ENG1100 Introduction to Engineering Design	1	2				1,2		
MEC1201 Engineering Materials	1	2				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
Approved course (select from the approved course list)	1	2				2		
Year 2								
Academic Courses								
ENM1600 Engineering Mathematics	2	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
MEC2202 Manufacturing Processes	2	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics	2	1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
Practice Courses								
MEC2902 Mechanical Practice 2	2	1		1			M	
ENG2909 Work Experience - Associate						1,2		
Academic Courses								
MEC2106 Introduction to Thermofluids	2	2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
ELE1801 Electrical Technology§	2	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2301 Design of Machine Elements	2	2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MEPR or GCEN or GEPR
ENG2111 Engineering Associate Degree Design Project	2	2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses								
MEC3903 Mechanical Practice 3	2	2		3			M	
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MEC2304 Solid Modelling#		2				2		
MEC3204 Production Engineering		2				2		
MEC3107 Thermofluids		1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CIV2502 Structural and Building Technology		2		2				
AGR2302 Agricultural Machinery		1				1		

Footnotes

$ Unavailable online S2 2023

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics and consequently the study of ENM1600 Engineering Mathematics with an additional Approved course. Please contact the Faculty of Health, Engineering and Sciences for further information.

\# This is a Pathway course. Please refer to Engineering pathways under Articulation.

§ Unavailable online in S3 2023

Mechanical Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Mechanical Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
ENG1100 Introduction to Engineering Design		1,2				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 2								
Academic Courses								
ENM1500 Introductory Engineering Mathematics*#§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Approved course (select from the approved course list)								
Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
Academic Courses								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Practice Courses								
MEC2901 Mechanical Practice 1		1		3			M	
Year 4								
Academic Courses								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in

Major study: Mechanical Engineering (Major Study Code: 15437)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics		1				1		Pre-requisite: CIV1501 or Students must be enrolled in the following Program: GCEN
Practice Courses								
ENG2909 Work Experience - Associate						1,2		
Academic Courses								
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses								
MEC2902 Mechanical Practice 2		1		1			M	
MEC3903 Mechanical Practice 3		2		3			M	
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MEC2304 Solid Modelling#		2				2		
MEC3204 Production Engineering		2				2		
MEC3107 Thermofluids		1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the following Programs: GCNS or GDNS Enrolment is not permitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CIV2502 Structural and Building Technology		2		2				
AGR2302 Agricultural Machinery		1				1		

Footnotes

$ Unavailable online S2 2023

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics and consequently the study of ENM1600 Engineering Mathematics with an additional Approved course. Please contact the Faculty of Health, Engineering and Sciences for further information.

\# This is a Pathway course. Please refer to Engineering pathways under Articulation.

§ Unavailable online in S3 2023

Mining Engineering major full-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Civil Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mining Engineering (Major study code: 17046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1500 Introductory Engineering Mathematics#*§	1	1				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
CIV1500 Applied Mechanics§	1	1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
SVY1500 Spatial Science for Engineers	1	2				2		
MEC1201 Engineering Materials	1	2				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Approved course (Select from the approved course list)	1	2				2,3		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
CIV2605 Construction Engineering	2	1				1		
MIN2001 Mining Technology and Mineral Processing						1		
ENG1100 Introduction to Engineering Design	2	1				1,2		
Approved course (select from the approved course list)	2	1				1		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
MIN2003 Mine Operations and Management						2		Pre-requisite or Co-requisite: SVY1500
MIN2002 Mine Planning and Design						2		
ENG2111 Engineering Associate Degree Design Project	2	2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
MIN2901 Mining Practice<				3			M	Pre-requisite or Co-requisite: MIN2001
ENG2909 Work Experience - Associate						1,2		

Major study: Mining Engineering (Major study code: 17046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MINAD Approved Courses (taken through Central Queensland University (CQU) via cross-institutional enrolment)								
ENAR12004 Mine Management and Safety						1		
ENAR12006 Rock Engineering						1		
ENAR11001 Resource Geology						2		
UniSQ Approved Courses								
ENG2002 Technology, Sustainability and Society#		1,2				1,2,3		
ENV2103 Hydraulics I#		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
ENV2201 Land Studies		1				1		
ENV3105 Hydrology#		2				2		
GIS1402 Geographic Information Systems£		1				1,3		
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
MGT2001 Risk Mitigation, Work Health and Safety		1				1		
SVY1110 Introduction to Global Positioning System		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.
* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.
§ Unavailable online in S3 2023
$ Unavailable online S2 2023
< offered in Semester 3 in odd years only e.g. 2019, 2021 etc
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Mining Engineering major part-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Civil Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mining Engineering (Major study code: 17046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENM1500 Introductory Engineering Mathematics#*§		1,2				1,2,3		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previous ly completed
CIV1500 Applied Mechanics§		1				1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
SVY1500 Spatial Science for Engineers		2				2		

Major study: Mining Engineering (Major study code: 17046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 2								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
Approved course (Select from the approved course list)								
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
CIV2605 Construction Engineering		1				1		
MIN2001 Mining Technology and Mineral Processing						1		
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
MIN2003 Mine Operations and Management						2		Pre-requisite or Co-requisite: SVY1500
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
MIN2901 Mining Practice<				3			M	Pre-requisite or Co-requisite: MIN2001
Year 4								
ENG1100 Introduction to Engineering Design		1,2				1,2		
Approved course (select from the approved course list)								
MIN2002 Mine Planning and Design						2		
ENG2111 Engineering Associate Degree Design Project		2				2		Pre-requisite: ENG1100 and (ENG1101 or ENG1003)
Year 4 Practice Courses								
ENG2909 Work Experience - Associate						1,2		
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MINAD Approved Courses (taken through Central Queensland University (CQU) via cross-institutional enrolment)								
ENAR12004 Mine Management and Safety						1		
ENAR12006 Rock Engineering						1		
ENAR11001 Resource Geology						2		

Major study: Mining Engineering (Major study code: 17046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
UniSQ Approved Courses								
ENG2002 Technology, Sustainability and Society#		1,2				1,2,3		
ENV2103 Hydraulics I#		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
ENV2201 Land Studies		1				1		
ENV3105 Hydrology#		2				2		
GIS1402 Geographic Information Systems£		1				1,3		
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
MGT2001 Risk Mitigation, Work Health and Safety		1				1		
SVY1110 Introduction to Global Positioning System		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		

Footnotes

This is a Pathway course. Please refer to Engineering pathways under Articulation.

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics. Please contact the Faculty of Health, Engineering and Sciences for further information.

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

< offered in Semester 3 in odd years only e.g. 2019, 2021 etc

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Associate Degree of Spatial Science (ADSS) - AssocDegSpSc

QTAC code (Australian and New Zealand applicants): Surveying (Springfield campus: 927061); (Toowoomba campus: 907061; External: 907065)

CRICOS code (International applicants): 053510F

	On-campus^*	External^@*
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) 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
Residential school:		Springfield, Toowoomba
Standard duration:	2 years full-time, 4 years part-time	
Program articulation:	To: Bachelor of Spatial Science Technology; Bachelor of Spatial Science (Honours); Bachelor of Urban and Regional Planning (Honours)	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ Availability of majors: Geographic Information Systems — on-campus at UniSQ Toowoomba and external; Surveying — on-campus at UniSQ Toowoomba, UniSQ Springfield, and external; Urban and Regional Planning — on-campus at UniSQ Toowoomba and external.

* The Urban and Regional Planning major articulates fully to the ; Bachelor of Urban and Regional Planning (Honours). With the possible exception of a couple of courses, the other majors articulate to the ; Bachelor of Spatial Science Technology and the ; Bachelor of Spatial Science (Honours).

@ International overseas students are advised against studying this program, as it contains mandatory residential schools. External students must be able to attend mandatory residential schools at a UniSQ campus.

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: studyeng@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 Associate Degree of Spatial Science (Surveying) is accredited by the Surveyors Board of Queensland and graduates may seek registration with the Board of Surveyors.

Graduates from the GIS and Surveying majors in the Associate Degree of Spatial Science are eligible to apply for membership with the Surveying and Spatial Sciences Institute Australia.

Program aims

The Associate Degree of Spatial Science program provides students with the theory, methods and practices required by an associate to support a practising professional spatial scientist. To this end the program provides

students with a general understanding of the broad practice and knowledge in the spatial science profession and the technical skills to work in one of three fields: Geographic Information Systems (GIS), Surveying or Urban and Regional Planning.

Program objectives

A student who successfully completes the Associate Degree of Spatial Science should be able to:

- display a broad range of theoretical and technical knowledge, including the underlying principles and concepts fundamental to spatial science
- identify, analyse and evaluate information in order to solve technical problems within a limited range and context of spatial science
- collect, store, adapt and manipulate spatial data to communicate effectively with a range of audiences including professionals, para-professionals, clients and the wider community
- exercise appropriate judgement when identifying and responding to cultural, ethical, environmental and social issues
- adapt to change, master new techniques and the skills required to process information and pathway to undertake further learning and study

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 06. Graduates at this level will have broad knowledge and skills for paraprofessional/highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **62.7**, or equivalent qualification.^

- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- Assumed knowledge expectations: English; General Mathematics
- Recommended Prior Study: Mathematical Methods (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or

equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Associate Degree of Spatial Science program consists of 16 Academic courses and two or three Practice courses, depending upon major (Geographic Information Systems, Surveying or Urban and Regional Planning).

Academic courses are one-unit courses and involve approximately 155 hours of student work per unit.

Practice courses are zero unit courses and each involves approximately 50 hours of student work.

Required time limits

Students have a maximum of 6 years to complete this program.

Electives/Approved courses

Approved courses are part of the academic program and students should select approved courses from the list provided.

Practice courses

The major practical work requirements associated with each of the Engineering and Built Environment programs are contained within a series of Practice courses. These courses are designed to enhance learning, communication and practical skills through laboratory sessions, workshops, seminars, field trips and group activities.

Practical experience

Work experience is desirable and encouraged but is not required for the completion of the Associate Degree of Spatial Science. Students are encouraged to obtain work experience during vacation periods.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

Geographic Information Systems

- SVY1901 Surveying and Spatial Science Practice 1
- GPL2901 GIS and Planning Practice 1

Surveying

- SVY1901 Surveying and Spatial Science Practice 1
- SVY2902 Surveying and Spatial Science Practice 2
- SVY2903 Surveying and Spatial Science Practice 3

Urban and Regional Planning

- SVY1901 Surveying and Spatial Science Practice 1
- GPL2901 GIS and Planning Practice 1

Articulation

The Urban and Regional Planning major articulates fully to the Bachelor of Urban and Regional Planning (Honours). With the possible exception of a couple of courses, the other majors articulate to the Bachelor of Spatial Science Technology and the Bachelor of Spatial Science (Honours).

Exit points

Students who, for whatever reason, are unable to complete the Associate Degree of Spatial Science and who satisfy all of the requirements of the Diploma of Engineering Studies may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Associate Degree of Spatial Science program.

Geographic Information Systems major recommended full-time enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Geographic Information Systems (Major Study Code: 15409)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses, Year 1								
Year 1, Semester 1								
ENM1500 Introductory Engineering Mathematics *§	1	1				1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
GIS1402 Geographic Information Systems £	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment <	1	1				1		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
CSC1401 Foundation Programming £	1	2				1,2		
Practice Course, Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Academic Courses, Year 2								
Year 2, Semester 1								
ENV2201 Land Studies	2	1				1		
SVY3202 Photogrammetry and Remote Sensing	2	1				1		
GIS3407 GIS Programming and Visualisation	2	1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
Approved Course (Select from the Approved Courses list)	2	1				1		
Year 2, Semester 2								
Approved Course (Select from the Approved Courses list)	2	2				2		

Major study: Geographic Information Systems (Major Study Code: 15409)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Course (Select from the Approved Courses list)	2	2				2		
SVY3302 Property Valuation and Development	2	2				2		
GIS2405 Spatial Analysis and Modelling	2	2				2		
Practice Course, Year 2								
GPL2901 GIS and Planning Practice 1£			3	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)
Approved Courses (Select 3 courses from the following)								
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
AGR2301 Agricultural Science		2				2		
CSC3400 Database Systems£		1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
GIS2407 Web Based Geographic Information System		2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ENM1600 Engineering Mathematics		1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
MKT1001 Marketing Fundamentals		1				1,2		Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
GIS3406 Remote Sensing and Image Processing		2				2		
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
URP1001 Introduction to Urban and Regional Planning		1				1		
URP2002 Local Government Planning Practice and Technology		2				2		

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics.

§ Unavailable online in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

< Unavailable online in S2 2023

Geographic Information Systems major recommended part-time enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Geographic Information Systems (Major Study Code: 15409)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses, Years 1-2								
Year 1, Semester 1								
ENM1500 Introductory Engineering Mathematics*§	1	1				1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
GIS1402 Geographic Information Systems£	1	1				1,3		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
Year 2, Semester 1								
SVY1102 Surveying A	2	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment<	2	1				1		
Year 2, Semester 2								
SVY1110 Introduction to Global Positioning System	2	2				2		
CSC1401 Foundation Programming£	2	2				1,2		
Practice Course, Year 1 or 2								
SVY1901 Surveying and Spatial Science Practice 1	2	1		1			M	
Academic Courses, Years 3-4								
Year 3, Semester 1								
ENV2201 Land Studies	3	1				1		
SVY3202 Photogrammetry and Remote Sensing	3	1				1		
Year 3, Semester 2								
Approved Course (Select from the Approved Courses list)	3	2				2		
SVY3302 Property Valuation and Development	3	2				2		
Year 4, Semester 1								
GIS3407 GIS Programming and Visualisation	4	1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
Approved Course (Select from the Approved Courses list)	4	1				1		

Major study: Geographic Information Systems (Major Study Code: 15409)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4, Semester 2								
Approved Course (Select from the Approved Courses list)	4	2				2		
GIS2405 Spatial Analysis and Modelling	4	2				2		
Practice Course, Year 3 or 4								
GPL2901 GIS and Planning Practice 1£	3			3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)
Approved Courses (Select 3 courses from the following)								
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
AGR2301 Agricultural Science		2				2		
CSC3400 Database Systems£		1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
GIS2407 Web Based Geographic Information System		2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ENM1600 Engineering Mathematics		1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
MKT1001 Marketing Fundamentals		1				1,2		Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
GIS3406 Remote Sensing and Image Processing		2				2		
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
URP1001 Introduction to Urban and Regional Planning		1				1		
URP2002 Local Government Planning Practice and Technology		2				2		

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics.

§ Unavailable online in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
< Unavailable online in S2 2023

Surveying major recommended full-time enrolment pattern (Toowoomba and Springfield campus)

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 specification to ascertain if a course is offered in another term.

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses, Year 1								
Year 1, Semester 1								
ENM1500 Introductory Engineering Mathematics *§	1	1				1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previous ly completed
GIS1402 Geographic Information Systems£	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment<	1	1				1		
Year 1, Semester 2								
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
GIS1401 Geographic Data Presentation	1	2				2		
SVY1104 Survey Computations A	1	2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
Practice Course, Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Academic Courses, Year 2								
Year 2, Semester 1								
SVY2301 Automated Surveying Systems	2	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A	2	1				1		Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3202 Photogrammetry and Remote Sensing	2	1				1		
SVY2302 Mine Surveying	2	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GCNS or GCST or GDNS or GDST or MSPT
Year 2, Semester 2								
Approved Course (Select from the Approved Courses list)	2	2				2		
SVY2303 Construction Surveying	2	2				2		Pre-requisite: SVY1104
Approved Course (Select from the Approved Courses list)	2	2				2		
Choose one of the following two courses:								
SVY3304 Cadastral Surveying (Queensland)^^	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)^^						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
Practice Courses, Year 2								
SVY2902 Surveying and Spatial Science Practice 2£	2	1	3	3			M	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£	2	2	4	3			M	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
Approved Courses (Select from the following)								
SVY3304 Cadastral Surveying (Queensland)**	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)**						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
CIV2605 Construction Engineering		1				1		
CIV2701 Road Design and Location		1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
SVY3107 Geodetic Surveying B		2				2		Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
URP2002 Local Government Planning Practice and Technology		2				2		
ENV2201 Land Studies		1				1		
ENM1600 Engineering Mathematics		1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY3302 Property Valuation and Development		2				2		
URP1001 Introduction to Urban and Regional Planning		1				1		
URP3201 Sustainable Urban Design and Development		2				2		
GIS2405 Spatial Analysis and Modelling		2				2		

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics.

§ Unavailable online in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

< Unavailable online in S2 2023

^^ Students should study the course appropriate to their intended jurisdiction of practice.

** The alternative to the previously completed Cadastral core course may be taken as an elective/approved course.

Surveying major recommended part-time enrolment pattern (Toowoomba and Springfield campus)

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 specification to ascertain if a course is offered in another term.

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses, Years 1-2								
Year 1, Semester 1								
ENM1500 Introductory Engineering Mathematics*§	1	1				1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
GIS1402 Geographic Information Systems£	1	1				1,3		
Year 1, Semester 2								
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
Year 2, Semester 1								
SVY1102 Surveying A	2	1				1		

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1003 Problem Solving in Engineering and the Built Environment<	2	1				1		
Year 2, Semester 2								
GIS1401 Geographic Data Presentation	2	2				2		
SVY1104 Survey Computations A	2	2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
Practice Course, Year 1 or 2								
SVY1901 Surveying and Spatial Science Practice 1	2	1		1			M	
Academic Courses, Years 3-4								
Year 3, Semester 1								
SVY2301 Automated Surveying Systems	3	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A	3	1				1		Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
Year 3, Semester 2								
Approved Course (Select from the Approved Courses list)	3	2				2		
SVY2303 Construction Surveying	3	2				2		Pre-requisite: SVY1104
Year 4, Semester 1								
SVY3202 Photogrammetry and Remote Sensing	4	1				1		
SVY2302 Mine Surveying	4	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSPT
Year 4, Semester 2								
Approved Course (Select from the Approved Courses list)	4	2				2		
Choose one of the following two courses:								
SVY3304 Cadastral Surveying (Queensland)^^	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)^^						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS

Major study: Surveying (Major Study Code: 15410)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses, Year 3 or 4								
SVY2902 Surveying and Spatial Science Practice 2£	3	1		3			M	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£	4	2		3			M	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
Approved Courses (Select from the following)								
SVY3304 Cadastral Surveying (Queensland)**	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)**						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
CIV2605 Construction Engineering		1				1		
CIV2701 Road Design and Location		1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
SVY3107 Geodetic Surveying B		2				2		Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT
URP2002 Local Government Planning Practice and Technology		2				2		
ENV2201 Land Studies		1				1		
ENM1600 Engineering Mathematics		1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY3302 Property Valuation and Development		2				2		
URP1001 Introduction to Urban and Regional Planning		1				1		
URP3201 Sustainable Urban Design and Development		2				2		
GIS2405 Spatial Analysis and Modelling		2				2		

Footnotes

* Students who achieve a high level in Year 12 Mathematics, or an equivalent mathematics program, may be eligible to replace the study of ENM1500 Introductory Engineering Mathematics with ENM1600 Engineering Mathematics.

§ Unavailable online in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

< Unavailable online in S2 2023

^^ Students should study the course appropriate to their intended jurisdiction of practice.

** The alternative to the previously completed Cadastral core course may be taken as an elective/approved course.

Urban and Regional Planning major recommended full-time enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Urban and Regional Planning (Major Study Code: 16734)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
Year 1, Semester 1								
SVY1102 Surveying A	1	1				1		
GIS1402 Geographic Information Systems£	1	1				1,3		
URP1001 Introduction to Urban and Regional Planning	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment<	1	1				1		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
LAW1501 Business Law and Ethics	1	2				2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
Approved Course (Select from the Approved Courses list)	1	2				2		
Practice Course, Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Academic Courses Year 2								
Year 2, Semester 1								
ENV2201 Land Studies	2	1				1		
PRL2002 Community Consultation and Engagement	2	1				1		
URP2001 Planning Structures and Statutory Planning	2	1				1		
CMG1001 Introduction to Construction Management and the Built Environment#	2	1				1		
Year 2, Semester 2								
Approved Course (Select from the Approved Courses list)	2	2				2		
URP2002 Local Government Planning Practice and Technology	2	2				2		
SVY1110 Introduction to Global Positioning System	2	2				2		
Approved Course (Select from the Approved Courses list)	2	2				2		
Practice Course, Year 2								
GPL2901 GIS and Planning Practice 1£			2	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)

Major study: Urban and Regional Planning (Major Study Code: 16734)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Courses (Select from the following)								
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
ECO1002 Market Behaviour		2				2		Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
MGT1101 Human Capabilities for Business£		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
CLI3301 Climate and Environment Risk Assessment						1		
SVY3202 Photogrammetry and Remote Sensing		1				1		
GIS2405 Spatial Analysis and Modelling		2				2		
GIS2407 Web Based Geographic Information System		2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
SVY3302 Property Valuation and Development		2				2		
URP3201 Sustainable Urban Design and Development		2				2		

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

< Unavailable online in S2 2023

On-campus offer available at Springfield only

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Urban and Regional Planning major recommended part-time enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Urban and Regional Planning (Major Study Code: 16734)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
Year 1, Semester 1								
SVY1102 Surveying A	1	1				1		
GIS1402 Geographic Information Systems£	1	1				1,3		

Major study: Urban and Regional Planning (Major Study Code: 16734)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
Year 2, Semester 1								
URP1001 Introduction to Urban and Regional Planning	2	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment[<]	2	1				1		
Year 2, Semester 2								
LAW1501 Business Law and Ethics	2	2				2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
Approved Course (Select from the Approved Courses list)	2	2				2		
Practice Course, Year 1 or 2								
SVY1901 Surveying and Spatial Science Practice 1	2	1		1			M	
Academic Courses Years 3-4								
Year 3, Semester 1								
ENV2201 Land Studies	3	1				1		
PRL2002 Community Consultation and Engagement	3	1				1		
Year 3, Semester 2								
Approved Course (Select from the Approved Courses list)	3	2				2		
URP2002 Local Government Planning Practice and Technology	3	2				2		
Year 4, Semester 1								
URP2001 Planning Structures and Statutory Planning	4	1				1		
CMG1001 Introduction to Construction Management and the Built Environment[#]	4	1				1		
Year 4, Semester 2								
SVY1110 Introduction to Global Positioning System	4	2				2		
Approved Course (Select from the Approved Courses list)	4	2				2		
Practice Course, Year 3 or 4								
GPL2901 GIS and Planning Practice 1[£]	4			3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)
Approved Courses (Select from the following)								
ACC1201 Data Insights and Financial Performance[£]		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
ECO1002 Market Behaviour		2				2		Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed

Major study: Urban and Regional Planning (Major Study Code: 16734)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MGT1101 Human Capabilities for Business£		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
CLI3301 Climate and Environment Risk Assessment						1		
SVY3202 Photogrammetry and Remote Sensing		1				1		
GIS2405 Spatial Analysis and Modelling		2				2		
GIS2407 Web Based Geographic Information System		2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
SVY3302 Property Valuation and Development		2				2		
URP3201 Sustainable Urban Design and Development		2				2		

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

< Unavailable online in S2 2023

On-campus offer available at Springfield only

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Bachelor of Engineering Science (BENS) - BEngSci

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907901; External: 907905; Springfield campus: 927902

CRICOS code (International applicants): 079333D

	On-campus*	External#@
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
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:	3 years full-time, 6 years part-time	
Program articulation:	From: Associate Degree of Engineering To: Bachelor of Engineering (Honours); Master of Professional Engineering; Master of Engineering Practice	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

* The only majors available on-campus at UniSQ Springfield are Civil Engineering, Infrastructure Management Engineering, Electrical and Electronic Engineering and Mechanical Engineering.

\# The semester 3 intake is only available via external study.

@ External students must be able to attend mandatory and highly recommended residential schools at a UniSQ campus.

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

A graduate of this program is eligible to apply for graduate membership of Engineers Australia as an Engineering Technologist. After further professional development, a graduate member with a Bachelor of Engineering Science may apply for chartered status as an Engineering Technologist and, when granted, may use the post-nominal TMIEAust CEngT.

Program aims

The Bachelor of Engineering Science is a tertiary level program designed to educate engineering technologists in the theory, methods and practices necessary to function as an engineering technologist. It is also designed so that students are eligible for graduate membership of Engineers Australia (as an Engineering Technologist) and other appropriate professional bodies. To this end, the program is designed to provide an in-depth understanding of specialist bodies of knowledge of a branch of engineering practice, appropriate to those

functioning at engineering technologist level with the personal, professional, and technical knowledge, skills and understanding necessary to practice within an appropriate social, cultural, industrial and environmental context.

Program objectives

Upon successful completion of the degree, students should be able to:

- Display systematic knowledge that underpins relevant engineering theory and practice in the technology domain.
- Recognise the social purpose of engineering technology and explain the relationship between human-made products and systems, and community needs.
- Apply well-researched, innovative, industry systems approaches to solve a range of well-defined engineering problems, and to address issues of sustainable practice in diverse environmental, technical and social contexts.
- Apply relevant management skills and design processes within the domain of engineering technologists to enable the delivery of engineering projects within given constraints.
- Make appropriate judgements by critically evaluating evidence, identifying and analysing ethical issues and applying cultural competencies, including those relevant to indigenous peoples
- Communicate effectively in English and interpret information for diverse audiences using oral, written and technology-based approaches; and apply effective competencies as a leader, team member and individual within the domain of engineering technologists.
- Engage in lifelong learning through reflection, and be accountable for their personal and professional actions by managing and monitoring personal performance.

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 07. Graduates at this level will have broad and coherent knowledge and skills for professional work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **65.6**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Engineering Science is a 24-unit program consisting of Academic Courses and Practice Courses. Students undertake a major of study, including approved courses which students are able to select. Mechanical engineering students may choose to study a minor of four units in another area of study instead of four approved courses.

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

Practice courses are zero unit courses and each involves approximately 50 hours of student work.

Required time limits

Students have a maximum of 8 years to complete this program.

Core courses

The courses that comprise the core studies program are shown in the following table:

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				

ENG1002 Introduction to Engineering and Built Environment Applications	1,2	1,2		1,2
ENG1003 Problem Solving in Engineering and the Built Environment[$]	1	1		1,2
ENG1100 Introduction to Engineering Design	1,2	1,2		1,2
ENG2002 Technology, Sustainability and Society	1,2	1.2		1,2,3
ENG3003 Engineering Management[*]	1,3	1		1,3
ENG3111 Technology Design Project	1,2			1,2
ENM1600 Engineering Mathematics	1,2	1,2		1,2
Practice Courses				
ENG1901 Engineering Practice 1	1,2	1	2,3	
ENG3909 Work Experience - Technologist				1,3

Footnotes

$ Unavailable online S2 2023

* The Semester 3 offering of this course is offered in odd numbered years only.

Major studies

The Bachelor of Engineering Science consists of a core component and a series of major studies. All students must complete the core courses and one of the major studies. The major study provides students with knowledge and skills in a specific discipline. The major study areas in the UniSQ Bachelor of Engineering Science are listed below.

Major	On-Campus Toowoomba	On-Campus Springfield	External
Agricultural Engineering	Yes	**No**	Yes
Civil Engineering	Yes	Yes	Yes
Electrical and Electronic Engineering	Yes	Yes	Yes
Environmental Engineering	Yes	**No**	Yes
Infrastructure Management Engineering	Yes	Yes	Yes
Mechanical Engineering	Yes	Yes	Yes

Agricultural Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
AGR2301 Agricultural Science	2			2
AGR2302 Agricultural Machinery	1			1
AGR3303 Agricultural Materials and Post-Harvest Technologies	1			1
AGR3304 Soil Science	1			1
AGR3305 Precision and Smart Technologies in Agriculture	2			2

CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV3105 Hydrology	2	2		2
ENV4106 Irrigation Science	2			2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2402 Stress Analysis	1	1		1
SVY1500 Spatial Science for Engineers	2	2		2
Approved Courses (x 4)				
Practice Courses				
AGR2902 Field Practice			3	
AGR3903 Soil and Water Engineering Practice 2			2	
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Civil Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
CIV2502 Structural and Building Technology	2	2	2	
CIV2503 Structural Design I	2	2		2
CIV2605 Construction Engineering	1	1		1
CIV2701 Road Design and Location	1	1		1
CIV2702 Municipal Services	2	2		2
CMG2001 Job Organisation	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV3105 Hydrology	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2402 Stress Analysis	1	1		1
SVY1500 Spatial Science for Engineers	2	2		2
Approved Courses (x 4)				
Practice Courses				
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
CIV3906 Civil Materials Practice	1	1	3	
CIV3907 Civil Systems Practice			3	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Electrical and Electronic Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology[$]	2	2		2,3
ELE2101 Control and Instrumentation	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2501 Electronic Workshop and Production	2	2		2
ELE2503 Electronic Systems	2	2		2
ELE2601 Telecommunications Principles	1	1		1
ELE2702 Electrical Measurement and Analysis	1	1		1
ELE3506 Electronic Measurement	2	2		2
ELE3803 Electrical Plant	1	1		1
ELE3805 Power Electronics Principles and Applications	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
Approved Courses (x4)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A[~§]	2	2	3	
ELE2912 Electrical and Electronic Practice B[§]	1	1	3	
ELE2913 Electrical and Electronic Practice C				2
ELE3914 Electrical and Electronic Practice D	1	1	3	

Footnotes

$ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
§ Unavailable in External mode in S3 2023

Environmental Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
AGR3304 Soil Science	1			1
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV2105 Applied Chemistry and Microbiology	1			1
ENV2201 Land Studies	1	1		1
ENV3103 Environmental Pollution	2			2

ENV3105 Hydrology	2	2		2
ENV4106 Irrigation Science	2			2
ENV4203 Public Health Engineering	2	2		2
ENV4204 Environmental Technology	1			1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
SVY1500 Spatial Science for Engineers	2	2		2
Approved Courses (x 4)				
Practice Courses				
AGR2902 Field Practice			3	
AGR3903 Soil and Water Engineering Practice 2			2	
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
ENV2902 Hydraulics Practice	2	2	1,2,3	
ENV3904 Environmental Engineering Practice			3	

Infrastructure Management Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
ACC1201 Data Insights and Financial Performance[£]	1,2	1,2		1,2
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
CIV2502 Structural and Building Technology	2	2	2	
CIV2503 Structural Design I	2	2		2
CIV2605 Construction Engineering	1	1		1
CIV3603 Construction Methods				2
CMG2001 Job Organisation	2	2		2
ENV2103 Hydraulics I	1	1		1
LAW1501 Business Law and Ethics	1,2	1,2		1,2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MGT1101 Human Capabilities for Business[£]	1	1		1,2,3
MGT1001 Cultivating Talent	1	1		1
MGT2001 Risk Mitigation, Work Health and Safety	1	1		1
SVY1500 Spatial Science for Engineers	2	2		2
Approved Courses (x 2)				
Practice Courses				
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
CIV3906 Civil Materials Practice	1	1	3	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Mechanical Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
CIV1501 Engineering Statics	2	2		2,3
ELE1801 Electrical Technology[$]	2	2		2,3
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2106 Introduction to Thermofluids	2	2		2
MEC2202 Manufacturing Processes	1	1		1
MEC2301 Design of Machine Elements	2	2		2
MEC2304 Solid Modelling	2	2		2
MEC2402 Stress Analysis	1	1		1
MEC2405 Machine Dynamics	1	1		1
MEC3107 Thermofluids	1	1		1
MEC3203 Materials Technology	1	1		1
MEC3204 Production Engineering	2	2		2
Approved Courses (x 5)				
Practice Courses				
MEC2901 Mechanical Practice 1	1	1	3	
MEC2902 Mechanical Practice 2	1	1	1	
MEC3903 Mechanical Practice 3	2	2	3	
MEC3904 Mechanical Practice 4	2	2	2	

Footnotes

$ Unavailable online in S3 2023

Practical experience

To be eligible to graduate from the Bachelor of Engineering Science, students must obtain an aggregate of at least 45 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 ENG3909 Work Experience - Technologist 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 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

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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.

Agricultural Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- AGR2902 Field Practice
- AGR3903 Soil and Water Engineering Practice 2

Civil Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- CIV3906 Civil Materials Practice
- CIV3907 Civil Systems Practice

Electrical and Electronic Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A
- ELE2912 Electrical and Electronic Practice B
- ELE3914 Electrical and Electronic Practice D
- CHE1110 Chemistry 1 (Elective)

Environmental Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- AGR2902 Field Practice
- ENV3904 Environmental Engineering Practice
- AGR3903 Soil and Water Engineering Practice 2

Infrastructure Management Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- CIV3906 Civil Materials Practice

Mechanical Engineering

- ENG1901 Engineering Practice 1
- MEC2901 Mechanical Practice 1
- MEC2902 Mechanical Practice 2
- MEC3903 Mechanical Practice 3
- MEC3904 Mechanical Practice 4

Articulation

Students who complete 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 approved courses 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).

Students who complete a Bachelor of Engineering Science program in a cognate major may articulate to the MEPR Master of Engineering Practice when eligible. To be eligible students must either:

- gain 5 years relevant industry experience after receiving their BENS degree, or
- on entry to the BENS program have achieved Engineers Australia Associate Status (or equivalent) and have at least 5 years of relevant industrial experience in a cognate field. In this case the student may be approved to complete the ENG3300 Industry Experience Evaluation Portfolio course to complete their BENS graduate Technologist portfolio. (refer to Pathways to the Master of Engineering Practice below for more details)

Engineering Pathways

Pathway to the Bachelor of Engineering (Honours)

A 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 Engineering (Honours) maximises the advanced standing (exemptions) students will receive in the Bachelor of Engineering (Honours) program. A Pathway to the Bachelor of Engineering (Honours) has been developed for each of the following Bachelor of Engineering Science majors into the equivalent Bachelor of Engineering (Honours) major:

- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Mechanical Engineering

In addition, students enrolled in the Electrical and Electronic Engineering major may articulate into the following Bachelor of Engineering (Honours) majors:

- Computer Systems Engineering
- Power Engineering

The pathway to the Bachelor of Engineering (Honours) has been specially developed for students who study part-time. Full-time students may seek approval to follow the Pathway to the Bachelor of Engineering (Honours), but it is not timetabled for on-campus students.

Students must have the approval of the Faculty of Health, Engineering and Sciences to undertake the Pathway to the Bachelor of Engineering (Honours). Students are strongly advised to consider and apply for approval

for this Pathway as soon as possible in order to maximise the credit they will receive in the Bachelor of Engineering (Honours). This should be done prior to the commencement of the second year of studies if possible or after successful completion of at least eight (8) academic courses including ENM1600 Engineering Mathematics.

The Faculty will take into consideration a student's GPA before granting approval.

Once approval is granted, the Faculty will advise students of the courses they should study when granting approval for them to follow the Pathway to the Bachelor of Engineering (Honours).

The following tables list some of the changes to the courses in each major which should be observed to undertake a Pathway into the Bachelor of Engineering (Honours). Pathway students should seek advice from the Faculty of Health, Engineering and Sciences before selecting their approved courses.

Agricultural Engineering (BENH)

Approved Courses (choose the following)	**Semester(s) Offered**			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Civil Engineering (BENH)

Courses to NOT be studied	**Substitute course**
CIV2702 Municipal Services	CIV3703 Transport Engineering
1 Approved Course	ENV4203 Public Health Engineering

Approved Courses (choose the following)	**Semester(s) Offered**			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Computer Systems Engineering (BENH)

Students wishing to articulate to this major should enrol in the Bachelor of Engineering Science (Electrical and Electronic Engineering).

Course to NOT be studied	Substitute course
ELE2101 Control and Instrumentation	ELE2103 Linear Systems and Control

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
CSC1401 Foundation Programming[£]	1,2	1,2		1,2,3
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Electrical and Electronic Engineering (BENH)

Course to NOT be studied	Substitute course
ELE2101 Control and Instrumentation	ELE2103 Linear Systems and Control
ELE2503 Electronic Systems	ELE2504 Electronic Design and Analysis

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Environmental Engineering (BENH)

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1

ENG3104 Engineering Simulations and Computations	2	2		2

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Mechanical Engineering (BENH)

Course to NOT be studied	Substitute course
MEC2405 Machine Dynamics	MEC2401 Dynamics I

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Students should contact the Faculty of Health, Engineering and Sciences regarding the selection of their remaining Approved courses.

Power Engineering (BENH)

Students wishing to articulate to this major should enrol in the Bachelor of Engineering Science (Electrical and Electronic Engineering).

Courses to NOT be studied	Substitute course
ELE2101 Control and Instrumentation	ELE2103 Linear Systems and Control
ELE2503 Electronic Systems	ELE2504 Electronic Design and Analysis

Approved Courses (choose the following)	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
ENM2600 Advanced Engineering Mathematics	1	1		1
ENG3104 Engineering Simulations and Computations	2	2		2

Pathways to the Master of Engineering Practice

One Pathway to the MEPR Master of Engineering Practice program has been developed for graduates of the BENS program who gain five years of relevant industrial experience after receiving their BENS degree. This industrial experience should be in the BENS major and/or the major they wish to undertake in the program. Students who wish to follow this pathway into a different major in the MEPR from the major they studied in the BENS are not guaranteed articulation into the MEPR. All students should consult their relevant Major Convenor for advice before enrolling in their courses.

An alternative engineering Practice Pathway has been developed for students who intend to study the MEPR immediately after completing the Bachelor of Engineering Science program. The BENS engineering practice

pathway is designed to enable experienced engineering Associates to draw on their industrial experience to demonstrate their achievement of the required generic and technical capabilities to Engineers Australia Stage 2 Experienced Technologist Competency attributes. BENS graduates who have completed this engineering practice pathway may be considered for entry into the MEPR program after receiving formal Engineers Australia Technologist accreditation using their Bachelor of Engineering Science (BENS) practice pathway e-Portfolio.

The engineering practice pathway is an option for students who hold an ADNG Associate Degree of Engineering or close equivalent and have five years of relevant industry experience at the time they enter the Bachelor of Engineering Science program. The pathway requires students to complete the approved course ENG3300 Industry Experience Evaluation Portfolio. Students who have the appropriate industrial experience, and are eligible for 10 or more exemptions upon entry into the Bachelor of Engineering Science (BENS) program may undertake this pathway. The ENG3300 Industry Experience Evaluation Portfolio will enable students to assess their existing workplace integrated learning skills, attributes and capabilities, and complete a technologist workplace e-portfolio to demonstrate their level of competency achievements.

Prospective Engineering Practice Pathway students should visit the Engineers Australia web site to gain an understanding of the processes which will be followed. In particular, they should view the Engineering Technologist Stage Two Competencies and the guidelines for achieving Chartered Technologist status.

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 UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Engineering Science program. The MEPR Master of Engineering Practice and the BENS/MEPR Engineering Practice Pathway has been established with the capacity of recognising and formally assessing industrial and work integrated learning (WIL) experience. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG3909 Work Experience - Technologist practice course.

Other information

The Faculty of Health, Engineering and Sciences may permit a student to enrol in an approved course other than those specified for the accredited program. Students who wish to enrol in approved courses other than those listed, must obtain written approval from their Major Convenor prior to enrolling in the course.

To satisfy the requirements of the program students must complete all Academic and Practice courses in the following recommended enrolment patterns. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

Agricultural Engineering major full-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Agricultural Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
AGR2302 Agricultural Machinery	2	1				1		
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Approved Course (Select from the approved course list)#	2	1				1		
Approved Course (Select from the approved course list)#	2	2				2		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
AGR2301 Agricultural Science	2	2				2		
ENV3105 Hydrology	2	2				2		
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
Academic Courses Year 3								
ENG3003 Engineering Management†	3	1				1,3		
AGR3304 Soil Science	3	1				1		
AGR3303 Agricultural Materials and Post-Harvest Technologies	3	1				1		
Approved Course (Select from the approved course list)#	3	1				1		
AGR3305 Precision and Smart Technologies in Agriculture	3	2				2		
ENV4106 Irrigation Science	3	2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Approved Course (Select from the approved course list)#	3	2				2		
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses Year 3								
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Agricultural Engineering) Core or Major course or any of the following:								
ELE1301 Computer Engineering		1				1		
ELE2103 Linear Systems and Control		2				2		
ENV2201 Land Studies		1				1		
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS

Footnotes

$ Unavailable online S2 2023

This is a Pathway course. Please refer to Engineering pathways under Articulation.

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

Agricultural Engineering major part-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Agricultural Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 2								
ENG1003 Problem Solving in Engineering and the Built Environment[$]		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
AGR2302 Agricultural Machinery		1				1		
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
Approved Course (Select from the approved course list)[#]								
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 4								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GDNS or MENS or GEPR
Approved Course (Select from the approved course list)#								
AGR2301 Agricultural Science		2				2		
ENV3105 Hydrology		2				2		
Year 4 Practice Courses								
AGR2902 Field Practice^				3			M	
Year 5								
ENG3003 Engineering Management†		1				1,3		
AGR3304 Soil Science		1				1		
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
ENV4106 Irrigation Science		2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Year 6								
AGR3303 Agricultural Materials and Post-Harvest Technologies		1				1		
Approved Course (Select from the approved course list)#								
Approved Course (Select from the approved course list)#								
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Year 6 Practice Courses								
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Agricultural Engineering) Core or Major course or any of the following:								
ELE1301 Computer Engineering		1				1		
ELE2103 Linear Systems and Control		2				2		
ENV2201 Land Studies		1				1		
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								s: GCEN or METC or GCNS or GDNS or MEPR or MENS

Footnotes

$ Unavailable online S2 2023

This is a Pathway course. Please refer to Engineering pathways under Articulation.

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

Civil Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Civil Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
Approved Course (Select from the approved course list)#	2	1				1		
CIV2605 Construction Engineering	2	1				1		
CIV2701 Road Design and Location	2	1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Approved Course (Select from the approved course list)#	2	2				2		
CIV2502 Structural and Building Technology	2	2		2				
CIV2702 Municipal Services#	2	2				2		Pre-requisite: ENV2103 or ENV1101
Practice Courses Year 2								
CIV3906 Civil Materials Practice	2	1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Academic Courses Year 3								
ENG3003 Engineering Management†	3	1				1,3		
MEC2402 Stress Analysis	3	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Approved Course (Select from the approved course list)#	3	1				1		
Approved Course (Select from the approved course list)#	3	1				1		
CIV2503 Structural Design I	3	2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation	3	2				2		
ENV3105 Hydrology	3	2				2		
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses Year 3								
CIV3907 Civil Systems Practice				3			M	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3909 Work Experience - Technologist						1,3		

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Courses: Select any BENH (Civil Engineering) Core or Major course or any of the following:								
CIV3603 Construction Methods						2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1				1,3		
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2				2		
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Major Convenor.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Civil Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students who wish to complete a Pathway to another degree in Civil Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1100 Introduction to Engineering Design		1,2				1,2		

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
Year 2								
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
Approved Course (Select from the approved course list)#								
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
Approved Course (Select from the approved course list)#								
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 4								
CIV2605 Construction Engineering		1				1		
CIV2701 Road Design and Location		1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
CIV2502 Structural and Building Technology		2		2				
CIV2702 Municipal Services#		2				2		Pre-requisite: ENV2103 or ENV1101
Year 4 Practice Courses								
CIV3906 Civil Materials Practice		1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 5								
ENG3003 Engineering Management†		1				1,3		
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation		2				2		
Year 6								
Approved Course (Select from the approved course list)#								
Approved Course (Select from the approved course list)#								
ENV3105 Hydrology		2				2		
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Year 6 Practice Courses								
CIV3907 Civil Systems Practice				3			M	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Civil Engineering) Core or Major course or any of the following:								
CIV3603 Construction Methods						2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1				1,3		
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2				2		
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engineering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Major Convenor.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Electrical and Electronic Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

On entering the Bachelor of Engineering Science in Electrical and Electronic 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 Electronic Workshop and Production will be required to purchase an electronic kit costing approximately $80. For ELE2702 Electrical Measurement and Analysis, access to a digital multimeter and hook-up wire may be required, together with the purchase of some electronic components.

Students who wish to complete a Pathway to another degree in Electrical and Electronic Engineering, Computer Systems Engineering or Power Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
ENG1100 Introduction to Engineering Design	1	2				1,2		
MEC1201 Engineering Materials	1	2				1,2,3		
ELE1801 Electrical Technology<	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MEPR or GCEN or GEPR
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
ELE1911 Electrical and Electronic Practice A~§	1	2		3			M	
Academic Courses Year 2								
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
ELE2303 Embedded Systems Design	2	1				1		Pre-requisite: ELE1301
ELE2702 Electrical Measurement and Analysis	2	1				1		Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE2601 Telecommunications Principles	2	1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2101 Control and Instrumentation#	2	2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ELE2501 Electronic Workshop and Production	2	2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
Approved Course (Select from the Approved Course list)#	2	2				2		
ELE2503 Electronic Systems#	2	2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previous ly completed
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B§	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 3								
ELE3803 Electrical Plant	3	1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG3003 Engineering Management†	3	1				1,3		
Approved Course (Select from the Approved Course list)#	3	1				1		
Approved Course (Select from the Approved Course list)#	3	1				1		
ELE3805 Power Electronics Principles and Applications	3	2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3506 Electronic Measurement	3	2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
Approved Course (Select from the Approved Course list)#	3	2				2		
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses Year 3								
ELE3914 Electrical and Electronic Practice D	3	1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Electrical and Electronic Engineering) Core or Major course or any of the following:								
ELE2704 Electricity Supply Systems						2		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: MEPR or GCEN or METC or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4807 Power Systems Analysis		1				1		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CSC1401 Foundation Programming£*		1,2				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
CHE1110 Chemistry 1^		1		1			HR	
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023
< Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
§ Unavailable in External mode in S3 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
* This is a Pathway course for students intending to complete the BENH (Computer Systems Engineering). Please refer to Engineering pathways under Articulation
^ CHE1110 Chemistry 1 has a highly recommended residential school component in External mode.

Electrical and Electronic Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

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

Workshop and Production will be required to purchase an electronic kit costing approximately $80. For ELE2702 Electrical Measurement and Analysis, access to a digital multimeter and hook-up wire may be required, together with the purchase of some electronic components.

Students who wish to complete a Pathway to another degree in Electrical and Electronic Engineering, Computer Systems Engineering or Power Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
MEC1201 Engineering Materials		1,2				1,2,3		
ELE1801 Electrical Technology<		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 2 Practice Courses								
ELE1911 Electrical and Electronic Practice A~§		2		3			M	
Year 3								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2101 Control and Instrumentation#		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ELE2501 Electronic Workshop and Production		2				2		Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
Year 3 Practice Courses								
ELE2912 Electrical and Electronic Practice B§		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4								
ELE2702 Electrical Measurement and Analysis		1				1		Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
Approved Course (Select from the Approved Course list)#								
ELE2503 Electronic Systems#		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previous ly completed
Year 4 Practice Courses								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Year 5								
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG3003 Engineering Management†		1				1,3		
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
Year 5 Practice Courses								
ELE3914 Electrical and Electronic Practice D		1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: MENS or MEPR
Year 6								
Approved Course (Select from the Approved Course list)#								
Approved Course (Select from the Approved Course list)#								
Approved Course (Select from the Approved Course list)#								
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Year 6 Practice Courses								
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Electrical and Electronic Engineering) Core or Major course or any of the following:								
ELE2704 Electricity Supply Systems						2		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4807 Power Systems Analysis		1				1		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
CSC1401 Foundation Programming£*		1,2				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MEC1501 Introduction to Industrial Processes						2		Pre-requisite: CIV1500 or CIV1501
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Program

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
CHE1110 Chemistry 1^		1		1			HR	
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023
< Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
§ Unavailable in External mode in S3 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
* This is a Pathway course for students intending to complete the BENH (Computer Systems Engineering). Please refer to Engineering pathways under Articulation
^ CHE1110 Chemistry 1 has a highly recommended residential school component in External mode.

Environmental Engineering major full-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Environmental Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: MEPR or GCEN or GEPR
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
ENV2105 Applied Chemistry and Microbiology	2	1				1		
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV2201 Land Studies	2	1				1		
Approved Course (Select from the Approved Course list)#	2	1				1		
Approved Course (Select from the Approved Course list)#	2	2				1,2,3		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
ENV3105 Hydrology	2	2				2		
Approved Course (Select from the Approved Course list)#	2	2				2		
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
Academic Courses Year 3								
ENG3003 Engineering Management†	3	1				1,3		
ENV4204 Environmental Technology	3	1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
AGR3304 Soil Science	3	1				1		
Approved Course (Select from the Approved Course list)#	3	1				1		
ENV4203 Public Health Engineering	3	2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3103 Environmental Pollution	3	2				2		Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the following Programs: GCEN or

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV4106 Irrigation Science	3	2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses Year 3								
ENV3904 Environmental Engineering Practice				3			M	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENG3909 Work Experience - Technologist						1,3		
Approved Courses: Select any BENH (Environmental Engineering) Core or Major course or any of the following:								
AGR2301 Agricultural Science		2				2		
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
CIV3703 Transport Engineering		2				2		
CLI2201 Climate Change and Variability						2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
GIS1402 Geographic Information Systems£		1				1,3		
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023

This is a Pathway course. Please refer to Engineering pathways under Articulation.

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Environmental Engineering major part-time recommended enrolment pattern

Students who wish to complete a Pathway to another degree in Environmental Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ENG1003 Problem Solving in Engineering and the Built Environment[$]		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
SVY1500 Spatial Science for Engineers		2				2		
Year 3								
ENV2105 Applied Chemistry and Microbiology		1				1		
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
Approved Course (Select from the Approved Course list)[#]								
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Year 3 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 4								
ENV2201 Land Studies		1				1		

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Course (Select from the Approved Course list)#								
ENV3105 Hydrology		2				2		
Approved Course (Select from the Approved Course list)#								
Year 4 Practice Courses								
AGR2902 Field Practice^				3			M	
Year 5								
ENG3003 Engineering Management†		1				1,3		
ENV4204 Environmental Technology		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3103 Environmental Pollution	3]	2				2		Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Year 5 Practice Courses								
ENV3904 Environmental Engineering Practice				3			M	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
Year 6								
AGR3304 Soil Science		1				1		
Approved Course (Select from the Approved Course list)#								
ENV4106 Irrigation Science		2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Year 6 Practice Courses								
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENG3909 Work Experience - Technologist						1,3		

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Courses: Select any BENH (Environmental Engineering) Core or Major course or any of the following:								
AGR2301 Agricultural Science		2				2		
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
CIV3703 Transport Engineering		2				2		
CLI2201 Climate Change and Variability						2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
GIS1402 Geographic Information Systems£		1				1,3		
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.

Footnotes

$ Unavailable online S2 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Infrastructure Management Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	1	2				1,2		
Approved Course (Select from the Approved Course list)	1	2				2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses Year 2								
MGT1001 Cultivating Talent	2	1				1		
MGT1101 Human Capabilities for Business£	2	1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
CIV2605 Construction Engineering	2	1				1		
ENG2002 Technology, Sustainability and Society	2	2				1,2,3		
LAW1501 Business Law and Ethics	2	2				2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
CIV2502 Structural and Building Technology	2	2		2				
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
Academic Courses Year 3								
ENG3003 Engineering Management†	3	1				1,3		
ACC1201 Data Insights and Financial Performance£	3	1				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
MGT2001 Risk Mitigation, Work Health and Safety	3	1				1		
Approved Course (Select from the Approved Course list)	3	1				1		
CIV2503 Structural Design I	3	2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation	3	2				2		
CIV3603 Construction Methods						2		
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses Year 3								
CIV3906 Civil Materials Practice	3	1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
ENG3909 Work Experience - Technologist						1,3		
Select approved courses from the following or other elective courses as approved by the Major Convenor								
Any approved Bachelor of Engineering (Honours) (Civil Engineering) course OR								
CIV4506 Concrete Structures		1				1		Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV2201 Land Studies		1				1		
URP1001 Introduction to Urban and Regional Planning		1				1		
ENG4004 Engineering Project and Operations Management‡		3				2,3		

Footnotes

$ Unavailable online S2 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

† The semester 3 offering of this course is offered in odd numbered years only.

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

Infrastructure Management Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 2								
ENG1003 Problem Solving in Engineering and the Built Environment[$]		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
Approved Course (Select from the Approved Course list)								
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
MGT1001 Cultivating Talent		1				1		
MGT1101 Human Capabilities for Business[£]		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
LAW1501 Business Law and Ethics		1,2				1,2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
Year 4								
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
CIV2605 Construction Engineering		1				1		
CIV2502 Structural and Building Technology		2		2				
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Year 4 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
Year 5								
ENG3003 Engineering Management[†]		1				1,3		
ACC1201 Data Insights and Financial Performance[£]		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering

Major study: Infrastructure Management Engineering (Major Study Code: 18502)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation		2				2		
Year 5 Practice Courses								
CIV3906 Civil Materials Practice		1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
Year 6								
MGT2001 Risk Mitigation, Work Health and Safety		1				1		
Approved Course (Select from the Approved Course list)								
CIV3603 Construction Methods						2		
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Year 6 Practice Courses								
ENG3909 Work Experience - Technologist						1,3		
Select approved courses from the following or other elective courses as approved by the Major Convenor								
Any approved Bachelor of Engineering (Honours) (Civil Engineering) course OR								
CIV4506 Concrete Structures		1				1		Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV2201 Land Studies		1				1		
URP1001 Introduction to Urban and Regional Planning		1				1		
ENG4004 Engineering Project and Operations Management‡		3				2,3		

Footnotes

$ Unavailable online S2 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

† The semester 3 offering of this course is offered in odd numbered years only.

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

Mechanical Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students enrolling in this major can choose to study a Minor in Control and Automation. Students who choose this minor must study the courses listed in the Minor instead of approved courses.

Students who wish to complete a Pathway to another degree in Mechanical Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	1				1,2		
Practice Courses								
ENG1901 Engineering Practice 1	1	1		2,3			M	
Academic Courses								
MEC1201 Engineering Materials	1	2				1,2,3		
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling	1	2				2		
Year 2								
Academic Courses								
MEC2202 Manufacturing Processes	2	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
Approved Course (Select from the Approved Course list)#	2	1				1		
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics#	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in the following Program: GCEN
Practice Courses								
MEC2901 Mechanical Practice 1	2	1		3			M	
MEC2902 Mechanical Practice 2	2	1		1			M	
Academic Courses								
MEC2106 Introduction to Thermofluids	2	2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
ELE1801 Electrical Technology<	2	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2301 Design of Machine Elements	2	2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Approved Course (Select from the Approved Course list)#	2	2				2		
Practice Courses								
MEC3903 Mechanical Practice 3	2	2		3			M	
Year 3								
Academic Courses								
MEC3107 Thermofluids	3	1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
ENG3003 Engineering Management†	3	1				1,3		
MEC3203 Materials Technology	3	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
Approved Course (Select from the Approved Course list)#	3	1				1		
Practice Courses								
ENG3909 Work Experience - Technologist						1,3		
Academic Courses								
Approved Course (Select from the Approved Course list)#	3	2				2		
Approved Course (Select from the Approved Course list)#	3	2				2		
ENG3111 Technology Design Project	3	2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
MEC3204 Production Engineering	3	2				2		
Practice Courses								
MEC3904 Mechanical Practice 4	3	2		2			M	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GDNS or MENS or MEPR
Select a minor study or any BENH (Mechanical Engineering) Core or Major course or any of the following as Approved Courses:								
ENG4004 Engineering Project and Operations Management‡		3				2,3		
AGR2302 Agricultural Machinery		1				1		
CIV2502 Structural and Building Technology		2		2				
ELE1502 Electronic Circuits		1				1		
ELE1301 Computer Engineering		1				1		
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.
Minor (Control and Automation)								
ELE1502 Electronic Circuits		1				1		
ELE1301 Computer Engineering		1				1		
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2101 Control and Instrumentation		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR

Footnotes

$ Unavailable online S2 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
< Unavailable online in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Major Convenor.

Mechanical Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Students enrolling in this major can choose to study a Minor in Control and Automation. Students who choose this minor must study the courses listed in the Minor instead of approved courses.

Students who wish to complete a Pathway to another degree in Mechanical Engineering should seek advice from the Faculty of Health, Engineering and Sciences before enrolling in their courses.

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1003 Problem Solving in Engineering and the Built Environment$		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
Year 2								
Academic Courses								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling		2				2		
Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
Academic Courses								
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
Approved Course (Select from the Approved Course list)#								
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
ELE1801 Electrical Technology<		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MEPR or GCEN or GEPR
Practice Courses								
MEC2901 Mechanical Practice 1		1		3			M	
Year 4								
Academic Courses								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics#		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in the following Program: GCEN
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Approved Course (Select from the Approved Course list)#								
Practice Courses								
MEC2902 Mechanical Practice 2		1		1			M	
MEC3903 Mechanical Practice 3		2		3			M	
Year 5								
Academic Courses								
MEC3107 Thermofluids		1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
ENG3003 Engineering Management†		1				1,3		
Approved Course (Select from the Approved Course list)#		2				2		
Approved Course (Select from the Approved Course list)#		2				2		
Year 6								
Academic Courses								
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
Approved Course (Select from the Approved Course list)#		1				1		

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses								
ENG3909 Work Experience - Technologist						1,3		
Academic Courses								
ENG3111 Technology Design Project		1,2				1,2		Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
MEC3204 Production Engineering		2				2		
Practice Courses								
MEC3904 Mechanical Practice 4		2		2			M	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol lowing Programs: GDNS or MENS or MEPR
Select a minor study or any BENH (Mechanical Engineering) Core or Major course or any of the following as Approved Courses:								
ENG4004 Engineering Project and Operations Management‡		3				2,3		
AGR2302 Agricultural Machinery		1				1		
CIV2502 Structural and Building Technology		2		2				
ELE1502 Electronic Circuits		1				1		
ELE1301 Computer Engineering		1				1		
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3300 Industry Experience Evaluation Portfolio						1,2		Pre-requisite: Students must be enrolled in the BENS engi neering practice sub-plan pathway.
Minor (Control and Automation)								
ELE1502 Electronic Circuits		1				1		
ELE1301 Computer Engineering		1				1		

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2101 Control and Instrumentation		2				2		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR

Footnotes

$ Unavailable online S2 2023
# This is a Pathway course. Please refer to Engineering pathways under Articulation.
< Unavailable online in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Major Convenor.

Bachelor of Engineering Technology (BETC) - BEngTech

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

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 BENS Bachelor of Engineering Science **which will be offered from S1 2014.**

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	Toowoomba, Springfield	
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:	3 years full-time, 6 years part-time or external	
Program articulation:	From: Associate Degree of Engineering To: Bachelor of Engineering (Honours)	

Notes:

Please note that the Civil Engineering major and the Infrastructure Management major (formerly known as Building and Construction Management) are the only two majors that are available on-campus at Springfield.

Contact us

Current students
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

A graduate of this program is eligible to apply for graduate membership of Engineers Australia as an Engineering Technologist. After further professional development, a graduate member with a Bachelor of Engineering Technology may apply for chartered status as an Engineering Technologist and, when granted, may use the post-nominal TMIEAust CEngT.

Program aims

To equip graduates with the academic, personal, professional, and technical knowledge, skills and understanding required to commence practice as a Graduate Engineering Technologist in Australia or overseas within appropriate social, cultural, industrial and environmental contexts.

Program objectives

The objectives of the Bachelor of Engineering Technology program are:

- 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

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

- 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

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Engineering Technology program consists of core, major study and Elective components. Students enrolled in the Bachelor of Engineering Technology program may undertake a professional specialisation in one of seven major discipline areas:

- Agricultural Engineering
- Civil Engineering
- Computer Systems Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Infrastructure Management
- Mechanical Engineering
- Power Engineering.

The Bachelor of Engineering Technology program comprises 24 academic and several practice units and involves three years of full-time study or six years of part-time study. The program is available in the on-campus mode and in the external mode of study. In order to be eligible for the award, students must complete the program within a maximum of five years of full-time study, or 10 years of part-time study, from the date of their initial enrolment.

The Faculty of Health, Engineering and Sciences may permit a student to enrol in an Elective course other than those specified for the accredited program. **Students who wish to enrol in Elective courses other than those listed, must obtain written approval prior to enrolling in the course.**

To satisfy the requirements of the program students must complete all of the Academic courses and the Practice courses in the following tables that show the recommended enrolment patterns for on-campus and external students. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

The program structure for each of the major studies in the Bachelor of Engineering Technology is shown in the following pages.

Required time limits

Full-time students have a maximum of five years to complete this program. Part-time students have a maximum of 10 years to complete this program.
A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Practical experience

To be eligible to graduate from the Bachelor of Engineering Technology, students must obtain an aggregate of at least 45 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 ENG3909 Work Experience - Technologist 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 45 days, will be determined by the Examiner of ENG3909 Work Experience - Technologist.

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.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

External students are required to attend a number of residential schools during their program. These are associated with Practice Courses and are normally conducted at the end of Semester 3 (February), or during the mid-semester recess in Semester 2 (September/October).

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.

Students enrolled in the external offer of a Practice Course **must attend** the residential school for that course. In some cases students enrolled in the on-campus mode may also be required to attend the residential school. Students should only enrol in a Practice Course when they are able to attend the residential school for that course. Practice Courses **may not** be taken earlier than shown except with the permission of the School responsible for the program. In some cases students may enrol in two Practice Courses in one term so they can complete the two residential schools in a two-week period. The actual dates for each residential school are shown in the Residential School schedule in this Handbook.

Safety boots are compulsory in engineering laboratories for several of the Practice courses and are strongly recommended for all other Practice courses.

Articulation

Students who have completed an Associate Diploma or Associate Degree program in Engineering at a Queensland university within the last five years may be able to claim up to a maximum of 16 units of advanced standing in the Bachelor of Engineering Technology program if studying in the same discipline area. Students who have completed an Advanced Diploma program in engineering at a TAFE college within the last five years are eligible to claim up to a maximum of 12 units of advanced standing if studying in the same discipline area provided appropriate modules from the national curriculum have been completed. Students holding an Associate Diploma in Engineering who seek and gain significant advanced standing in the Bachelor of Engineering Technology program in the same field of study are not entitled to use both awards after graduation.

Students who have completed a Bachelor of Engineering Technology program, or equivalent, within the last five years may normally be able to claim up to a maximum of 16 units of advanced standing in the Bachelor of Engineering. It is possible for students to be granted maximum credit (24 units) towards the Bachelor of Engineering but this ONLY applies to students who have applied for, and been granted, approval to undertake the 'Pathway to Bachelor of Engineering. The amount of credit granted depends upon the field of study and Electives completed in the Bachelor of Engineering Technology program and the field of study selected in the Bachelor of Engineering.

Exit points

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

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 Technology program. Pathway to the Bachelor of Engineering (Honours) maximises the advanced standing (exemptions) students will receive in the Bachelor of Engineering (Honours) program. A Pathway to the Bachelor of Engineering (Honours) has been developed for each of the following Bachelor of Engineering Technology majors into the equivalent Bachelor of Engineering (Honours) major:

- Agricultural Engineering
- Civil Engineering
- Computer Systems Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Mechanical Engineering
- Power Engineering

Pathway to the Bachelor of Engineering (Honours) has been specially developed for students who study part-time. Full-time students may seek approval to follow the Pathway to the Bachelor of Engineering (Honours), but it is not timetabled for on-campus students.

Students must have the approval of the Faculty of Health, Engineering and Sciences to undertake the Pathway to the Bachelor of Engineering (Honours). Students are strongly advised to consider and apply for approval for this Pathway as soon as possible in order to maximise the credit they will receive in the Bachelor of Engineering (Honours). This should be done prior to the commencement of the second year of studies if possible.

Before applying for approval students must demonstrate they have the ability to undertake the Bachelor of Engineering (Honours) program by successfully completing the course ENM2600 Advanced Engineering Mathematics as one of their Electives. The Faculty will also consider a student's GPA before granting approval.

Once approval is granted, the Faculty will advise them of the courses they should study when granting approval for them to follow the Pathway to the Bachelor of Engineering (Honours).

Agricultural Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

The course AGR2902 Field Practice may involve overnight field trips for which each student will be responsible for their own accommodation costs. This course is not offered in the on-campus mode. On-campus students should enrol in the external mode.

Agricultural Engineering Pathway

It is recommended that students wishing to continue into the Bachelor of Engineering (Honours) (Agricultural Engineering) program using a Pathway should have completed at least eight courses with a GPA greater than

5. Pathway students should enrol in ENM2600 Advanced Engineering Mathematics, and ENG3104 Engineering Simulations and Computations as electives.

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1101	1	1	2	1,2				
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				
SVY1500 Spatial Science for Engineers	1	2	2	2				
AGR2302 Agricultural Machinery	2	1	3					
ENV2103 Hydraulics I	2	1	3	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Elective (Select from the Electives list)	2	1	4	1				
ENG2002 Technology, Sustainability and Society	2	2	3	1,2,3				
CIV2403 Geology and Geomechanics	2	2	3	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
AGR2301 Agricultural Science	2	2	4	2				
ENV3105 Hydrology	2	2	4	2				
ENG3003 Engineering Management†	3	1	5	1,3				
AGR3304 Soil Science	3	1	5	1				
AGR3303 Agricultural Materials and Post-Harvest Technologies	3	1	6	1				
AGR3305 Precision and Smart Technologies in Agriculture	3	1	6	1				
ENV4106 Irrigation Science	3	2	5	2				Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Elective (Select from the Electives list)	3	2	5	2				
Elective (Select from the Electives list)	3	2	6	2				

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1	2	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^	2		4	3			C	
AGR3903 Soil and Water Engineering Practice 2^	3		3	2			C	
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
Any approved BEng (AgrEng) course OR								
ELE1301 Computer Engineering		1		1				
ELE2103 Linear Systems and Control		2		2				
ENG3104 Engineering Simulations and Computations		2		2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ENV2201 Land Studies		1		1				
ENV3104 Hydraulics II		1		1				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENM2600 Advanced Engineering Mathematics		1		1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
MEC2202 Manufacturing Processes		1		1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2301 Design of Machine Elements		2		2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2401 Dynamics I		2		2				Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR

Major study: Agricultural Engineering (Major Study Code: 16244)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC3303 Mechanical and Mechatronic System Design		2		2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3203 Materials Technology		1		1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS

Footnotes

† 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.

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

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 specification 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 with a GPA greater than 5. Pathway students should enrol in CIV3703 Transport Engineering instead of CIV2702 Municipal Services and enrol in ENM2600 Advanced Engineering Mathematics, , CIV3506 and ENG3104 Engineering Simulations and Computations as electives.

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1	1	1				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
ENG1101	1	1	2	1,2				
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
SVY1500 Spatial Science for Engineers	1	2	2	2				
ENV2103 Hydraulics I	2	1	3	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
Elective (Select from the Electives list)#	2	1	3	1				
CIV2605 Construction Engineering	2	1	4	1				
CIV2701 Road Design and Location	2	1	4	1				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
CIV2403 Geology and Geomechanics	2	2	3	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
ENG2002 Technology, Sustainability and Society	2	2	3	1,2,3				
CIV2502 Structural and Building Technology	2	2	4	2				
CIV2702 Municipal Services#	2	2	4	2				Pre-requisite: ENV2103 or ENV1101
ENG3003 Engineering Management†	3	1	5	1,3				
MEC2402 Stress Analysis	3	1	5	1				Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Elective (Select from the Electives list)#	3	1	6	1				
Elective (Select from the Electives list)#	3	1	6	1				
CIV2503 Structural Design I	3	2	5	2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation	3	2	5	2				
ENV3105 Hydrology	3	2	6	2				
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1,2	2	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101

Major study: Civil Engineering (Major Study Code: 12044)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV3906 Civil Materials Practice	2	1	4	3			C	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
CIV3907 Civil Systems Practice^			6	3			C	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
Any approved BEng (Civil) course OR								
CIV3603 Construction Methods				2				
CIV3506 *		1		1				
CIV3703 Transport Engineering		2		2				
ENG3104 Engineering Simulations and Computations		2		2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
ENG4004 Engineering Project and Operations Management‡				2,3				
ENV2201 Land Studies		1		1				
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1		1,3				
ENM2600 Advanced Engineering Mathematics		1		1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
REN1201 Environmental Studies		1		1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY1104 Survey Computations A		2		2				Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2		2				
ENV4203 Public Health Engineering		2		2				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS

Footnotes

This is a Pathway to the Bachelor of Engineering course. 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.

* Not available on-campus at Springfield in 2017.

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Computer Systems Engineering Major recommended enrolment pattern

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 specification 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 Technology 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 costing approximately $50.

Students who have been granted an exemption in the course ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study materials from the UniSQ Bookshop and work through these to consolidate their knowledge.

Pathways

The Pathway to the Bachelor of Engineering (Honours) program is available for this major. Please refer to Other Information - Engineering Pathways at the beginning of this program section.

Major study: Computer Systems Engineering (Major Study Code: 13274)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
CSC1401 Foundation Programming£	1	1	1	1,2				
ENG1101	1	1	2	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1301 Computer Engineering	1	1	2	1				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	2				

Major study: Computer Systems Engineering (Major Study Code: 13274)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CSC2401 Algorithms and Data Structures	2	2	3	1				Pre-requisite: CSC2402 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
MAT1101 Discrete Mathematics for Computing	2	1	4	1				
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
ENG1100 Introduction to Engineering Design	2	2	4	1,2				
ELE2501 Electronic Workshop and Production#	2	2	3	2				Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ENG2002 Technology, Sustainability and Society	2	1	4	1,2,3				
Elective (Select from the Electives list)#	2	1	4	1				
ELE2101 Control and Instrumentation#	2	2	3	2				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
CSC2402 Object-Oriented Programming in C++	3	1	6	1				Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
ELE3305 Computer Systems and Communications Protocols	3	1	6	1				
ENG3003 Engineering Management†	3	1	5	1,3				
ELE2601 Telecommunications Principles	3	1	5	1				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Elective (Select from the Electives list)	3	2	6	2				
ELE2503 Electronic Systems#	3	2	5	2				Pre-requisite: ELE1502 or S tudents must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previous ly completed
ELE3307	3	2	5	2				
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1,2	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	

Major study: Computer Systems Engineering (Major Study Code: 13274)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	3	2	5	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ENG3909 Work Experience - Technologist^	3		6	1,3				
ELE3914 Electrical and Electronic Practice D	3	1	6	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
Electives (Select from the following)								
CSC3403 Comparative Programming Languages		1		1				Pre-req: CSC2408; and Pre-req or Co-req: CSC2402; or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT Enrolment is not permitted in CSC3403 if CIS3001 has been previous ly completed
ELE2103 Linear Systems and Control		2		2				
ENG4004 Engineering Project and Operations Management‡				2,3				
CSC2408 Software Development Tools		2		1,2				Pre-requisite: CSC1401

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

This is a Pathway to the Bachelor of Engineering course. 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.

Electrical and Electronic Engineering Major recommended enrolment pattern

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 specification 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 specification 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 Technology in Electrical and Electronic 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 costing approximately $50. For ELE2702, access to an analogue multimeter and hook-up wire may be required, together with the purchase of some electronic components.

Students who have been granted an exemption in the course ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study materials from the UniSQ Bookshop and work through these prior to attempting ELE2702 or ELE3803.

Pathways

The Pathway to the Bachelor of Engineering (Honours) program is available for this major. Please refer to Other Information - Engineering Pathways at the beginning of this program section.

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
MEC1201 Engineering Materials	1	1	1	1,2,3				
ENG1101	1	1	2	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1301 Computer Engineering	1	1	2	1				
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	2	1	3	1,2				
ELE2702 Electrical Measurement and Analysis#	2	1	4	1				Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE2601 Telecommunications Principles	2	1	4	1				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
ELE2501 Electronic Workshop and Production#	2	2	3	2				Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
Elective (Select from the Electives list)#	2	2	4	2				
ELE2503 Electronic Systems#	2	2	4	2				Pre-requisite: ELE1502 or Students must be enrolled in the following Program: GCEN or GEPR Students cannot be

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previously completed
ELE2101 Control and Instrumentation#	2	2	3	2				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG3003 Engineering Management†	3	1	6	1,3				
Elective (Select from the Electives list)#	3	1	6	1				
ELE3803 Electrical Plant	3	1	5	1				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Elective (Select from the Electives list)#	3	2	6	1				
ENG2002 Technology, Sustainability and Society	3	1	5	1,2,3				
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
ELE3506 Electronic Measurement	3	2	5	2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS
ELE3805 Power Electronics Principles and Applications	3	2	5	2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1,2	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	2	2	4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or

Major study: Electrical and Electronic Engineering (Major Study Code: 12047)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
ELE2704 Electricity Supply Systems				2				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE2103 Linear Systems and Control		2		2				
ELE2504 Electronic Design and Analysis		2		2				Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ENG4004 Engineering Project and Operations Management‡				2,3				
ELE3305 Computer Systems and Communications Protocols		1		1				
ELE4109 Measurement Science and Instrument Engineering>				1				
ELE3804 Power Systems Protection		1		1				

Footnotes

This is a Pathway to the Bachelor of Engineering course. 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.

> Offered Odd Years Only.

Environmental Engineering Major recommended enrolment pattern

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 specification 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 with a GPA greater than

5. Pathway students should enrol in , ENM2600 Advanced Engineering Mathematics and ENG3104 Engineering Simulations and Computations as electives.

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
ENG1101	1	1	2	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				
SVY1500 Spatial Science for Engineers	1	2	2	2				
REN1201 Environmental Studies	2	1	3	1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
ENV2103 Hydraulics I	2	1	3	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV2201 Land Studies	2	1	4	1				
Elective (Select from the Electives list)#	2	1	4	1				
ENG2002 Technology, Sustainability and Society	2	2	3	1,2,3				
CIV2403 Geology and Geomechanics	2	2	3	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
ENV3105 Hydrology	2	2	4	2				
AGR2301 Agricultural Science	2	2	4	2				
ENG3003 Engineering Management†	3	1	5	1,3				
ENV4204 Environmental Technology	3	1	5	1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
AGR3304 Soil Science	3	1	6	1				
Elective (Select from the Electives list)#	3	1	6	1				
ENV4203 Public Health Engineering	3	2	5	2				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Elective (Select from the Electives list)#	3	2	5	2				
ENV4106 Irrigation Science	3	2	6	2				Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1	1	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice	2		4	3			C	
ENV3904 Environmental Engineering Practice^	3		5	3			C	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
AGR3903 Soil and Water Engineering Practice 2^	3		6	2			C	
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
Any approved BEng (Env) course OR								
AGR3305 Precision and Smart Technologies in Agriculture		1		1				
CHE1110 Chemistry 1		1		1				
CIV3703 Transport Engineering		2		2				
CLI2201 Climate Change and Variability		2		2				
ENG3104 Engineering Simulations and Computations		2		2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ENG4004 Engineering Project and Operations Management‡				2,3				
GIS1402 Geographic Information Systems£		1		1,3				
LAW2107 Environmental Law*		1				1		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)

Major study: Environmental Engineering (Major Study Code: 12045)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENM2600 Advanced Engineering Mathematics		1		1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
URP3201 Sustainable Urban Design and Development		2		2				
SVY3202 Photogrammetry and Remote Sensing		1		1				

Footnotes

This is a Pathway to the Bachelor of Engineering course. 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.

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

* Springfield campus only

Infrastructure Management Major recommended enrolment pattern (Toowoomba and Springfield campus)

(Formerly known as Building and Construction Management)

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 specification to ascertain if a course is offered in another term.

Major study: Infrastructure Management (Major Study Code: 12046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
ENG1101	1	1	2	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				
SVY1500 Spatial Science for Engineers	1	2	2	2				
MGT1001 Cultivating Talent	2	1	3	1				

Major study: Infrastructure Management (Major Study Code: 12046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MGT1101 Human Capabilities for Business£	2	1			3	1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
MGT3100 ~	2	1	4	1				
CIV2605 Construction Engineering	2	1	4	1				
ENG2002 Technology, Sustainability and Society	2	2	3	1,2,3				
LAW1101	2	2	3	2,3				
CIV2502 Structural and Building Technology	2	2	4	2				
CIV2403 Geology and Geomechanics	2	2	4	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
ENG3003 Engineering Management†	3	1	5	1,3				
ACC1201 Data Insights and Financial Performance£	3	1	5	1,2				Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
MGT2001 Risk Mitigation, Work Health and Safety	3	1	6	1				
Elective (Select from the Electives list)	3	1	6	1				
CIV2503 Structural Design I	3	2	5	2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CMG2001 Job Organisation	3	2	5	2				
CIV3603 Construction Methods	3		6	2				
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1	2	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
CIV3906 Civil Materials Practice	3	1	5	3			C	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
Any approved BEng (Civil) course OR								
CIV3506 *		1		1				
ENV2201 Land Studies		1		1				
URP4203		1		1				

Major study: Infrastructure Management (Major Study Code: 12046)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4004 Engineering Project and Operations Management‡				2,3				

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

~ Last offering 2019

† 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.

* Not available on-campus at Springfield in 2017.

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

Mechanical Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Pathways

The Pathway to the Bachelor of Engineering (Honours) program is available for this major. Please refer to Other Information - Engineering Pathways at the beginning of this program section.

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENG1101	1	1	1	1,2				
ENM1600 Engineering Mathematics	1	1	2	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	1	2	1,2				
MEC1201 Engineering Materials	1	2	1	1,2,3				
ENG2102	1	2	1	2,3				
CIV1501 Engineering Statics	1	2	2	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling	1	2	2	2				
ENG2002 Technology, Sustainability and Society	2	1	3	1,2,3				
MEC2202 Manufacturing Processes	2	1	3	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2405 Machine Dynamics#	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in the following Program: GCEN
MEC2106 Introduction to Thermofluids#	2	2	3	2				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
ELE1801 Electrical Technology	2	2	3	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2301 Design of Machine Elements	2	2	4	2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Elective (Select from the Electives list)#	2	2	4	2				
MEC2101	3	1	5	1				
ENG3003 Engineering Management†	3	1	5	1,3				
MEC3203 Materials Technology	3	1	6	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
Elective (Select from the Electives list)#	3	1	6	1				
Elective (Select from the electives list)#	3	2	5	2				
MEC3303 Mechanical and Mechatronic System Design	3	2	5	2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
MEC3204 Production Engineering	3	2	6	2				
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1	2	2,3			C	
MEC2901 Mechanical Practice 1	1	1	3	3			C	
MEC2902 Mechanical Practice 2	2	1	4	1			C	
MEC3903 Mechanical Practice 3	2	2	4	2			C	
MEC3904 Mechanical Practice 4	3	2	6	2			C	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 12048)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GDNS or MENS or MEPR
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
MEC4104 Renewable Energy Technology		1		1				Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
ENG4004 Engineering Project and Operations Management‡				2,3				
AGR2302 Agricultural Machinery				1				
CIV2502 Structural and Building Technology		2		2				
MAT1102 Algebra and Calculus I		1		1				
ELE1502 Electronic Circuits		2		2				
ELE1301 Computer Engineering		1		1				
ELE3803 Electrical Plant		1		1				Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2503 Structural Design I		2		2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS

Footnotes

This is a pathway to the Bachelor of Engineering. 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

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 specification 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 consult the course specification 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 Technology in Power 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 costing approximately $50. For ELE2702, access to an analogue multimeter and hook-up wire may be required, together with the purchase of some electronic components.

Students who have been granted an exemption in the course ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study materials from the UniSQ Bookshop and work through these prior to attempting ELE2702 or ELE3803.

Pathway

The Pathway to the Bachelor of Engineering (Honours) program is available for this major. Please refer to Other Information - Engineering Pathways at the beginning of this program section.

Major study: Power Engineering (Major Study Code:15935)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
MEC1201 Engineering Materials	1	1	1	1,2,3				
ENG1101	1	1	2	1,2				
ENM1600 Engineering Mathematics	1	1	2	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1301 Computer Engineering	1	1	2	1				
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	2	1	3	1,2				
ELE2702 Electrical Measurement and Analysis#	2	1	4	1				Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
Elective (Select from the Electives list)	2	1	4	1				
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
ELE2501 Electronic Workshop and Production#	2	2	3	2				Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN

Major study: Power Engineering (Major Study Code:15935)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2704 Electricity Supply Systems^	2	2	4	2				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE2503 Electronic Systems#	2	2	4	2				Pre-requisite: ELE1502 or Students must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previously completed
ELE2101 Control and Instrumentation#	2	2	3	2				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG3003 Engineering Management†	3	1	6	1,3				
ENG2002 Technology, Sustainability and Society	3	2	5	1,2,3				
Elective (Select from the Electives list)	3	1	6	1				
ELE3803 Electrical Plant	3	1	5	1				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3804 Power Systems Protection	3	1	6	1				
ENG3111 Technology Design Project	3	2	6	2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.
Elective (Select from the Electives list)	3	2	5	2				
ELE3805 Power Electronics Principles and Applications	3	2	5	2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Practice Courses								
ENG1901 Engineering Practice 1^^	1	1	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	2	2	4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in

Major study: Power Engineering (Major Study Code:15935)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3909 Work Experience - Technologist^	3		6	1,3				
Electives (Select from the following)								
ELE2103 Linear Systems and Control		2		2				
ELE2504 Electronic Design and Analysis		2		2				Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ENG4004 Engineering Project and Operations Management‡				2,3				
ELE3305 Computer Systems and Communications Protocols		1		1				
ELE4109 Measurement Science and Instrument Engineering>				1				
CIV1501 Engineering Statics		2		2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
CIV2605 Construction Engineering		1		1				
CIV2403 Geology and Geomechanics		2		2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
GIS1401 Geographic Data Presentation		2		2				
GIS1402 Geographic Information Systems£		1		1,3				
SVY1110 Introduction to Global Positioning System		2		2				

Footnotes

This is a Pathway to the Bachelor of Engineering course. Please refer to Other Information - Engineering Pathways at the beginning of this program section.

^ On-campus students should enrol in the external offering of this course.

† 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**.

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

> Offered Odd Years Only

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Bachelor of Spatial Science Technology (BSST) - BSpScTech

QTAC code (Australian and New Zealand applicants): Unspecified (Toowoomba campus: 907801; External: 907805); Surveying (Springfield campus: 927801)

CRICOS code (International applicants): 053512D

The Geographic Information Systems Major is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area should contact us.

	On-campus^	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) 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:	3 years full-time, 6 years part-time	
Program articulation:	From: Associate Degree of Spatial Science To: Bachelor of Spatial Science (Honours); Master of Spatial Science Technology	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ Only the Surveying major is available on-campus at Springfield.

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: studyeng@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 Bachelor of Spatial Science Technology (Surveying) program is accredited by the Surveyors Board of Queensland and is recognised in every Australian state and in New Zealand through reciprocal arrangements. The degree, together with relevant industry experience, enables registration as a graduate surveyor with the Queensland Surveyors Board. The degree, together with relevant industry experience, enables registration and/or licensing as a professional mining surveyor with the Surveyors Boards of Queensland and New South Wales.

The Spatial Science Institute has accredited both program majors and graduates are eligible for membership with the Surveying and Spatial Sciences Institute Australia.

Program aims

The Bachelor of Spatial Science Technology program equips students with a core of basic technical, scientific, analytical, business administration and communication skills that will permit them to undertake further study of the science and practice of spatial science in one of two fields: Geographic Information Systems (GIS) or Surveying. The program provides students with sufficient knowledge of surveying, spatial information systems or urban and regional planning to be eligible to gain employment, certification and, where appropriate, registration as a Graduate Surveyor or GIS Spatial Scientist.

In addition, students obtain knowledge of the natural, legal, commercial, industrial and social environments in which they will function as professionals. The program instils in students the need for continuing professional development and gives them the ability to adapt to change.

Program objectives

A student who successfully completes the Bachelor of Spatial Science Technology should be able to apply:

- broad and coherent knowledge in the theories, concepts, methods and technologies in the areas of surveying and spatial science
- skills and knowledge of the analysis and evaluation of appropriate technologies, methods and processes to solve and complete a range of surveying and spatial science activities
- well-developed technical and cognitive skills to create innovative and sustainable solutions utilising cutting-edge technologies, supported by research to collect, store and manipulate spatial data
- knowledge and skills to autonomously apply well-informed judgements regarding specialised practices, theories and processes in their domain of knowledge
- well-developed communication skills to transmit and convey the necessary information and ideas to relevant stakeholders
- consistent application of academic norms and ethical standards in decision making when working collaboratively in a professional capacity
- knowledge of surveying or spatial information systems to sufficient depth to be eligible for employment, certification and, where appropriate, registration as a Graduate Surveyor or GIS Spatial Scientist.

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 07. Graduates at this level will have broad and coherent knowledge and skills for professional work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **65.6**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.

- English Language Proficiency requirements for Category 2.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Spatial Science Technology is a 24-unit program comprising Academic Courses plus Practice Courses.

Academic courses are one-unit courses and involve approximately 155 hours of student workload per unit.

Practice courses are zero-unit courses and each involves approximately 50 hours of student workload.

Required time limits

Students have a maximum of 8 years to complete this program.

Electives/Approved courses

Approved courses are part of the Academic program and students should select approved courses from a specified list of approved courses.

Practical experience

Work experience is desirable and encouraged but is not required for the completion of the Bachelor of Spatial Science Technology program. Students are encouraged to obtain work experience during vacation periods.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

Students 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 can articulate into the Bachelor of Spatial Science (Honours) program.

Exit points

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

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Spatial Science Technology program.

Geographic Information Systems Major recommended enrolment pattern

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.

Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

Major study: Geographic Information Systems (Major Study Code: 15405)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
GIS1402 Geographic Information Systems[£]	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment[$]	1	1				1,2		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
CSC1401 Foundation Programming[£]	1	2				1,2,3		
Practice courses Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Year 2, Semester 1								
Academic Courses								
ENV2201 Land Studies	2	1				1		
URP1001 Introduction to Urban and Regional Planning	2	1				1		
GIS3407 GIS Programming and Visualisation	2	1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
Year 2, Semester 2								
Approved Course (Select from the Approved Course list)	2	2				2		
URP2002 Local Government Planning Practice and Technology	2	2				2		
SVY3302 Property Valuation and Development	2	2				2		
GIS3406 Remote Sensing and Image Processing	2	2				2		
Practice Courses Year 2								
GPL2901 GIS and Planning Practice 1[£]			4	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS)

Major study: Geographic Information Systems (Major Study Code: 15405)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
GPL3902 GIS and Planning Practice 2[£]			5	3			M	Pre-requisite: (GIS1402 or URP2001) Pre-requisite or Co-requisite: GPL2901
Year 3, Semester 1								
Academic Courses								
SVY4309 Practice Management for Spatial Scientists	3	1				1		
SVY3202 Photogrammetry and Remote Sensing	3	1				1		
Approved Course (Select from the Approved Course list)	3	1				1		
CSC3400 Database Systems[£]	3	1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
Year 3, Semester 2								
GIS3008 Applications of GIS and Remote Sensing	3	2				2		Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
GIS2405 Spatial Analysis and Modelling	3	2				2		
GIS2407 Web Based Geographic Information System	3	2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
Approved Course (Select from the Approved Course list)	3	2				2		
Approved Courses (Select 3 courses from the following)								
CSC2406 Web Technology 1		2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
MKT1001 Marketing Fundamentals		1				1,2		Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
MGT1101 Human Capabilities for Business[£]		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
ACC1201 Data Insights and Financial Performance[£]		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
AGR2301 Agricultural Science		2				2		
LAW2107 Environmental Law[**]						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or

Major study: Geographic Information Systems (Major Study Code: 15405)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
REN3302 Sustainable Resource Use*		2				2		
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
URP4002 Urban and Regional Planning Theory		1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
URP2001 Planning Structures and Statutory Planning		1				1		
URP3201 Sustainable Urban Design and Development		2				2		

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

$ Unavailable online S2 2023

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

* On-campus mode is only available at Toowoomba.

Surveying Major recommended enrolment pattern (Toowoomba and Springfield campus)

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. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

Major study: Surveying (Major Study Code: 15406)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
GIS1402 Geographic Information Systems£	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1				1,2		

Major study: Surveying (Major Study Code: 15406)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 2								
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
GIS1401 Geographic Data Presentation	1	2				2		
SVY1104 Survey Computations A	1	2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
Practice Courses Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Year 2, Semester 1								
Academic Courses								
SVY2301 Automated Surveying Systems	2	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A	2	1				1		Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3202 Photogrammetry and Remote Sensing	2	1				1		
SVY2302 Mine Surveying	2	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSPT
Year 2, Semester 2								
Approved Course (Select from the Approved course list)	2	2				2		
SVY2303 Construction Surveying	2	2				2		Pre-requisite: SVY1104
ENG2002 Technology, Sustainability and Society	2	2				1,2,3		
Choose one of the following courses:								
SVY3304 Cadastral Surveying (Queensland)^^	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)^^						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS

Major study: Surveying (Major Study Code: 15406)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses Year 2								
SVY2902 Surveying and Spatial Science Practice 2£	2	1	3	3			M	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£	2	2	4	3			M	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
Year 3, Semester 1								
Academic Courses								
CIV2701 Road Design and Location	3	1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
Approved Course (Select from the Approved Course list)	3	1				1		
ENV2201 Land Studies	3	1				1		
SVY2105 Survey Computations B	3	1				1		Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
Year 3, Semester 2								
SVY3302 Property Valuation and Development	3	2				2		
SVY3400 Advanced Surveying	3	2				2		Pre-requisite: (SVY2106 and SVY2105) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSPT or MENS
URP3201 Sustainable Urban Design and Development	3	2				2		
SVY3107 Geodetic Surveying B	3	2				2		Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT
Practice Courses Year 3								
SVY3904 Surveying and Spatial Science Practice 4£			6	2,3			M	Pre-requisite: SVY2902 or SVY2903 and SVY3304 or SVY3306 and SVY3202
Approved Courses (Select 2 courses from the following)								
SVY4309 Practice Management for Spatial Scientists		1				1		
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
CIV2605 Construction Engineering		1				1		
SVY3304 Cadastral Surveying (Queensland)**		2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol

Major study: Surveying (Major Study Code: 15406)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)**						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
GIS3407 GIS Programming and Visualisation		1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT
URP4002 Urban and Regional Planning Theory		1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
CSC1401 Foundation Programming£		2		1,2,3				
SVY4304 Land and Cadastral Law^*		2				2		
GIS2405 Spatial Analysis and Modelling		2				2		
GIS3406 Remote Sensing and Image Processing		2				2		
URP1001 Introduction to Urban and Regional Planning		1				1		
URP2001 Planning Structures and Statutory Planning		1				1		
URP2002 Local Government Planning Practice and Technology		2				2		

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

$ Unavailable online S2 2023

^^ students should study the course appropriate to their intended jurisdiction of practice.

** The alternative to the previously completed Cadastral core course may be taken as an elective/approved course.

^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus

Bachelor of Construction (BCON) - BCon

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

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 Construction (Honours) which will be offered from S1 2014.

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	Toowoomba, 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:	4 years full-time, 8 years part-time or external	
Program articulation:	From: Associate Degree of Construction; Bachelor of Engineering Technology (Infrastructure Management)	

Contact us

Current students
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

Graduates of the Bachelor of Construction meet the Queensland Building and Construction Commission's technical qualification requirements to hold a Builder Open class of licence and a Builder Project Management Services licence subject to demonstrating the required level of industry experience.

Professional accreditation will be sought from Australian Institute of Building.

Program aims

The program aims to produce professional level graduates for the building industry who have a broad range of relevant technical skills and well developed skills in communication and team work.

The program is designed to capitalise on growing demand and its primary aims are to:

- enable graduates to attain a diverse range of skills and competence to successfully manage a wide range of construction projects
- develop ability to plan, monitor and control the technical, logistical, legal and financial aspects associated with building and construction projects
- take a leadership role in planning, managing and organising people and other resources on construction projects in the built environment.

Program objectives

At the completion of the program the graduate will be able to:

- apply building principles and methods
- prepare documentation for building development and construction

- liaise with other members of the building team, clients and other external stakeholders
- apply relevant legislation and technical standards in building work
- manage the human relations, resources, scheduling, quality control, environmental factors and social impacts involved in building projects.

Admission requirements

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

- have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in each of the following Queensland Senior Secondary School subjects: English . It is recommended that applicants should also have satisfactorily completed the subject: Mathematics B (Mathematics A is assumed)

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

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Construction is a 32 unit program consisting of Academic courses and Practice courses.

Academic courses are normally one-unit courses and 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 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:

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Studies	17	17	6	0
Major Study	15	15	up to 1	0
Total	32	32	up to 7	0

Program completion requirements

The Bachelor of Construction involves either four years of full-time study or eight years of part-time study. To be eligible for the award students must complete the program within a maximum period of six years full-time study or 10 years part-time study from the date of their initial enrolment. Students who undertake the program by a combination of external and full-time study must complete their studies within nine years from the date of their initial enrolment to be eligible for the award.

Required time limits

Full-time students have a maximum of six years to complete this program. Part-time students have a maximum of 10 years to complete this program.
A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Core courses

The courses that comprise the core studies program are shown in the following table:

Courses	Units
Academic Courses	
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENM1500 Introductory Engineering Mathematics	1
CMG1001 Introduction to Construction Management and the Built Environment	1
MEC1201 Engineering Materials	1
ENG1100 Introduction to Engineering Design	1
ENG1101	1
MGT1000	1
CMG2001 Job Organisation	1
ENG2002 Technology, Sustainability and Society	1
FIN1101 Corporate Finance	1
SVY1500 Spatial Science for Engineers	1
CIV2502 Structural and Building Technology	1
CMG3001 Building and Construction Procurement	1
CMG4001	1

ENG4110 Engineering Research Methodology	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
Practice Courses	
ENG1901 Engineering Practice 1	0
CIV3906 Civil Materials Practice	0
CMG4901 Construction Management Practice	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

Major studies

The Bachelor of Construction consists of a core component and a major study. The major study provides students with knowledge and skills in a specific discipline. The major studies currently available are:

- Civil
- Management.

Electives/Approved courses

Students are required to complete a number of electives in their Bachelor of Construction program.
In the Bachelor of Construction, students are not required to undertake the Elective courses until the third or fourth level of the program. This enables students enrolled in the second level of the program to discuss their choice of Electives with the Faculty of Health, Engineering and Sciences. The most popular choices of courses for Electives may thus be timetabled to allow students to attend in their fourth year of study. Appropriate Electives are shown in the tables in the Recommended Enrolment Pattern section. Students may undertake only one appropriate level five or level eight course from the Bachelor of Engineering or another Engineering and Built Environment program as an Elective with the approval of the Faculty of Health, Engineering and Sciences. The Faculty may approve a variation in Elective studies where the student can demonstrate that there is a sound academic argument for the change. Arguments based on timetable difficulties, quota problems etc. will not normally be entertained. Note however that students who wish to enrol in courses other than those listed must obtain the written approval of the Faculty prior to enrolling in the course if they want the course to count as credit towards their award.

Students should note that quota restrictions may preclude their enrolment in particular Elective study courses as students enrolling in these courses as part of their core or major studies will be given enrolment priority.

Practical experience

To be eligible to graduate from the Bachelor of Construction, students must obtain an aggregate of at least 80 days of suitable practical experience during their program. This experience may be in an architectural, engineering or building project management office. Students are required to keep a record of such experience. The student must meet all costs associated with the acquisition of practical experience to satisfy this requirement. The Record Book 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 80 days, will be determined by the Faculty.

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.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

External students are required to attend a number of residential schools during their program. These are associated with Practice courses and are normally conducted at the end of Semester 3 (February), or during the mid-semester recess in Semester 2 (September/October).

Students enrolled in the external offer of a Practice Course **must attend** the residential school for that course. In some cases students enrolled in the on-campus mode may also be required to attend the residential school. Students should only enrol in a Practice Course when they are able to attend the residential school for that course. Practice Courses **may not** be taken earlier than shown except with the permission of the Faculty of Health, Engineering and Sciences. In some cases students may enrol in two Practice Courses in one term so they can complete the two residential schools in a two-week period. The actual dates for each residential school are shown in the Residential School schedule in this Handbook.

Practice courses

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern in the following table. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.

Articulation

Students who have completed an Associate Diploma or Associate Degree program in Engineering or Construction at a Queensland university within the last five years are eligible to claim up to a maximum of 16 units of advanced standing in the BCON Bachelor of Construction program.

Exit points

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

Honours

The Bachelor of Construction may be awarded with Honours. The class of honours to be awarded to a student is dependent 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	**6.0**	**6.2**	**6.5**	**A**
Second Class Honours - Division A	**5.5**	**5.7**	**5.9**	**B**
Second Class Honours - Division B	**5.0**	**5.1**	**5.3**	**C**
Minimum number of courses required	**20**	**16**	**8**	

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

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.**

Civil Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Civil Major recommended enrolment pattern

Major study: Civil (Major Study Code: 16631)							
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	
Academic Courses							
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1			
ENM1500 Introductory Engineering Mathematics	1	1	1	1,2			Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or EN G1500 has been previously completed
MGT1101 Human Capabilities for Business	1	1	3	1,3			Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
ENG1101	1	1	2	1			
CMG1001 Introduction to Construction Management and the Built Environment<	1	2	1	2			
ENG2002 Technology, Sustainability and Society	1	2	1	1,2,3			
ENG1100 Introduction to Engineering Design	1	2	2	1			
ENG2102	1	2	2	2,3			
ENM1600 Engineering Mathematics	2	1	2	1,2			Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed

Major study: Civil (Major Study Code: 16631)							
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	
CIV1500 Applied Mechanics	2	1	3	1,3			Pre-requisite or Co-requisite: ENM1500 or ENM1600
CIV2605 Construction Engineering	2	1	4	1			
FIN1101 Corporate Finance	2	1	4	1,3			Enrolment is not permitted in FIN1101 if FIN1100 has been previously completed (excluding BBIZ 19395 Finance major stu dents)
CMG2001 Job Organisation	2	2	3	2			
CIV1501 Engineering Statics	2	2	3	2,3			Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or G CEN or GEPR
CIV2403 Geology and Geomechanics	2	2	4	2			Pre-requisite: CIV1501 or CIV1500 or Stu dents must be enrolled in one of the follow ing Programs: MENS or GCEN or GEPR
SVY1500 Spatial Science for Engineers	2	2	4	2			
MEC1201 Engineering Materials	3	1	5	1,2,3			
MEC2402 Stress Analysis	3	1	5	1			Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV2103 Hydraulics I	3	1	6	1			Pre-requisite: CIV1500 or CIV1501 or Stu dents must be enrolled in the following Pro gram: GCEN or GEPR
MGT2001 Risk Mitigation, Work Health and Safety	3	1	6	1			
CMG3001 Building and Construction Procurement	3	2	5	2			Pre-requisite: CMG1001 and CMG2001
CIV2502 Structural and Building Technology	3	2	5	2			
CIV2503 Structural Design I	3	2	6	2			Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students en rolled in one of the following: BETC Infras tructure Management major or BENS Infras tructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ENG4110 Engineering Research Methodology	3	2	7	2,3			
ENG3003 Engineering Management†	4	1	7	1,3			
CMG4001 <	4	1	7	1			
ENG4111 Research Project Part 1	4	1	8	1			Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their pro gram.
Elective (Select from the Electives List)*	4	1	8	1			
LAW1101	4	2	7	2			
Elective (Select from the Electives List)*	4	2	6	2,3			
ENG4112 Research Project Part 2	4	2	8	2			Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Elective (Select from the Electives List)*	4	2	8	2			

Major study: Civil (Major Study Code: 16631)							
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	
Practice Courses							
ENG1901 Engineering Practice 1	1	1	2	2,3			
CIV2901 Geology and Geomechanics Practice	2	2	4	3			Pre-requisite or Co-requisite: ENG1901 and CIV2403
CIV3906 Civil Materials Practice	2	1	5	3			Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
ENG3902 Professional Practice 1	3	2	7	2			Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
CMG4901 Construction Management Practice^	4	2	8	2			Pre-requisite: CMG4001 or CMG4003
ENG4903 Professional Practice 2	4	2	8	2			Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional#	4		8	1,3			
Electives (Select from the following)							
CIV2701 Road Design and Location		1		1			Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
CIV2702 Municipal Services		2		2			Pre-requisite: ENV2103 or ENV1101
CIV3403 Geotechnical Engineering		2		2			Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4004 Engineering Project and Operations Management‡				2,3			
ENG8104		1		1			
ENV2201 Land Studies		1		1			
MGT2002 Perspectives of Organisation		2		2,3			
MGT2007 Leadership				1			
MGT2203 Project Management Fundamentals		2		2,3			
MGT3100 ~		1		1			
SVY1102 Surveying A		1		1			
SVY1104 Survey Computations A		2		2			Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
SVY2303 Construction Surveying		2		2			Pre-requisite: SVY1104
URP3201 Sustainable Urban Design and Development		2	2				
CIV3506 **		1		1			

Footnotes

< Available at Springfield campus only in 2017.
† The semester 3 offering of this course is offered in odd numbered years only.
* Students permitted only one level 8 course as an elective
^ Residential School will be held at Springfield campus.
# On-campus students should enrol in the external mode.

‡ The semester 3 offering of this course is offered in even numbered years only.
~ Last offering 2019
** Not available on-campus at Springfield in 2017.

Management Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Management Major recommended enrolment pattern

Major study: Management (Major Study Code: 16425)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1	1	1				
ENM1500 Introductory Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
MGT1101 Human Capabilities for Business	1	1	3	1,3				Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
ENG1101	1	1	2	1				
CMG1001 Introduction to Construction Management and the Built Environment<	1	2	1	2				
ENG2002 Technology, Sustainability and Society	1	2	2	1,2,3				
ENG1100 Introduction to Engineering Design	1	2	1	2				
ENG2102	1	2	2	2,3				
ENM1600 Engineering Mathematics	2	1	2	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
CIV1500 Applied Mechanics	2	1	3	1,3				Pre-requisite or Co-requisite: ENM1500 or ENM1600
CIV2605 Construction Engineering	2	1	4	1				
FIN1101 Corporate Finance	2	1	4	1,3				Enrolment is not permitted in FIN1101 if FIN1100 has been previously completed (excluding BBIZ 19395 Finance major students)
CMG2001 Job Organisation	2	2	3	2				
CIV1501 Engineering Statics	2	2	3	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
LAW1101	2	2	4	2,3				
SVY1500 Spatial Science for Engineers	2	2	4	2				
MEC1201 Engineering Materials	3	1	5	1,2,3				
MGT2007 Leadership	3	1	5	1				
Elective (Select from the Electives List)*	3	1	6	1				
MGT2001 Risk Mitigation, Work Health and Safety	3	1	6	1				

Major study: Management (Major Study Code: 16425)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CMG3001 Building and Construction Procurement	3	2	5	2				Pre-requisite: CMG1001 and CMG2001
CIV2502 Structural and Building Technology	3	2	5	2				
MGT2002 Perspectives of Organisation	3	2	6	2,3				
ENG4110 Engineering Research Methodology	3	2	7	2				
ENG3003 Engineering Management†	4	1	7	1,3				
CMG4001 <	4	1	7	1				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Elective (Select from the Electives List)*	4	1	8	1				
MGT2203 Project Management Fundamentals	4	2	6	2,3				
ENG4004 Engineering Project and Operations Management‡	4		7	2,3				
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Elective (Select from the Electives List)*	4	2	8	2				
Practice courses								
ENG1901 Engineering Practice 1	1	1	2	2,3			C	
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
CIV3906 Civil Materials Practice	2	1	5	3			C	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
CMG4901 Construction Management Practice^	4	2	8	2			C	Pre-requisite: CMG4001 or CMG4003
ENG4903 Professional Practice 2	4	2	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412

Major study: Management (Major Study Code: 16425)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4909 Work Experience - Professional#	4		8	1,3				
Electives (Select from the following)								
CIV2503 Structural Design I		2		2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CIV2701 Road Design and Location		1		1				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
CIV2702 Municipal Services		2		2				Pre-requisite: ENV2103 or ENV1101
CIV2403 Geology and Geomechanics		2		2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
CIV3403 Geotechnical Engineering				2				Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3506 **		1		1				
ENG8104		1		1				
ENV2201 Land Studies		1		1				
ENV2103 Hydraulics I		1		1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
MEC2402 Stress Analysis		1		1				Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
SVY1102 Surveying A		1		1				
URP3201 Sustainable Urban Design and Development		2		2				
MGT3100 ~		1		1				

Footnotes

< Available at Springfield campus only in 2017.
* Students permitted only one level 8 course as an elective
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
^ Residential School will be held at Springfield campus.
# On-campus students should enrol in the external mode.
** Not available on-campus at Springfield in 2017.
~ Last offering 2019

Bachelor of Engineering (BENG) - BEng

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907332; External: 907335
Springfield campus: 927332

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

	On-campus	External
Start:	No new admissions	No new admissions
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:	4 years full-time, 8 years part-time or external	
Program articulation:	From: Associate Degree of Engineering; Bachelor of Engineering Technology	

Notes:

Please note that the Civil Engineering major is the only major that is available on-campus at Springfield.

Contact us

Current students
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

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

The Bachelor of Engineering 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 United States of America, Canada, Ireland, Hong Kong, New Zealand and South Africa.

Program aims

The Bachelor of Engineering provides students with the knowledge and skills that are necessary to commence practice as a professional engineer and to undertake further advanced level studies in engineering. Specifically the program provides students with a core of basic generic and technical skills, common to all branches of engineering, and then permits students to undertake an in depth study of either agricultural, civil, computer systems, electrical and electronic, environmental, instrumentation and control, mechanical, mechatronic, power engineering. In addition, students are equipped with a knowledge of the industrial and social environments in which they will function as professional engineers. The program also seeks to instill in students a capacity to communicate effectively and adapt to change.

The Bachelor of Engineering is primarily vocationally oriented. However, the program has been designed to identify students who have the capacity to undertake further study at an advanced level and to make an original contribution to engineering knowledge. These students are encouraged to undertake the course ENG8001 as one of their Elective courses. This, and the two Research Project courses, will assist them in achieving these goals.

Program objectives

The objectives of this program are:

- to enable students to acquire, and demonstrate that they possess, the specified graduate attributes and capabilities
- to enable students to acquire in-depth technical competence in one of the following fields: Agricultural Engineering; Civil Engineering; Computer Systems Engineering; Electrical and Electronic Engineering; Environmental Engineering; Instrumentation and Control Engineering; Mechanical Engineering; Mechatronic 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 graduate membership of Engineers Australia, and other appropriate professional bodies.

Admission requirements

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

- have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in each of the following Queensland Senior Secondary School subjects: English and Mathematics B. It is recommended that applicants should also have satisfactorily completed the subject: Physics

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

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Engineering is a 32 unit program consisting of Academic courses and Practice courses.

Academic courses are normally one-unit courses and 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 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:

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Studies	12	12	3	0
Major Study	20	20	3-5 depending upon the major	0
Total	32	32	3-8	0

Program completion requirements

The Bachelor of Engineering involves either four years of full-time study or eight years of part-time study. To be eligible for the award students must complete the program within a maximum period of six years full-time study or 10 years part-time study from the date of their initial enrolment. Some courses in the Agricultural Engineering major are not yet available in external mode. In that case, students may need to spend up to two terms full-time on-campus to complete those courses. The Instrumentation and Control Engineering major is designed for process technologists in industry who wish to upgrade their qualifications. As such, the program will normally be undertaken by external study. Students who undertake the program by a combination of external and full-time study must complete their studies within nine years from the date of their initial enrolment to be eligible for the award.

These modes are available in each major shown in the following table.

Major	On-Campus	External
Agricultural Engineering	Yes	Yes
Civil Engineering	Yes	Yes

Computer Systems Engineering	Yes	Yes
Electrical and Electronic Engineering	Yes	Yes
Environmental Engineering	Yes	Yes
Instrumentation and Control Engineering		Yes
Mechanical Engineering	Yes	Yes
Mechatronic Engineering	Yes	Yes
Power Engineering	Yes	Yes

Required time limits

Full-time students have a maximum of six years to complete this program. Part-time students have a maximum of 10 years to complete this program.
A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Core courses

The courses that comprise the core studies program are shown in the following table:

Courses	Units
Academic Courses	
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENG1101	1
ENG1100 Introduction to Engineering Design	1
ENG2002 Technology, Sustainability and Society	1
ENG2102	1
ENG3104 Engineering Simulations and Computations	1
ENG4110 Engineering Research Methodology	1
ENG3003 Engineering Management	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
ENM1600 Engineering Mathematics	1
ENM2600 Advanced Engineering Mathematics	1
Elective (Select from the Electives list)	1
Practice Courses	
ENG1901 Engineering Practice 1	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

Major studies

The Bachelor of Engineering consists of a core component and a series of major studies. All students must complete the core courses and one of the major studies. The major study provides students with knowledge and skills in a specific discipline. The major study areas in the UniSQ Bachelor of Engineering are:

- Agricultural Engineering
- Civil Engineering
- Computer Systems Engineering
- Electrical and Electronic Engineering

- Environmental Engineering
- Instrumentation and Control Engineering
- Mechanical Engineering
- Mechatronic Engineering
- Power Engineering

Electives/Approved courses

In the Bachelor of Engineering, students are not required to undertake the Elective courses until the third and fourth levels of the program. This enables students enrolled in the second level of the program to discuss their choice of Electives with their Faculty. The most popular choices of courses for Electives may thus be timetabled to allow students to attend in their third and fourth years of study. Appropriate Electives are shown in the tables in the Recommended Enrolment Pattern section. Students may undertake only one appropriate level five or level eight course from the Bachelor of Engineering or another Engineering and Built Environment program as an Elective with the approval of the Faculty of Health, Engineering and Sciences. The Faculty may approve a variation in Elective studies where the student can demonstrate that there is a sound academic argument for the change. Arguments based on timetable difficulties, quota problems etc. will not normally be entertained. Note however that students who wish to enrol in courses other than those listed must obtain the written approval from the Faculty of Health, Engineering and Sciences prior to enrolling in the course if they want the course to count as credit towards their award.

Students should note that quota restrictions may preclude their enrolment in particular Elective study courses as students enrolling in these courses as part of their core or major studies will be given enrolment priority.

Practical experience

To be eligible to graduate from the Bachelor of Engineering, 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.

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.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

Students enrolled in the external offer of a Practice Course **must attend** the residential school for that course. In some cases students enrolled in the on-campus mode may also be required to attend the residential school. Students should only enrol in a Practice Course when they are able to attend the residential school for that course. Practice courses **may not** be taken earlier than shown except with the permission of the Faculty of Health, Engineering and Sciences. In some cases students may enrol in two Practice courses in one term so they can complete the two residential schools in a two-week period. The actual dates for each residential school are shown in the Residential School schedule in this Handbook.

Safety boots are compulsory in engineering laboratories for several of the Practice courses and are strongly recommended for all other Practice courses.

Practice courses

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern in the following table. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.
ENG3902 Professional Practice 1 is to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1, students must study ENG4111 Research Project Part 1 and ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Elective courses

Elective courses are included in the list of Academic courses. Students should select these courses from the Electives listing.

Related programs

Students may combine the Bachelor of Engineering with a program from another area of study. Currently the following combined programs have been accredited by the University and Engineers Australia:

-
-
- .

Exit points

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

Honours

The Bachelor of Engineering may be awarded with Honours. 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	**6.0**	**6.2**	**6.5**	**A**
Second Class Honours - Division A	**5.5**	**5.7**	**5.9**	**B**
Second Class Honours - Division B	**5.0**	**5.1**	**5.3**	**C**
Minimum number of courses required	**20**	**16**	**8**	

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

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.**

Agricultural Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

The course AGR2902 Field Practice may involve overnight field trips for which each student will be responsible for their own accommodation costs. This course is not offered in the on-campus mode. On-campus students should enrol in the external mode.

Major study: Agricultural Engineering (Major Study Code: 12013)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
ENG1101	1	1	2	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				

Major study: Agricultural Engineering (Major Study Code: 12013)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
SVY1500 Spatial Science for Engineers	1	2	2	2				
AGR2302 Agricultural Machinery	2	1	3	1				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1	4	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Pro gram: GCEN or GEPR
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG2002 Technology, Sustainability and Society	2	2	3	1,2,3				
ENG3104 Engineering Simulations and Computations	2	2	3	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
Elective (Select from the Electives list)	2	2	4	2				
CIV2403 Geology and Geomechanics	2	2	4	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
AGR3303 Agricultural Materials and Post-Harvest Technologies	3	1	5	1				
AGR3304 Soil Science	3	1	5	1				
ENV3104 Hydraulics II	3	1	6	1				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
AGR3305 Precision and Smart Technologies in Agriculture	3	1	6	1				
AGR2301 Agricultural Science	3	2	5	2				
ENG4110 Engineering Research Methodology	3	2	7	2				
MEC2401 Dynamics I	3	2	5	2				Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
ENV3105 Hydrology	3	2	6	2				
ENV4106 Irrigation Science	4	2	7	2				Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.

Major study: Agricultural Engineering (Major Study Code: 12013)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG3003 Engineering Management†	4	1	7	1,3				
AGR4305 Agricultural Soil Mechanics	4	1	7	1				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Elective (Select from the Electives list)	4	1	8	1				
ELE2103 Linear Systems and Control	4	2	6	2				
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Elective (Select from the Electives list)	4	2	8	2				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice	2		3	3			C	
AGR3903 Soil and Water Engineering Practice 2^	3		6	2			C	
AGR3905 Agricultural Engineering Practice			6	3			C	
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
CIV3403 Geotechnical Engineering		2		2				Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or

Major study: Agricultural Engineering (Major Study Code: 12013)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								METC or MEPR or GCNS or GDNS or MENS
ELE1301 Computer Engineering		1		1				
ENG4004 Engineering Project and Operations Management‡				2,3				
MEC4406 Robotics and Machine Vision		2		2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
ENV2201 Land Studies		1		1				
ENV4107 Water Resources Engineering		2		2				Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2		2				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1		1,3				
MEC2202 Manufacturing Processes		1		1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2301 Design of Machine Elements		2		2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC3203 Materials Technology		1		1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3302		1		1				
MEC3303 Mechanical and Mechatronic System Design		2		2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
REN1201 Environmental Studies		1		1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.

^ On-campus students should enrol in the external mode.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Civil Engineering Major recommended enrolment pattern (Toowoomba and Springfield Campus)

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 specification to ascertain if a course is offered in another term.

Elective courses are included in the list of Academic courses. Students should select these courses from the Electives listing.

Major study: Civil Engineering (Major Study Code: 12014)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
ENG1101	1	1	2	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				
SVY1500 Spatial Science for Engineers	1	2	2	2				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1	3	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG2002 Technology, Sustainability and Society	2	1	4	1,2,3				
ENG3104 Engineering Simulations and Computations	2	2	3	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS

Major study: Civil Engineering (Major Study Code: 12014)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Elective (Select from the Electives list)	2	2	3	2				
CIV2403 Geology and Geomechanics	2	2	4	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2503 Structural Design I	2	2	4	2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ENV3104 Hydraulics II	3	1	5	1				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3505	3	1	5	1				
CIV3506 #	3	1	6	1				
CIV2605 Construction Engineering	3	1	6	1				
ENG4110 Engineering Research Methodology	3	2	7	2				
CIV3403 Geotechnical Engineering	3	2	5	2				Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3105 Hydrology	3	2	6	2				
CIV3703 Transport Engineering	3	2	6	2				
CIV4508 Structural Design II	4	1	7	1				Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†	4	1	7	1,3				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
Elective (Select from the Electives list)	4	1	8	1				
Elective (Select from the Electives list)	4	2	5	2				
ENV4203 Public Health Engineering	4	2	7	2				Pre-requisite: ENV1101 or ENV2103 or Students must

Major study: Civil Engineering (Major Study Code: 12014)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Elective (Select from the Electives list)	4	2	8	2				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101
CIV3906 Civil Materials Practice	3	1	5	3			C	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH
CIV3907 Civil Systems Practice^			6	3			C	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: MENS or MEPR
CIV4908 Civil Design Practice^			8	2			C	Co-requisite: CIV4508 or Students must be enrolled in the following Program: MEPR or MENS
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
AGR3304 Soil Science		1		1				
CIV3603 Construction Methods				2				
ENG4004 Engineering Project and Operations Management‡				2,3				
ENV2201 Land Studies		1		1				

Major study: Civil Engineering (Major Study Code: 12014)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV4107 Water Resources Engineering		2		2				Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1		1,3				
REN1201 Environmental Studies		1		1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SVY1104 Survey Computations A		2		2				Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2		2				
Either								
CIV8802 Advanced Prestressed Concrete >						2		
or								
CIV8803						1		

Footnotes

Not available on-campus at Springfield in 2017.
† The semester 3 offering of this course is offered in odd numbered years only.
^ On-campus students should enrol in the external mode.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
> Offered Odd Years Only

Computer Systems Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

All students granted exemption from ELE1801 are strongly advised to purchase the ELE1801 study guide from the UniSQ Bookshop and work through this prior to attempting courses for which ELE1801 is an enrolment requirement.

Major study: Computer Systems Engineering (Major Study Code: 12017)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
CSC1401 Foundation Programming£	1	1	1	1,2				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1101	1	1	2	1,2				
ELE1301 Computer Engineering	1	1	2	1				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
CSC2402 Object-Oriented Programming in C++	2	1	3	1				Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
ELE2103 Linear Systems and Control	2	2	3	2				
ENG1100 Introduction to Engineering Design	2	2	4	1,2				
MAT1101 Discrete Mathematics for Computing	2	1	4	1				
ENG3104 Engineering Simulations and Computations	2	2	4	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
Elective (Select from the Electives list)	2	2	4	2				
ENG2002 Technology, Sustainability and Society	3	1	5	1,2,3				
ELE2601 Telecommunications Principles	3	1	5	1				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE2504 Electronic Design and Analysis	3	2	5	2				Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR

Major study: Computer Systems Engineering (Major Study Code: 12017)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3307	3	2	5	2				
ELE3105 Computer Controlled Systems	3	1	6	1				Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3305 Computer Systems and Communications Protocols	3	1	6	1				
ENG4110 Engineering Research Methodology	3	2	7	2				
ELE3107 Signal Processing	3	2	6	2				
CSC2401 Algorithms and Data Structures	4	2	7	2				Pre-requisite: CSC2402 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
Elective (Select from the Electives list)	4	1	7	1				
Elective (Select from the Electives list)	4	2	6	2				
CSC2408 Software Development Tools	4	1,2	7	1,2				Pre-requisite: CSC1401
ENG3003 Engineering Management†	4	1	8	1,3				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
ENG4004 Engineering Project and Operations Management‡	4		8	2,3				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	2	2	4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in

Major study: Computer Systems Engineering (Major Study Code: 12017)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2	6	2			C	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
CSC3403 Comparative Programming Languages		1		1				Pre-req: CSC2408; and Pre-req or Co-req: CSC2402; or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT Enrolment is not permitted in CSC3403 if CIS3001 has been previously completed
ELE3506 Electronic Measurement		2		2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS
ELE4402				2				
ELE4607 Advanced Digital Communications		1		1				Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
MEC4406 Robotics and Machine Vision		2		2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol

Major study: Computer Systems Engineering (Major Study Code: 12017)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MENS or GCEN

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

† The semester 3 offering of this course is offered in odd numbered years only.

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

* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.

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

Electrical and Electronic Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Students who have been granted an exemption from ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study guide from the UniSQ Bookshop and work through this prior to attempting courses for which ELE1801 is an enrolment requirement.

Major study: Electrical and Electronic Engineering (Major Study Code: 12018)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
MEC1201 Engineering Materials	1	1	1	1,2,3				
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ENG1101	1	1	2	1,2				
ELE1301 Computer Engineering	1	1	2	1				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
Elective (Select from the Electives list)	2	2	3	2				
ELE2103 Linear Systems and Control	2	2	3	2				
ENG1100 Introduction to Engineering Design	2	1	4	1,2				
ELE2601 Telecommunications Principles	2	1	4	1				Pre-requisite: (ELE1502 and ELE1801) or Students must

Major study: Electrical and Electronic Engineering (Major Study Code: 12018)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ENG3104 Engineering Simulations and Computations	2	2	4	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ELE2504 Electronic Design and Analysis	2	2	4	2				Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ENG2002 Technology, Sustainability and Society	3	1	5	1,2,3				
ELE3803 Electrical Plant	3	1	5	1				Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3506 Electronic Measurement	3	2	5	2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
ELE3805 Power Electronics Principles and Applications	3	2	5	2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3305 Computer Systems and Communications Protocols	3	1	6	1				
ELE3105 Computer Controlled Systems	3	1	6	1				Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ENG4110 Engineering Research Methodology	3	2	6	2				
ELE3107 Signal Processing	3	2	6	2				
ELE4605 Fields and Waves	4	1	7	1				Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the fol lowing Programs: MEPR or MENS or GCNS or GDNS
Elective (Select from the Electives list)	4	1	7	1				
ELE4606 Communication Systems	4	2	7	2				Pre-requisite: (ELE2504 and ELE2601) or Students must

Major study: Electrical and Electronic Engineering (Major Study Code: 12018)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
Elective (Select from the Electives list)	4	2	7	2				
ENG3003 Engineering Management†	4	1	8	1,3				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
ENG4004 Engineering Project and Operations Management‡	4		8	2,3				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	2	2	4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2	6	2			C	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or Students must be enrolled in one of the following Programs: MENS or MEPR
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in:

Major study: Electrical and Electronic Engineering (Major Study Code: 12018)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
ELE2704 Electricity Supply Systems		2		2				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE3307		2		2				
ELE3807		1		1				
ELE4607 Advanced Digital Communications		1		1				Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
MEC4406 Robotics and Machine Vision		2		2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ELE3804 Power Systems Protection		1		1				

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
^ On-campus students should enrol in the external mode.

Environmental Engineering Major recommended enrolment

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 specification to ascertain if a course is offered in another term.

The course AGR2902 Field Practice may involve overnight field trips for which each student will be responsible for their own accommodation costs. This course is not offered in the on-campus mode. On-campus students should enrol in the external mode.

Major study: Environmental Engineering (Major Study Code: 12015)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				

Major study: Environmental Engineering (Major Study Code: 12015)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	2	1	1,2				
ENG1101	1	1	2	1,2				
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	1	2	1,2,3				
ENG2102	1	2	2	2,3				
SVY1500 Spatial Science for Engineers	1	2	2	2				
REN1201 Environmental Studies	2	1	3	1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1	4	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Elective (Select from the Electives list)	2	2	3	2				
ENG3104 Engineering Simulations and Computations	2	2	3	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
CIV2403 Geology and Geomechanics	2	2	4	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
AGR2301 Agricultural Science	2	2	4	2				
AGR3304 Soil Science	3	1	5	1				
ENG2002 Technology, Sustainability and Society	3	2	5	1,2,3				
ENV3104 Hydraulics II	3	1	5	1				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†	3	1	6	1,3				
Elective (Select from the Electives list)	3	1	6	1				

Major study: Environmental Engineering (Major Study Code: 12015)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4110 Engineering Research Methodology	3	2	7	2				
ENV3105 Hydrology	3	2	6	2				
ENV4203 Public Health Engineering	3	2	6	2				Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology	4	1	7	1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
Elective (Select from the Electives list)	4	1	7	1				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Elective (Select from the Electives list)	4	1	8	1				
ECO8012 #	4		5			2		
ENV4106 Irrigation Science	4	2	7	2				Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4107 Water Resources Engineering	4	2	8	2				Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
CIV2901 Geology and Geomechanics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2	4	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice			5	3			C	
AGR3903 Soil and Water Engineering Practice 2^	3		6	2			C	

Major study: Environmental Engineering (Major Study Code: 12015)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV3904 Environmental Engineering Practice^	3		6	3			C	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
AGR3305 Precision and Smart Technologies in Agriculture				1				
CLI1110 Weather and Climate		1				1		
CHE1110 Chemistry 1		1		1				
CHE2120 Chemistry 2		2		2				Pre-requisite: CHE1110
CIV3403 Geotechnical Engineering		2		2				Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3703 Transport Engineering		2		2				
ECO1002 Market Behaviour		1		1,2,3				Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
ENG4004 Engineering Project and Operations Management‡				2,3				
ENV5205 Solid and Liquid Waste Treatment		1		1				
GIS1402 Geographic Information Systems£		1		1,3				
LAW2107 Environmental Law**		1				1		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
MAT2200 Operations Research 1		2				2		Pre-requisite: MAT1102 or ENM1600 or equivalent or approval from the examiner. Enrolment is not permitted in

Major study: Environmental Engineering (Major Study Code: 12015)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								MAT2200 if MAT1200 has been previously completed.
URP3201 Sustainable Urban Design and Development		2		2				
SVY3202 Photogrammetry and Remote Sensing		1		1				

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.
# ECO8012 is not offered in the on-campus mode. On-campus students should enrol in the online mode of this course.
^ On-campus students should enrol in the external mode.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
‡ The semester 3 offering of this course is offered in even numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
** Springfield campus only

Instrumentation and Control Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Students who have been granted an exemption from ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study guide from the UniSQ Bookshop and work through this prior to attempting courses for which ELE1801 is an enrolment requirement.

Major study: Instrumentation and Control Engineering (Major Study Code: 12019)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications			1	1,2				
ENM1600 Engineering Mathematics			1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1801 Electrical Technology			1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design			1	1,2				
ENG1101			2	1,2				
ELE1301 Computer Engineering			2	1				
ENG2102			2	2,3				
ELE1502 Electronic Circuits			2	2				
ENM2600 Advanced Engineering Mathematics			3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design			3	1				Pre-requisite: ELE1301
Elective (Select from the Electives list)			3	2				
ELE2103 Linear Systems and Control			3	2				

Major study: Instrumentation and Control Engineering (Major Study Code: 12019)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2601 Telecommunications Principles			4	1				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
MEC2101			4	1				
ELE2504 Electronic Design and Analysis			4	2				Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3307			4	2				
ENG2002 Technology, Sustainability and Society			5	1,2,3				
ELE3803 Electrical Plant			5	1				Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3506 Electronic Measurement			5	2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
ENG3104 Engineering Simulations and Computations			5	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
MEC3102			6	1				
ELE3105 Computer Controlled Systems			6	1				Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
MEC1201 Engineering Materials			6	1,2,3				
MEC4406 Robotics and Machine Vision			6	2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
ELE4109 Measurement Science and Instrument Engineering>			7	1				
MEC2202 Manufacturing Processes			7	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
ENG4110 Engineering Research Methodology			7	2				
Elective (Select from the Electives list)			7	2				

Major study: Instrumentation and Control Engineering (Major Study Code: 12019)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG3003 Engineering Management†			8	1,3				
ENG4111 Research Project Part 1			8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
ENG4112 Research Project Part 2			8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
ENG4004 Engineering Project and Operations Management‡			8	2,3				
Practice Courses								
ENG1901 Engineering Practice 1			1	2,3			C	
ELE1911 Electrical and Electronic Practice A			2	3			C	
ELE2912 Electrical and Electronic Practice B			3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C			4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE3914 Electrical and Electronic Practice D			5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
MEC3905 Mechatronic Practice			6	2			C	
ENG3902 Professional Practice 1			7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*			8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional			8	1,3				

Major study: Instrumentation and Control Engineering (Major Study Code: 12019)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Electives (Select from the following)								
CIV1501 Engineering Statics				2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
ELE3107 Signal Processing				2				
ELE3305 Computer Systems and Communications Protocols				1				
ELE3805 Power Electronics Principles and Applications				2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3807				1				
MEC3204 Production Engineering				2				
MEC4103				1				
ELE3804 Power Systems Protection				1				

Footnotes

> Offered Odd Years Only
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.

Mechanical Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Mechanical Engineering (Major Study Code: 12021)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ENG1101	1	1	1	1,2				
ENM1600 Engineering Mathematics	1	1	2	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1100 Introduction to Engineering Design	1	1	2	1,2				
MEC1201 Engineering Materials	1	2	1	1,2,3				
ENG2102	1	2	1	2,3				
CIV1501 Engineering Statics	1	2	2	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Major study: Mechanical Engineering (Major Study Code: 12021)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC2304 Solid Modelling	1	2	2	2				
MEC2101	2	1	3	1				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG2002 Technology, Sustainability and Society	2	1	4	1,2,3				
ENG3104 Engineering Simulations and Computations	2	2	3	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
Elective (Select from the Electives list)	2	2	3	2				
MEC2401 Dynamics I	2	2	4	2				Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2301 Design of Machine Elements	2	2	4	2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC3203 Materials Technology	3	1	5	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC2202 Manufacturing Processes	3	1	5	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC3102	3	1	6	1				
MEC3302	3	1	6	1				
ENG4110 Engineering Research Methodology	3	2	7	2				
MEC3303 Mechanical and Mechatronic System Design	3	2	5	2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
ELE1801 Electrical Technology	3	2	6	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC3204 Production Engineering	3	2	6	2				

Major study: Mechanical Engineering (Major Study Code: 12021)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC4103	4	1	7	1				
ENG3003 Engineering Management†	4	1	7	1,3				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
Elective (Select from the Electives list)	4	2	5	2,3				
Elective (Select from the Electives list)	4	1	8	1				
MEC3403	4	2	7	2				
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Elective (Select from the Electives list)	4	2	8	2				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	2	2,3			C	
MEC2901 Mechanical Practice 1	2	1	3	3			C	
MEC2902 Mechanical Practice 2	2	1	4	1			C	
MEC3903 Mechanical Practice 3	3	2	5	2			C	
MEC3904 Mechanical Practice 4	4	2	6	2			C	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the following Programs: GDNS or MENS or MEPR
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
AGR2302 Agricultural Machinery		1		1				
CIV2503 Structural Design I		2		2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and

Major study: Mechanical Engineering (Major Study Code: 12021)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
ELE3105 Computer Controlled Systems		1		1				Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
MEC4406 Robotics and Machine Vision		2		2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC4104 Renewable Energy Technology		1		1				Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
ENG4004 Engineering Project and Operations Management‡				2,3				
ELE2103 Linear Systems and Control		2		2				
CIV8803						1		

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
^ On-campus students should enrol in the external mode.
‡ The semester 3 offering of this course is offered in even numbered years only.

Mechatronic Engineering Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Mechatronic Engineering (Major Study Code: 12022)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1101	1	1	1	1,2				
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	2	1,2				
ENG1100 Introduction to Engineering Design	1	1	2	1,2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2102	1	2	1	2,3				
CIV1501 Engineering Statics	1	2	2	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling	1	2	2	2				
ELE1301 Computer Engineering	2	1	3	1				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
MEC2402 Stress Analysis	2	1	4	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC1201 Engineering Materials	2	1	4	1,2,3				
ENG3104 Engineering Simulations and Computations	2	2	3	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
Elective (Select from the Electives list)	2	2	3	2				
MEC2301 Design of Machine Elements	2	2	4	2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2401 Dynamics I	2	2	4	2				Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or

Major study: Mechatronic Engineering (Major Study Code: 12022)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								GCNS or METC or MEPR or MENS or GEPR
ENG2002 Technology, Sustainability and Society	3	1	5	1,2,3				
MEC3302	3	1	5	1				
MEC2202 Manufacturing Processes	3	1	6	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
Elective (Select from Electives list)	3	1	6	1				
ENG4110 Engineering Research Methodology	3	2	7	2				
ELE1502 Electronic Circuits	3	2	5	2				
ELE2103 Linear Systems and Control	3	2	6	2				
MEC3303 Mechanical and Mechatronic System Design	3	2	6	2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
ENG3003 Engineering Management†	4	1	7	1,3				
ELE2303 Embedded Systems Design	4	1	7	1				Pre-requisite: ELE1301
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Elective (Select from the Electives list)	4	1	8	1				
Elective (Select from the Electives list)	4	2	5	2				
ELE2504 Electronic Design and Analysis	4	2	7	2				Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
MEC4406 Robotics and Machine Vision	4	2	8	2				Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	2	2,3			C	
ELE1911 Electrical and Electronic Practice A#	1	2	5	3			C	

Major study: Mechatronic Engineering (Major Study Code: 12022)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC2901 Mechanical Practice 1	3	1	4	3			C	
MEC2902 Mechanical Practice 2	2	1	5	1			C	
MEC3905 Mechatronic Practice^	3		6	2			C	
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
ELE3105 Computer Controlled Systems		1		1				Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ENG4004 Engineering Project and Operations Management‡				2,3				
ELE3305 Computer Systems and Communications Protocols		1		1				
ELE3506 Electronic Measurement		2		2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
MEC2101		1		1				
MEC3102		1		1				
MEC3203 Materials Technology		1		1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3204 Production Engineering		2		2				
MEC3403		2		2				
MEC4104 Renewable Energy Technology		1		1				Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.

On-campus students should not be confused by the recommended pre/co-requisites for this course and should enrol in Year 1 Semester 1. This Practice course, comprising a number of modules, is undertaken throughout the program. These modules will be undertaken in combination with the relevant academic course work in the prescribed semester.

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

* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.

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

Power Engineering Major recommended enrolment pattern

Students who have been granted an exemption from ELE1801 Electrical Technology are strongly advised to purchase the ELE1801 study guide from the UniSQ Bookshop and work through this prior to attempting courses for which ELE1801 is an enrolment requirement.

Major study: Power Engineering (Major Study Code:15932)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
MEC1201 Engineering Materials	1	1	1	1,2,3				
ENM1600 Engineering Mathematics	1	1	2	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
ELE1801 Electrical Technology	1	2	1	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1101	1	1	2	1,2				
ELE1301 Computer Engineering	1	1	2	1				
ENG2102	1	2	2	2,3				
ELE1502 Electronic Circuits	1	2	2	2				
ENM2600 Advanced Engineering Mathematics	2	1	3	1				Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1	3	1				Pre-requisite: ELE1301
Elective (Select from the Electives list)	2	2	3	2				
ELE2103 Linear Systems and Control	2	2	3	2				
ENG1100 Introduction to Engineering Design	2	1	4	1,2				
Elective (Select from the Electives list)	2	1	4	1				
ENG3104 Engineering Simulations and Computations	2	2	4	2				Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
Elective (Select from the Electives list)	2	2	4	2				
ENG2002 Technology, Sustainability and Society	3	1	5	1,2,3				
ELE3803 Electrical Plant	3	1	5	1				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR

Major study: Power Engineering (Major Study Code:15932)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2504 Electronic Design and Analysis	3	2	6	2				Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3805 Power Electronics Principles and Applications	3	2	5	2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3305 Computer Systems and Communications Protocols	3	1	5	1				
ELE3105 Computer Controlled Systems	3	1	6	1				Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ENG4110 Engineering Research Methodology	3	2	7	2				
Elective (Select from the Electives list)	3	2	6	1				
ELE3807	4	1	7	1				
ELE3804 Power Systems Protection	4	1	7	1				
ENG3003 Engineering Management†	4	1	8	1,3				
ENG4111 Research Project Part 1	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
ELE2704 Electricity Supply Systems	4	2	7	2				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
Elective (Select from the Electives list)	4	2	6	2				
ENG4112 Research Project Part 2	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
ENG4004 Engineering Project and Operations Management‡	4		8	2,3				
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C	
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C	

Major study: Power Engineering (Major Study Code:15932)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C	2	2	4	2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2	6	2			C	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2*	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional^	4		8	1,3				
Electives (Select from the following)								
CIV2605 Construction Engineering		1		1				
CIV2403 Geology and Geomechanics		2		2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the follow ing Programs: MENS or G CEN or GEPR
GIS1401 Geographic Data Presentation		2		2				
GIS1402 Geographic Information Systems£		1		1,3				
ENV2201 Land Studies		1		1				
ELE3307		2		2				
ELE3107 Signal Processing		2		2				
CIV1501 Engineering Statics		2		2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Major study: Power Engineering (Major Study Code:15932)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC2106 Introduction to Thermofluids		2		2				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC4104 Renewable Energy Technology>		1		1				Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
* Students need to enrol in ENG4909 Work Experience - Professional to record their relevant work experience.
^ On-campus students should enrol in the external mode.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
> Students wishing to study MEC4104 Renewable Energy Technology should study CIV1501 Engineering Statics as their second Elective.

Bachelor of Spatial Science (BSPS) - BSpSc

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907222; External: 907225

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 Spatial Science (Honours) **which will be offered from S1 2014.**

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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:	4 years full-time, 8 years part-time or external	
Program articulation:	From: Associate Degree of Spatial Science; Bachelor of Spatial Science Technology To: ; Master of Spatial Science Technology	

Contact us

Current students
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 Bachelor of Spatial Science (Surveying) is fully accredited by the Surveyors Board of Queensland and is recognised in every Australian state and in New Zealand through reciprocal arrangements. The degree, together with relevant industry experience, enables registration and/or licensing as a professional surveyor with the Boards of Surveyors in Australia and New Zealand.

Provisional accreditation of the Bachelor of Spatial Science (Urban and Regional Planning will be sought from the Planning Institute of Australia during 2013.

Graduates from the Bachelor of Spatial Science are eligible to apply for membership with the Surveying and Spatial Science Institute Australia

Program aims

The Bachelor of Spatial Science program provides students with the educational requirements to become a professional spatial scientist and the ability to undertake postgraduate studies. The program equips students with a core of basic theoretical, scientific, analytical, managerial, professional, research and communication skills that will permit them to undertake an in-depth study of the fundamental science and practice of spatial science in one of three fields: Geographic Information Systems (GIS),Surveying or Urban and Regional Planning.

In addition, students obtain knowledge of the natural, legal, commercial, industrial and social environments in which they will function as professionals. The program instils in students the need for continuing professional development and gives them the ability to adapt to change.

The program is designed to identify, and award honours to, students who have the capacity to undertake study at an advanced level and to make an original contribution to the fundamental science and practice of spatial science. The award of honours will be determined by academic performance and is normally based on a student's grade point average (GPA).

Program objectives

A student who successfully completes the Bachelor of Spatial Science should be able to demonstrate:

- a broad knowledge of basic scientific and technical skills
- a high level of computer literacy skills appropriate to their field of study
- a high level of written and oral communication skills
- a capacity for analysis, evaluation and synthesis
- an understanding of, and ability to undertake, the processes required to collect, store, and manipulate a variety of spatial data
- a capacity to adapt to change and to apply innovation
- an understanding of the natural, social, professional, industrial and technical environments in which they will practice
- a knowledge of professional journals and other information sources related to the spatial science industry, the skills required to access information from those sources, and an aptitude to undertake further learning and study
- an ability to undertake applied research in a field of the spatial science discipline
- a knowledge of the financial and management principles and practices that are used to manage a professional office
- a knowledge of surveying, spatial information systems or urban and regional planning of sufficient depth to gain employment, certification and, where appropriate, registration as a Professional Surveyor, Spatial Scientist or Planner.

Admission requirements

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

- Geographic Information Systems and Surveying majors: have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in each of the following Queensland Senior Secondary School subjects: English and Mathematics B. It is recommended that applicants should also have satisfactorily completed the subject: Physics

- Urban and Regional Planning Major: have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in each of the following Queensland Senior Secondary subjects: English and Mathematics A.

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

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Spatial Science is a 32-unit program consisting of Academic courses and Practice courses.

Academic courses are normally one-unit courses and 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 major study. The 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.

Program completion requirements

The Bachelor of Spatial Science Program normally involves four years of full-time study or eight years of part-time study.

Students must complete the program within a maximum period of six years of full-time study, or 12 years of part-time study, from the date of their initial enrolment. To graduate from a particular major students must successfully complete all of the core courses plus the specialist and Practice courses in that major, including the required number of Electives.

Required time limits

Full-time students have a maximum of six years to complete this program. Part-time students have a maximum of 12 years to complete this program.

A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Practical experience

Practical experience is desirable and encouraged but is not required for the completion of the Bachelor of Spatial Science program. Students are encouraged to obtain practical experience during vacation periods.

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.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

External students are required to attend a number of residential schools during their program. These are associated with Practice courses and are normally conducted at the end of Semester 3 (February), or during the mid-semester recess in Semester 2 (September/October).

Students enrolled in the external offer of a Practice Course **must attend** the residential school for that course. In some cases students enrolled in the on-campus mode may also be required to attend the residential school. Students should only enrol in a Practice Course when they are able to attend the residential school for that course. Practice courses **may not** be taken earlier than shown except with the permission of the Faculty of Health, Engineering and Sciences. In some cases students may enrol in two Practice courses in one term so they can complete the two residential schools in a two-week period. The actual dates for each residential school are shown in the Residential School schedule in this Handbook.

Safety boots are compulsory in engineering laboratories for several of the Practice courses and are strongly recommended for all other Practice courses.

Practice courses

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern in the following table. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.

Elective courses

Elective courses are included in the list of Academic courses. Students should select these courses from the Electives list. Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an Elective with the approval of the Faculty of Health, Engineering and Sciences.

Articulation

Graduates of an Associate Degree in Spatial Science majoring in Surveying or GIS, would normally be eligible for up to 16 units of credit towards the Bachelor of Spatial Science Technology within the same field. Similarly, Bachelor of Spatial Science Technology graduates would normally be eligible for up to 24 units of credit towards the Bachelor of Spatial Science degree within the same field. Graduates of an Associate Degree in Spatial Science majoring in Urban and Regional Planning would normally be eligible for up to 16 courses of credit towards the Bachelor of Spatial Science within the same field.

Students who have completed an associate degree or certificate program in surveying more than five years ago are eligible to claim advanced standing. The number of units of advanced standing granted will depend upon the nature and currency of the studies undertaken, and on the major study undertaken.

The programs in Surveying, Geographic Information Systems and Urban and Regional Planning also articulate to and from each other and enable students to move between Surveying, Geographic Information Systems and Regional Planning degrees, whilst still retaining a significant amount of credit.

Prospective students who wish to upgrade an existing qualification should contact the Faculty to obtain information about likely exemptions and recommended enrolment patterns for their upgrade program.

Exit points

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

Honours

The Bachelor of Spatial Science may be awarded with Honours. The class of honours to be awarded to a student is dependent 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	**6.0**	**6.2**	**6.5**	**A**
Second Class Honours - Division A	**5.5**	**5.7**	**5.9**	**B**
Second Class Honours - Division B	**5.0**	**5.1**	**5.3**	**C**
Minimum number of courses required	**20**	**16**	**8**	

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.

Geographic Information Systems Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
GIS1402 Geographic Information Systems£	1	1	1	1,3				
SVY1102 Surveying A	1	1	2	1				
ENG1101	1	1	2	1,2				
GIS1401 Geographic Data Presentation	1	2	1	2				
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
SVY1110 Introduction to Global Positioning System	1	2	2	2				
CSC1401 Foundation Programming£	1	2	2	1,2				
Elective (Select from Electives list)	2	1	3	1				
SVY3202 Photogrammetry and Remote Sensing	2	1	3	1				
GIS3407 GIS Programming and Visualisation	2	1	4	1				Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
ENG2002 Technology, Sustainability and Society	2	1	4	1,2,3				
URP3201 Sustainable Urban Design and Development	2	2	3	2				
ENG2102	2	2	3	2,3				
SVY3200 Land Administration	2	2	4	2				
GIS2405 Spatial Analysis and Modelling	2	2	4	2				
CIS2002	3	1	5	1,3				
ENV2201 Land Studies	3	1	5	1				
SVY4309 Practice Management for Spatial Scientists	3	1	6	1				
Elective (Select from the Electives list)	3	2	5	2				
GIS3406 Remote Sensing and Image Processing	3	2	5	2				
ENG4110 Engineering Research Methodology	3	2	7	2				
GIS2407 Web Based Geographic Information System	3	2	6	2				Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
Elective (Select from the Electives list)	4	1	7	1				
CSC2402 Object-Oriented Programming in C++	4	1	7	1,3				Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
ENG4111 Research Project Part 1^+	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
LAW2107 Environmental Law*					8	1		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
ACC1201 Data Insights and Financial Performance£	4	2	7	1,2,3				Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
CSC2406 Web Technology 1	4	2	6	2				Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
Elective (Select from the Electives list)	4	2	8	2				
ENG4112 Research Project Part 2^++	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			C	
SVY2902 Surveying and Spatial Science Practice 2£#	2	1	4	3			C	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£>	3	2	5	3			C	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Electives (Select from the following)								
CIS3001		1		1				
CIV2701 Road Design and Location		1		1				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†		1,3		1,3				
MGT1101 Human Capabilities for Business£		1		1,2,3				Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
MKT1001 Marketing Fundamentals		1		1,2,3				Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
MAT1102 Algebra and Calculus I^^		1		1				
AGR2301 Agricultural Science		2		2				
REN1201 Environmental Studies		1		1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
REN3302 Sustainable Resource Use		2						
SVY1104 Survey Computations A		2		2				Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ It is recommended that these courses are undertaken in the same academic year.

+ It is recommended that students in the Bachelor of Spatial Science should have completed ENG3902 prior to undertaking this course.

* Springfield campus only

++ It is recommended that students in the Bachelor of Spatial Science should also be enrolled in ENG4903 while undertaking this course.

Students who have completed GIS2901 do not need to undertake SVY2902.

> Students who have completed GIS3901 do not need to undertake SVY2903.

† The semester 3 offering of this course is offered in odd numbered years only.

^^ Replaces MAT1502 in the previous Handbook. Students should enrol in this course only if they have completed MAT1500 and Not MAT1502. Students undertaking ENM1600 are not required to complete MAT1502 and should choose an elective course in place of MAT1502

Notes:

For students transferring from one program to another a complete list of enrolment requirements are available in the course specification.

Other courses may be admissible as an Elective. However students must obtain approval from the Faculty of Health, Engineering and Sciences prior to enrolling in the course. Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an Elective with the approval of the Faculty of Health, Engineering and Sciences.

Surveying Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
GIS1402 Geographic Information Systems£	1	1	1	1,3				
SVY1102 Surveying A	1	1	2	1				
ENG1101	1	1	2	1,2				
SVY1110 Introduction to Global Positioning System	1	2	1	2				
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2	1	1,2				
SVY1104 Survey Computations A	1	2	2	2				Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
GIS1401 Geographic Data Presentation	1	2	2	2				
SVY2301 Automated Surveying Systems	2	1	3	1				Pre-requisite: SVY1104 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A	2	1	3	1				Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
CIV2701 Road Design and Location	2	1	4	1				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
Elective (Select from the Electives list)								
ENG2102	2	2	3	2,3				
SVY2303 Construction Surveying	2	2	3	2				Pre-requisite: SVY1104
CSC1401 Foundation Programming£	2	2	4	1,2				
SVY3304 Cadastral Surveying (Queensland)	2	2	4	2				Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3202 Photogrammetry and Remote Sensing	3	1	5	1				
SVY2302 Mine Surveying	3	1	5	1				Pre-requisite: SVY1104 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSPT
ENV2201 Land Studies	3	1	6	1				
ENG2002 Technology, Sustainability and Society	3	1	6	1,2,3				

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
SVY2105 Survey Computations B	3	2	5	2				Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
ENG4110 Engineering Research Methodology	3	2	7	2				
URP3201 Sustainable Urban Design and Development	3	2	6	2				
SVY3107 Geodetic Surveying B	3	2	6	2				Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT
SVY4309 Practice Management for Spatial Scientists	4	1	7	1				
ENG4111 Research Project Part 1[+]	4	1	7	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Elective (Select from the Electives list)	4	1	8	1				
ACC1201 Data Insights and Financial Performance[£]	4	2	5	1,2,3				Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
SVY4304 Land and Cadastral Law	4	2	7	2				
SVY3200 Land Administration	4	2	8	2				
ENG4112 Research Project Part 2[++]	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			C	
SVY2902 Surveying and Spatial Science Practice 2[£]	2	1	3	3			C	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3[£]	2	2	4	3			C	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
SVY3904 Surveying and Spatial Science Practice 4[£~]	3		6	2,3			C	Pre-requisite: SVY2902 or SVY2903 and SVY3304 or SVY3306 and SVY3202
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4903 Professional Practice 2	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
Electives (Select from the following)								
CIV2605 Construction Engineering		1		1				
ENV2103 Hydraulics I		1		1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV4204 Environmental Technology		1		1				Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS3407 GIS Programming and Visualisation		1		1				Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
MGT1101 Human Capabilities for Business[£]		1		1,2,3				Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
MAT1102 Algebra and Calculus I[^^]		1		1				
CIV3703 Transport Engineering		2		2				
CIV1501 Engineering Statics		2		2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
CIV2702 Municipal Services		2		2				Pre-requisite: ENV2103 or ENV1101
GIS2405 Spatial Analysis and Modelling		2		2				
GIS3406 Remote Sensing and Image Processing		2		2				
GIS2407 Web Based Geographic Information System		2		2				Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
LAW2107 Environmental Law[*]		1				1		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BZLW - Pre-requisite: LAW1111)
REN1201 Environmental Studies		1		1				Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
REN3302 Sustainable Resource Use		2						

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

+ It is recommended that students in the Bachelor of Spatial Science should have completed ENG3902 prior to undertaking this course.

++ It is recommended that students in the Bachelor of Spatial Science should also be enrolled in ENG4903 while undertaking this course.

~ On-campus students should enrol in the external offering of this course.

^^ Replaces MAT1502 in the previous Handbook. Students should enrol in this course only if they have completed MAT1500 and Not MAT1502. Students undertaking ENM1600 are not required to complete MAT1502 and should choose an elective course in place of MAT1502

* Springfield campus only

Notes:

For students transferring from one program to another a complete list of enrolment requirements are available in the course specification .

Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an Elective with the approval of the Faculty of Health, Engineering and Sciences.

Urban and Regional Planning major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Major Study Code 16735								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses								
SVY1102 Surveying A	1	1	1	1				
GIS1402 Geographic Information Systems£	1	1	1	1,3				
URP1001 Introduction to Urban and Regional Planning	1	1	2	1				
ENG1101	1	1	2	1,2				
GIS1401 Geographic Data Presentation	1	2	1	2				
ENG1002 Introduction to Engineering and Built Environment Applications	1	2	1	1,2				
LAW1101	1	2	2	2				
CMG1001 Introduction to Construction Management and the Built Environment	1	2	2	2				
ENV2201 Land Studies	2	1	3	1				
ECO1002 Market Behaviour	2	1	3	1				Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
PRL2002 Community Consultation and Engagement	2	1	4	1				
URP2001 Planning Structures and Statutory Planning	2	1	4	1				
URP2002 Local Government Planning Practice and Technology	2	2	3	2				
SVY1110 Introduction to Global Positioning System	2		3	2				
ENG2102	2	2	4	2,3				

Major study: Major Study Code 16735								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Elective (Select from the Electives list)	2	2	4	2				
SVY3202 Photogrammetry and Remote Sensing	3	1	5	1				
ACC1201 Data Insights and Financial Performance£	3	1	5	1				Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
ECO2000 The Macro-economy and Business	3	1	6	1				
Elective (Select from the Electives list)	3	1	6	1				
REN3302 Sustainable Resource Use	3	2	5	2				
STA3100 Data Analysis in the Social Sciences	3	2	5	2				
URP3201 Sustainable Urban Design and Development	3	2	6	2				
ENG4110 Engineering Research Methodology	3	2	7	2				
SVY4309 Practice Management for Spatial Scientists	4	1	7	1				
Elective (Select from the Electives list)	4	1	8	1				
ENG4111 Research Project Part 1^+	4	1	8	1				Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
URP4001 Movement Network Planning	4	2	7	2				Pre-requisite: URP1001 or SVY4203 or Students must be enrolled in one of the fol lowing Programs: BENH or MEPR
SVY3200 Land Administration	4	2	6	2				
GIS2407 Web Based Geographic Information System	4	2	8	2				Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
ENG4112 Research Project Part 2^++	4	2	8	2				Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			C	
SVY2902 Surveying and Spatial Science Practice 2£	2	1	3	3			C	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£	3	2	6	3			C	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)
ENG3902 Professional Practice 1	3	2	7	2			C	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or

Major study: Major Study Code 16735								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4903 Professional Practice 2	4	1	8	2			C	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
Electives (Select from the following)								
ANT1001 Cultural Diversity: an Introduction to Anthropology£		1		1,3				
CLI1110 Weather and Climate		1		1				
AGR3304 Soil Science		1		1				
CLI3301 Climate and Environment Risk Assessment		1		1				
ECO3030 Sustainable Economies		1		1				
POL3013 Sustainability and Politics						1		
MGT1101 Human Capabilities for Business£		1		1,2,3				Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
ANT3006 Indigenous Peoples in the Nation State*		2		2				
CLI3302 Adaptation to Climate Change		2		2				
GIS2405 Spatial Analysis and Modelling		2		2				
GIS3406 Remote Sensing and Image Processing		2		2				
LAW2107 Environmental Law**		1				1		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
PRL3003 Public Sector and Public Service Communication		2		2				
SVY4304 Land and Cadastral Law		2		2				

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ It is recommended that these courses are undertaken in the same academic year.

+ It is recommended that students in the Bachelor of Spatial Science should have completed ENG3902 prior to undertaking this course.

++ It is recommended that students in the Bachelor of Spatial Science should also be enrolled ENG4903 while undertaking this course.

* Offered odd years only.

** Springfield campus only

Notes:

For students transferring from one program to another a complete list of enrolment requirements are available in the course specification .

Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an Elective with the approval of the Faculty of Health, Engineering and Sciences.

Bachelor of Construction (Honours) (BCNH) - BCon(Hons)

QTAC code (Australian and New Zealand applicants): External: 907415; Springfield campus: 927411

CRICOS code (International applicants): 089494D

This program is currently undergoing internal reaccreditation. This may result in changes to the program for 2023.

	On-campus	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Springfield	-
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:	4 years full-time, 8 years part-time	
Program articulation:	From: Associate Degree of Construction	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

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 Australian Institute of Building is accredited the Bachelor of Construction (Honours) at the University of Southern Queensland.

Program aims

The program aims to produce professional level graduates for the building industry who have a broad range of relevant technical skills and well developed skills in communication and team work.

The program is designed to capitalise on growing demand and the primary aims are to:

- enable graduates to attain a diverse range of skills and competence to successfully manage a wide range of construction projects
- develop ability to plan, monitor and control the technical, logistical, legal and financial aspects associated with building and construction projects
- accept a leadership role in planning, managing and organising people and other resources on construction projects in the built environment.

Program objectives

At the completion of the program the graduate will be able to:

- apply building principles and methods
- prepare documentation for building development and construction
- advise and liaise with other members of the building team, clients and other external stakeholders
- apply relevant legislation and technical standards in building construction
- actively manage the human relations, resources, scheduling, quality control, environmental factors and social impacts involved for a building project.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **65.6**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C), General Mathematics (Units 3 & 4, C) or equivalent.
- English Language proficiency requirements for Category 2.

Applicants are advised to also note the following:

- Recommended Prior Study: Mathematical Methods (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Construction (Honours) is a 32 unit program consisting of Academic courses and Practice courses comprising a core major study component and a minor study. The Bachelor of Construction (Honours) comprises either four years of full-time study or eight years of part-time study.

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

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Major Study	28	28	6	0
Minor Study	4	4		
Total	32	32	6	0

Required time limits

Students have a maximum of 10 years to complete this program.

Core courses

The courses that comprise the core major study program are listed in the following table:

Courses	Units
Academic Courses	
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENM1500 Introductory Engineering Mathematics[§]	1
CMG1001 Introduction to Construction Management and the Built Environment	1
CIV1500 Applied Mechanics[§]	1
ENG1100 Introduction to Engineering Design	1

ENG1003 Problem Solving in Engineering and the Built Environment[$]	1
CMG1002 Residential Construction: Methods, Materials and Management	1
CMG2001 Job Organisation	1
ENG2002 Technology, Sustainability and Society	1
FIN1101 Corporate Finance	1
SVY1500 Spatial Science for Engineers	1
LAW1501 Business Law and Ethics	1
ACC1201 Data Insights and Financial Performance[£]	1
CIV2605 Construction Engineering	1
CMG2003 Construction Production Management	1
ENG3003 Engineering Management	1
CMG3002 Contract Administration	1
CMG2002 Cost Management: Estimating, Measurement and Cost Control	1
CMG3001 Building and Construction Procurement	1
MGT3203 Project Management Processes	1
MGT2007 Leadership	1
CMG4003 Commercial Construction	1
LAW3473 Construction Law	1
CMG4002 Integrated Construction Management	1
MGT3006 Employment Relations	1
ENG4110 Engineering Research Methodology	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
Practice Courses	
ENG1901 Engineering Practice 1	0
CIV3906 Civil Materials Practice	0
CMG4901 Construction Management Practice	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

Footnotes

§ Unavailable online in S3 2023

$ Unavailable online S2 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Major studies

The Bachelor of Construction (Honours) consists of a core major study component (Construction Management) and minor study. The major study provides students with knowledge and skills in a specific discipline.

Minor Studies

The Bachelor of Construction (Honours) consists of a core major study component and a minor study. The minor study provides students with knowledge and skills in a specific area or specialisation. A minor study in a program is a group of four units of courses that provides students an appropriate breadth of study in an area of specialisation. Students must complete four (4) units from the minors listed below. The minor studies available are:

- Building
- Civil

- Transdisciplinary.

Practical experience

To be eligible to graduate from the Bachelor of Construction (Honours), students must obtain an aggregate of at least 60 days of suitable work experience in an architectural, engineering or construction organisation. Students are required to enrol in ENG4909 Work Experience - Professional in the latter part of the program and maintain a record of their practical experience as specified by the Course Specification. The record of work experience must be made available for perusal by the Faculty of Health, Engineering and Sciences upon request. Work experience is to be certified by an appropriate person in the organisation that is providing the workplace experience and to be submitted to the examiner. The student must meet all costs associated with the acquisition of work experience to satisfy this requirement.

Credit or exemptions for ENG4909 Work Experience - Professional will not normally be considered.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology are to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1, students must study ENG4111 Research Project Part 1, ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Exit points

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

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Construction (Honours) program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG4909 Work Experience - Professional practice course.

Honours

The level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule.

Other information

ENG1901 Engineering Practice 1 is the first in a series of **Practice courses** designed to enable students to acquire professional practice skills, including practical and teamwork skills, problem solving and judgement. It is designed principally to cater for the needs of recent school leavers and those lacking any significant experience of the workforce. **Students who have a trade certificate and who have been employed in industry for some time may be able to claim credit from the course.**

Construction Management Major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Construction Management (Major Study Code: 17530)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
CMG1001 Introduction to Construction Management and the Built Environment<	1	1			1	1		
ENM1500 Introductory Engineering Mathematics§	1	1			1	1,2		Enrolment is not permitted in ENM1500 if MAT1100 or MAT1102 or ENM1600 or ENG1500 has been previously completed
CIV1500 Applied Mechanics§	1	1			2	1,3		Pre-requisite or Co-requisite: ENM1500 or ENM1600
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1			2	1,2		
CMG1002 Residential Construction: Methods, Materials and Management<	1	2			2	2		Pre-requisite: CMG1001
SVY1500 Spatial Science for Engineers	1	2			1	2		
ENG1100 Introduction to Engineering Design	1	2			1	1,2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2			2	1,2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1	2	2,3			M	
Academic Courses Year 2								
LAW1501 Business Law and Ethics	2	1			3	1,2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.

Major study: Construction Management (Major Study Code: 17530)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ACC1201 Data Insights and Financial Performance£	2	1			4	1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
CIV2605 Construction Engineering	2	1			4	1		
MGT2007 Leadership					3	1		
CMG2001 Job Organisation	2	2			3	2		
CMG2003 Construction Production Management<	2	2			3	2		Pre-requisite: CMG1002
ENG2002 Technology, Sustainability and Society	2	2			4	1,2,3		
Minor study (Select from the Minor list	2	2	4	2				
Practice Courses Year 2								
CIV3906 Civil Materials Practice	2	1	4	3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
Academic Courses Year 3								
CMG2002 Cost Management: Estimating, Measurement and Cost Control<	3	1			5	1		Pre-requisite: CMG1001 and ENG1100
CMG3002 Contract Administration<	3	1			6	1		Pre-requisite: LAW1101 or LAW1500
Minor study (Select from the Minor List)	3	1	5	1				
ENG3003 Engineering Management¥	3	1			6	1,3		
CMG3001 Building and Construction Procurement<	3	2			6	2		Pre-requisite: CMG1001 and CMG2001
FIN1101 Corporate Finance*	3	2			5	2		Enrolment is not permitted in FIN1101 if FIN1100 has been previously completed (exclud ing BBIZ 19395 Finance ma jor students)
ENG4110 Engineering Research Methodology	3	2			7	2		
MGT3203 Project Management Processes	3	2			6	2		Enrolment is not permitted in MGT3203 if MGT2203 has been previously completed.
Practice Courses Year 3								
ENG3902 Professional Practice 1			7	2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
ENG4909 Work Experience - Professional					6	1,2,3		
Academic Courses Year 4								
Minor study (Select from Minor list)	4	1	7	1				
CMG4003 Commercial Construction						1		Pre-requisite: CMG2003 and CMG3001 or Students must be enrolled in the following Program: GCEN
ENG4111 Research Project Part 1~#	4	1			8	1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol

Major study: Construction Management (Major Study Code: 17530)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
LAW3473 Construction Law**	4	1			8	1		Pre-requisite: LAW1101 or LAW1500 or LAW1501 or ((LAW1111 and (LAW1123 or LAW1116))
MGT3006 Employment Relations	4	2			8	2		Enrolment is not permitted in MGT3006 if MGT2006 has been previously completed.
CMG4002 Integrated Construction Management					7	2		Pre-requisite: CMG2003 and CMG3002
ENG4112 Research Project Part 2~##	4	2			8	2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Minor study (Select from the Minor List)	4	2	6	2				
Practice courses Year 4								
ENG4903 Professional Practice 2	4	1	8	2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
CMG4901 Construction Management Practice^			7	2			M	Pre-requisite: CMG4001 or CMG4003

Footnotes

< On-campus mode no longer available in Toowoomba.
§ Unavailable online in S3 2023
$ Unavailable online S2 2023
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
¥ the Semester 3 offering of this course is available in odd-numbered years only.
* The on-campus Toowoomba offering is only available in Semester 1.
~ It is recommended that these courses are undertaken in the same academic year.
# It is recommended that students should have completed ENG3902 Professional Practice 1 prior to undertaking this course
** Course is offered in the interim trimester layer, please consult for interim trimester dates.
It is recommended that students should also be enrolled in ENG4903 Professional Practice 2 while undertaking this course.
^ Residential School will be held at Springfield campus.

Building Minor recommended enrolment pattern

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 undertaking a Building minor should choose four (4) courses as per the following table, subject to any requisite requirements:							
CIV2502 Structural and Building Technology		2		2			
CMG3003 Building Services: Methods, Materials and Management						1	Pre-requisite: CMG1001 and CIV2502 or Students must be enrolled in the following Program: MEPR
Plus any two courses from the following list:							
URP1001 Introduction to Urban and Regional Planning		1				1	
URP3201 Sustainable Urban Design and Development		2				2	
URP2001 Planning Structures and Statutory Planning		1				1	
URP2002 Local Government Planning Practice and Technology		2				2	
MGT2001 Risk Mitigation, Work Health and Safety		1				1,3	

Civil Minor recommended enrolment pattern

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 undertaking a Civil minor should choose four (4) courses as per the following table, subject to any requisite requirements:							
CIV2701 Road Design and Location		1				1	Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
CIV3603 Construction Methods						2	
Plus any two courses from the following list:							
CIV3703 Transport Engineering		2				2	
CIV2403 Geology and Geomechanics		2				2	Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV3403 Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV1501 Engineering Statics		2				2,3	Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
CIV2503 Structural Design I		2				2	Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
MEC1201 Engineering Materials		1				1,2,3	

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	
MEC2402 Stress Analysis		1				1	Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENV3105 Hydrology		2				2	
ENV2103 Hydraulics I		1				1	Pre-requisite: CIV1500 or CIV1501 or Stu dents must be enrolled in the following Pro gram: GCEN or GEPR

Transdisciplinary Minor recommended enrolment pattern

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 undertaking a Transdisciplinary minor should choose four (4) courses from the other two minors, subject to any requisite requirements:							
Choose any four (4) courses from the other two minors:							
Choose a course from the other two minors		2		2			
Choose a course from the other two minors		1		1			
Choose a course from the other two minors		1		1			
Choose a course from the other two minors		2		2			

Bachelor of Engineering (Honours) (BENH) - BEng(Hons)

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907331; External: 907335; Springfield campus: 927331

CRICOS code (International applicants): 079519E

	On-campus^#	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) 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:	4 years full-time, 8 years part-time	
Program articulation:	From: Associate Degree of Engineering; Bachelor of Engineering Science	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ The only majors available on-campus at UniSQ Springfield are Civil Engineering, Electrical and Electronic Engineering, Mechanical Engineering and Mechatronic Engineering.

The Instrumentation Control and Automation Engineering major is only available via external study.

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

A graduate of this program is eligible to apply for membership of Engineers Australia as a graduate Professional 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 those countries that are signatories to the Washington Accord.

Program aims

The Bachelor of Engineering (Honours) provides students with the knowledge and skills that are necessary to commence practice as a professional engineer; be eligible for graduate membership of Engineers Australia (as a Professional Engineer) and other appropriate professional bodies; and to undertake further advanced level studies in engineering. Specifically the program provides students with a core of basic generic and

technical skills, common to all branches of engineering, and then permits students to undertake an in depth study of either agricultural, civil, computer systems, electrical and electronic, environmental, instrumentation control and automation, mechanical, mechatronic or power engineering. In addition, students are equipped with a knowledge of the industrial and social environments in which they will function as professional engineers. The program also seeks to instil in students a capacity to communicate effectively and adapt to change.

The Bachelor of Engineering (Honours) is primarily vocationally oriented. However, the program has been designed to identify students who have the capacity to undertake further study at an advanced level and to make an original contribution to engineering knowledge.

Program objectives

On completion of this program, students should be able to:

- Display coherent and comprehensive knowledge of historical, contemporary and emerging theories and concepts that underpin relevant engineering disciplines.
- Recognise the social purpose of engineering and analyse the relationship between human-made products and systems, and community needs.
- Apply well-researched, innovative, industry-relevant systems approaches to solve a range of engineering problems, and to address issues of sustainable practice in diverse environmental, technical and social contexts.
- Apply relevant project management skills and formulate design processes to enable the delivery of engineering projects within given project constraints.
- Make appropriate autonomous judgements by critically evaluating evidence, identifying and analysing ethical issues and applying cultural competencies, including those relevant to indigenous peoples.
- Communicate effectively in English and interpret information for diverse audiences using a range of high-level oral, written and technology-based approaches; and apply effective competencies as a leader, team member and individual within the professional domain.
- Engage in lifelong learning through critical reflection, and be accountable for their personal and professional actions by managing and monitoring personal performance.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **74.15**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

Applicants are advised to also address the following:

- Recommended Prior Study: Physics (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Engineering (Honours) is a 32-unit program consisting of Academic Courses and Practice Courses. Students undertake a major of study, including approved courses which students are able to select. Students may choose to substitute four approved courses for a minor of four units in another area of study to their major (except for Mechanical Engineering and Mechatronic Engineering). The available minors and associated courses are listed in the minor studies section.

Academic courses are normally one-unit courses and 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 following table shows the mandatory components of the program:

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Studies	11	11	4	0
Major Study (including approved courses) OR Major Study plus Minor Study	21 OR 17+4	21	4-5 depending upon the major	0
Total	32	32	8–9	0

Minor Studies

A minor study is a coherent group of four units of courses that provides students with an additional breadth of study in their program. Students who wish to take a minor study before undertaking any course should ensure any pre-requisite courses are completed or exempted, enrolment requirements must be satisfied for any course selected.

Major study	Minor Study available
Agricultural Engineering	Yes
Civil Engineering	Yes
Computer Systems Engineering	Yes
Electrical and Electronic Engineering	Yes
Environmental Engineering	Yes
Instrumentation Control and Automation Engineering	Yes
Mechanical Engineering	**No**
Mechatronic Engineering	**No**
Power Engineering	Yes

When students select a minor, courses will only count towards that minor if they have not already counted towards another selected major. Not all minors are available on-campus at all campuses. Students undertaking a Minor study may choose courses from those listed in this section of the Handbook as follows:

Major: All except Mechanical or Mechatronic	Toowoomba (ONC)	Springfield (ONC)	External (EXT)	Online (ONL)	Enrolment requirements
Minor Study – Management. Select the following course:					
ENG4004 Engineering Project and Operations Management				S2, S3	
select 3 other courses from the following list:					
MGT2001 Risk Mitigation, Work Health and Safety	S1	S1		S1	
MGT2007 Leadership				S2	

MGT3004 Creativity, Innovation and Entrepreneurship				S2	
MGT3005 Workforce Design	S1	S1		S1	
MGT3203 Project Management Processes	S2	S2		S2	

Major: Agricultural Engineering	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor study: Mechanical Engineering (select 4 courses from the following list):					
MEC2202 Manufacturing Processes	S1	S1		S1	
MEC2406 Introduction to Mechatronics and Automation	S2	S2		S2	
MEC3203 Materials Technology	S1	S1		S1	
MEC3303 Mechanical and Mechatronic System Design	S2	S2		S2	
MEC4406 Robotics and Machine Vision	S2	S2		S2	

Major: Civil Engineering	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor study: Mining Engineering (select 4 courses from the following list):					
MIN2001 Mining Technology and Mineral Processing				S1	
MIN2002 Mine Planning and Design				S2	
MIN2003 Mine Operations and Management				S2	

MINAD approved course taken through Central Queensland University (CQU) via cross-institutional enrolment. ENAR12004 Mine Management and Safety OR ENAR11001 Resource Geology			S1 S2		

Major: Civil Engineering	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor study: Transport Engineering (select the following 3 courses):					
CIV5704 Road and Street Engineering				S2	
CIV5705 Pavement Design and Analysis				S1	
URP4001 Movement Network Planning	S2			S2	
Select 1 of the following courses:					
CIV3603 Construction Methods				S2	
ENV2201 Land Studies	S1	S1		S1	

Majors: Agricultural or Environmental Engineering	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor study: Climatology (select the following 4 courses):					
CLI1110 Weather and Climate	S1			S1	
CLI2201 Climate Change and Variability				S2	

CLI3301 Climate and Environment Risk Assessment				S1	
CLI3302 Adaptation to Climate Change				S2	

Majors: Environmental or Power Engineering	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor study: Geographic Information Systems (select 4 courses from the following list):					
GIS1402 Geographic Information Systems[£]	S1	S1		S1, S3	
GIS2405 Spatial Analysis and Modelling	S2			S2	
GIS3406 Remote Sensing and Image Processing	S2			S2	
CSC1401 Foundation Programming[£]	S1, S2, S3	S1, S2		S1, S2, S3	
GIS3407 GIS Programming and Visualisation	S1			S1	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Major: All except Mechanical or Mechatronic	**Toowoomba (ONC)**	**Springfield (ONC)**	**External (EXT)**	**Online (ONL)**	**Enrolment requirements**
Minor Study – Data Management:					
CSC1401 Foundation Programming[£]	S1, S2, S3	S1, S2		S1, S2, S3	
CSC3400 Database Systems[£]	S1	S1		S1,S3	
CSC3501 Principles of Data Science and Visualisation[*]	S2	S2		S2	

CSC3502 Principles of Big Data Management*	S2	S2		S2	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

* Students are able to use ENG3104 Engineering Simulations and Computations to satisfy the Requisite Knowledge requirements of this course.

Required time limits

Students have a maximum of 10 years to complete this program.

Core courses

The courses that comprise the core studies program are shown in the following table:

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
ENG1002 Introduction to Engineering and Built Environment Applications	1,2	1,2		1,2
ENG1004 Engineering Problem Solving Principles	1	1		1,2
ENG1100 Introduction to Engineering Design	1,2	1,2		1,2
ENG2002 Technology, Sustainability and Society	1,2	1.2		1,2,3
ENG3003 Engineering Management†	1, 3	1		1,3
ENG3104 Engineering Simulations and Computations	2	2		2
ENG4110 Engineering Research Methodology	2	2		2
ENG4111 Research Project Part 1	1	1		1
ENG4112 Research Project Part 2	1,2	2		1,2
ENM1600 Engineering Mathematics	1,2	1,2		1,2
ENM2600 Advanced Engineering Mathematics§	1	1		1, 3
Practice Courses				
ENG1901 Engineering Practice 1	1,2	1	2,3	
ENG3902 Professional Practice 1			2	
ENG4903 Professional Practice 2	1		2	
ENG4909 Work Experience - Professional				1,2,3

Footnotes

† The Semester 3 offering of this course is offered in odd numbered years only.

§ Unavailable online in S3 2023

Major studies

The Bachelor of Engineering (Honours) consists of a core component and a series of major studies. All students must complete the core courses and one of the major studies. The major study provides students with knowledge and skills in a specific discipline. The major study areas in the UniSQ Bachelor of Engineering (Honours) are listed below. The Instrumentation Control and Automation Engineering major is designed for process technologists in industry who wish to upgrade their qualifications. As such, the program will normally be undertaken by external study.

Major	On-Campus Toowoomba	On-Campus Springfield	External
Agricultural Engineering	Yes	**No**	Yes
Civil Engineering	Yes	Yes	Yes
Computer Systems Engineering	Yes	**No**	Yes
Electrical and Electronic Engineering	Yes	Yes	Yes
Environmental Engineering	Yes	**No**	Yes
Instrumentation Control and Automation Engineering	**No**	**No**	Yes
Mechanical Engineering	Yes	Yes	Yes
Mechatronic Engineering	Yes	Yes	Yes
Power Engineering	Yes	**No**	Yes

Agricultural Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
AGR2301 Agricultural Science	2			2
AGR2302 Agricultural Machinery	1			1
AGR3303 Agricultural Materials and Post-Harvest Technologies	1			1
AGR3304 Soil Science	1			1
AGR3305 Precision and Smart Technologies in Agriculture	2			2
AGR4305 Agricultural Soil Mechanics	1			1
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV3104 Hydraulics II	1	1		1
ENV3105 Hydrology	2	2		2
ENV4106 Irrigation Science	2			2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2301 Design of Machine Elements	2	2		2
MEC2401 Dynamics I	1	1		1
MEC2402 Stress Analysis	1	1		1
SVY1500 Spatial Science for Engineers	2	2		2
Approved courses (x4)				
Practice Courses				
AGR2902 Field Practice			3	

AGR3903 Soil and Water Engineering Practice 2			2	
AGR3905 Agricultural Engineering Practice			3	
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Civil Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
CIV2503 Structural Design I	2	2		2
CIV2605 Construction Engineering	1	1		1
CIV3403 Geotechnical Engineering	2	2		2
CIV4505 Structural Analysis	1	1		1
CIV4506 Concrete Structures	1	1		1
CIV3703 Transport Engineering	2	2		2
CIV4508 Structural Design II	1	1		1
ENV2103 Hydraulics I	1	1		1
ENV3104 Hydraulics II	1	1		1
ENV3105 Hydrology	2	2		2
ENV4203 Public Health Engineering	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2402 Stress Analysis	1	1		1
SVY1500 Spatial Science for Engineers	2	2		2
Approved course (x5)				
Practice Courses				
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
CIV3906 Civil Materials Practice	1	1	3	
CIV3907 Civil Systems Practice			3	
CIV4908 Civil Design Practice			1,2	
ENV2902 Hydraulics Practice	2	2	1,2,3	

Computer Systems Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
CSC1401 Foundation Programming[£]	1,2,3	1,2		1,2,3
CSC2401 Algorithms and Data Structures	2			2

CSC2402 Object-Oriented Programming in C++	1			1
CSC2408 Software Development Tools	1,2	1,2		1,2
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology§	2	2		2,3
ELE2103 Linear Systems and Control	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2601 Telecommunications Principles	1	1		1
ELE3105 Computer Controlled Systems	1	1		1
ELE3107 Signal Processing	2	2		2
ELE3305 Computer Systems and Communications Protocols	1	1		1
ELE4307 Real Time Systems	2	2		2
MAT1101 Discrete Mathematics for Computing	1	1		1
Approved Courses (x6)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A~‡	2	2	3	
ELE2912 Electrical and Electronic Practice B‡	1	1	3	
ELE2913 Electrical and Electronic Practice C				2
ELE3914 Electrical and Electronic Practice D	1	1	3	
ELE3915 Electrical and Electronic Practice E	2	2	2	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

§ Unavailable online in S3 2023

~ Unavailable in On-Campus mode in S2 2023

‡ Unavailable in External mode in S3 2023

Electrical and Electronic Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology§	2	2		2,3
ELE2103 Linear Systems and Control	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2504 Electronic Design and Analysis	2	2		2
ELE2601 Telecommunications Principles	1	1		1
ELE3105 Computer Controlled Systems	1	1		1
ELE3107 Signal Processing	2	2		2

ELE3305 Computer Systems and Communications Protocols	1	1		1
ELE4307 Real Time Systems	2	2		2
ELE3506 Electronic Measurement	2	2		2
ELE3803 Electrical Plant	1	1		1
ELE4605 Fields and Waves	1	1		1
ELE4606 Communication Systems	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
Approved Courses (x5)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A~‡	2	2	3	
ELE2912 Electrical and Electronic Practice B‡	1	1	3	
ELE2913 Electrical and Electronic Practice C				2
ELE3914 Electrical and Electronic Practice D	1	1	3	
ELE3915 Electrical and Electronic Practice E	2	2	2	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Environmental Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
AGR3304 Soil Science	1			1
CIV1501 Engineering Statics	2	2		2,3
CIV2403 Geology and Geomechanics	2	2		2
ENV2103 Hydraulics I	1	1		1
ENV2105 Applied Chemistry and Microbiology	1			1
ENV2201 Land Studies	1	1		1
ENV3103 Environmental Pollution	2			2
ENV3104 Hydraulics II	1	1		1
ENV3105 Hydrology	2	2		2
ENV4106 Irrigation Science	2			2
ENV4107 Water Resources Engineering	2			2
ENV4203 Public Health Engineering	2	2		2
ENV4204 Environmental Technology	1			1
ENV4205 Water and Wastewater Treatment				1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
SVY1500 Spatial Science for Engineers	2	2		2
Approved courses (x5)				

Practice Courses				
AGR2902 Field Practice			3	
AGR3903 Soil and Water Engineering Practice 2			2	
CIV2901 Geology and Geomechanics Practice	2	2	2,3	
ENV2902 Hydraulics Practice	2	2	1,2,3	
ENV3904 Environmental Engineering Practice			3	

Instrumentation Control and Automation Engineering major courses

Courses	**Semester(s) Offered**			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology[§]	2	2		2,3
ELE2103 Linear Systems and Control	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2504 Electronic Design and Analysis	2	2		2
ELE3105 Computer Controlled Systems	1	1		1
ELE4307 Real Time Systems	2	2		2
ELE3506 Electronic Measurement	2	2		2
ELE4109 Measurement Science and Instrument Engineering				1 (odd years only)
ELE4506 Industrial Process Automation				1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2106 Introduction to Thermofluids	2	2		2
MEC2501 Process Control Systems				2
MEC3107 Thermofluids	1	1		1
MEC4108 Advanced Thermofluids	1	1		1
MEC4406 Robotics and Machine Vision	2	2		2
Approved Courses (x4)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A[~‡]	2	2	3	
ELE2912 Electrical and Electronic Practice B[‡]	1	1	3	
ELE2913 Electrical and Electronic Practice C				2
ELE3914 Electrical and Electronic Practice D	1	1	3	
MEC3905 Mechatronic Practice			2	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Mechanical Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
CIV1501 Engineering Statics	2	2		2,3
ELE1801 Electrical Technology[§]	2	2		2,3
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2106 Introduction to Thermofluids	2	2		2
MEC2202 Manufacturing Processes	1	1		1
MEC2301 Design of Machine Elements	2	2		2
MEC2304 Solid Modelling	2	2		2
MEC2401 Dynamics I	1	1		1
MEC2402 Stress Analysis	1	1		1
MEC2406 Introduction to Mechatronics and Automation	2	2		2
MEC3107 Thermofluids	1	1		1
MEC3203 Materials Technology	1	1		1
MEC3204 Production Engineering	2	2		2
MEC4302 Computational Mechanics in Design	1	1		1
MEC3303 Mechanical and Mechatronic System Design	2	2		2
MEC4403 Advanced Dynamics	2	2		2
MEC4104 Renewable Energy Technology	2	2		2
MEC4108 Advanced Thermofluids	1	1		1
Approved Course (x3)				
Practice Courses				
MEC2901 Mechanical Practice 1	1	1	3	
MEC2902 Mechanical Practice 2	1	1	1	
MEC3903 Mechanical Practice 3	2	2	3	
MEC3904 Mechanical Practice 4	2	2	2	

Footnotes

§ Unavailable online in S3 2023

Mechatronic Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Academic Courses				
CIV1501 Engineering Statics	2	2		2,3
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1

ELE1801 Electrical Technology§	2	2		2,3
ELE2103 Linear Systems and Control	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2504 Electronic Design and Analysis	2	2		2
ELE3105 Computer Controlled Systems	1	1		1
ELE3506 Electronic Measurement	2	2		2
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2202 Manufacturing Processes	1	1		1
MEC2301 Design of Machine Elements	2	2		2
MEC2304 Solid Modelling	2	2		2
MEC2401 Dynamics I	1	1		1
MEC2402 Stress Analysis	1	1		1
MEC2406 Introduction to Mechatronics and Automation	2	2		2
MEC4302 Computational Mechanics in Design	1	1		1
MEC3303 Mechanical and Mechatronic System Design	2	2		2
MEC4403 Advanced Dynamics	2	2		2
MEC4406 Robotics and Machine Vision	2	2		2
Approved Course (x1)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A~‡	2	2	3	
MEC2901 Mechanical Practice 1	1	1	3	
MEC2902 Mechanical Practice 2	1	1	1	
MEC3905 Mechatronic Practice			2	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Power Engineering major courses

Courses	Semester(s) Offered			
	Toowoomba	**Springfield**	**External**	**Online**
Academic Courses				
ELE1301 Computer Engineering	1	1		1
ELE1502 Electronic Circuits	1	1		1
ELE1801 Electrical Technology§	2	2		2,3
ELE2103 Linear Systems and Control	2	2		2
ELE2303 Embedded Systems Design	1	1		1
ELE2504 Electronic Design and Analysis	2	2		2
ELE2704 Electricity Supply Systems	2			2
ELE3105 Computer Controlled Systems	1	1		1

ELE3305 Computer Systems and Communications Protocols	1	1		1
ELE3803 Electrical Plant	1	1		1
ELE4804 Power Systems Protection				1
ELE3805 Power Electronics Principles and Applications	2	2		2
ELE4807 Power Systems Analysis	1			1
MEC1201 Engineering Materials	1,2	1,2		1,2,3
MEC2106 Introduction to Thermofluids	2	2		2
MEC4104 Renewable Energy Technology	2	2		2
Approved Courses (x5)				
Practice Courses				
ELE1911 Electrical and Electronic Practice A~‡	2	2	3	
ELE2912 Electrical and Electronic Practice B‡	1	1	3	
ELE2913 Electrical and Electronic Practice C				2
ELE3914 Electrical and Electronic Practice D	1	1	3	
ELE3915 Electrical and Electronic Practice E	2	2	2	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023

Electives/Approved courses

Appropriate approved courses in each major are shown in the tables in the Recommended Enrolment Pattern section. The Program Director may approve a variation in approved course studies where the student can demonstrate that there is a sound academic argument for the change. Arguments based on timetable difficulties, quota problems etc. will not normally be entertained. Note however that students who wish to enrol in a course other than those listed must obtain the written approval of the Program Director prior to enrolling in the course if they want the course to count as credit towards their award.

Students should note that quota restrictions may preclude their enrolment in particular approved courses as students enrolling in these courses as part of their core or major studies will be given enrolment priority.

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

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology are to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology, students must study ENG4111 Research Project Part 1, ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Agricultural Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- AGR3903 Soil and Water Engineering Practice 2
- AGR3905 Agricultural Engineering Practice
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2

Civil Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- CIV3906 Civil Materials Practice
- CIV3907 Civil Systems Practice
- CIV4908 Civil Design Practice
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2

Computer Systems Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A

- ELE2912 Electrical and Electronic Practice B
- ELE2913 Electrical and Electronic Practice C
- ELE3914 Electrical and Electronic Practice D
- ELE3915 Electrical and Electronic Practice E
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2

Electrical and Electronic Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A
- ELE2912 Electrical and Electronic Practice B
- ELE3914 Electrical and Electronic Practice D
- ELE3915 Electrical and Electronic Practice E
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2
- CHE1110 Chemistry 1 (Elective)

Environmental Engineering

- ENG1901 Engineering Practice 1
- CIV2901 Geology and Geomechanics Practice
- ENV2902 Hydraulics Practice
- AGR2902 Field Practice
- ENV3904 Environmental Engineering Practice
- AGR3903 Soil and Water Engineering Practice 2
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2
- CHE1110 Chemistry 1(Elective)
- CHE2120 Chemistry 2 (Elective)

Instrumentation Control and Automation Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A
- ELE2912 Electrical and Electronic Practice B
- ELE2913 Electrical and Electronic Practice C
- ELE3914 Electrical and Electronic Practice D
- MEC3905 Mechatronic Practice
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2
- CHE1110 Chemistry 1 (Elective)

Mechanical Engineering

- ENG1901 Engineering Practice 1
- MEC2901 Mechanical Practice 1
- MEC2902 Mechanical Practice 2
- MEC3903 Mechanical Practice 3
- MEC3904 Mechanical Practice 4
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2

Mechatronic Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A

- MEC2901 Mechanical Practice 1
- MEC2902 Mechanical Practice 2
- MEC3905 Mechatronic Practice
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2

Power Engineering

- ENG1901 Engineering Practice 1
- ELE1911 Electrical and Electronic Practice A
- ELE2912 Electrical and Electronic Practice B
- ELE2913 Electrical and Electronic Practice C
- ELE3914 Electrical and Electronic Practice D
- ELE3915 Electrical and Electronic Practice E
- ENG3902 Professional Practice 1
- ENG4903 Professional Practice 2
- CHE1110 Chemistry 1 (Elective)

Related programs

Students may combine the Bachelor of Engineering (Honours) with a program from another area of study. Currently the following combined programs have been accredited by the University and Engineers Australia:

- Bachelor of Engineering (Honours) Bachelor of Business
- Bachelor of Engineering (Honours) Bachelor of Information Technology
- Bachelor of Engineering (Honours) Bachelor of Science.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering (Honours) and who satisfy all of the requirements of either the Bachelor of Engineering Science, 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 UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Engineering (Honours) program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG4909 Work Experience - Professional practice course.

Honours

The level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule.

Agricultural Engineering major full-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			M	
Academic Courses Year 2								
AGR2302 Agricultural Machinery	2	1				1		
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
AGR2301 Agricultural Science	2	2				2		
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
MEC2301 Design of Machine Elements	2	2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
Academic Courses Year 3								
AGR3303 Agricultural Materials and Post-Harvest Technologies	3	1				1		
AGR3304 Soil Science	3	1				1		
ENV3104 Hydraulics II	3	1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC2401 Dynamics I	3	1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
AGR3305 Precision and Smart Technologies in Agriculture	3	2				2		
Approved Course (Select from minor or approved course list)	3	2				2		
ENV3105 Hydrology	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
AGR3903 Soil and Water Engineering Practice 2				2			M	
AGR3905 Agricultural Engineering Practice				3			M	
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
ENG3003 Engineering Management†	4	1				1,3		
AGR4305 Agricultural Soil Mechanics	4	1				1		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have com

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)	4	1				1		
ENV4106 Irrigation Science	4	2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Approved Course (Select from minor or approved course list)	4	2				2		
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	4	2				2		
Practice Courses Year 4								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
CIV3403 Geotechnical Engineering		2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE1301 Computer Engineering		1				1		
ELE2103 Linear Systems and Control		2				2,3		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
ENV2201 Land Studies		1				1		
ENV4107 Water Resources Engineering		2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology[@]		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems[£]		1				1,3		
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2406 Introduction to Mechatronics and Automation		2				2		
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
CLI2201 Climate Change and Variability						2		
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.

Footnotes

§ Unavailable online in S3 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

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

@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Agricultural Engineering major part-time recommended enrolment pattern

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ENG1004 Engineering Problem Solving Principles		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
SVY1500 Spatial Science for Engineers		2				2		
Year 3								
AGR2302 Agricultural Machinery		1				1		
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
AGR2301 Agricultural Science		2				2		
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
Year 3 Practice Courses								
AGR2902 Field Practice^				3			M	
Year 4								
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Year 4 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 5								
AGR3303 Agricultural Materials and Post-Harvest Technologies		1				1		
AGR3304 Soil Science		1				1		
Approved Course (Select from minor or approved course list)								
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
Year 6								
ENV3104 Hydraulics II		1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
ENV3105 Hydrology		2				2		
Approved Course (Select from minor or approved course list)								
Year 6 Practice Courses								
AGR3903 Soil and Water Engineering Practice 2				2			M	
AGR3905 Agricultural Engineering Practice				3			M	
Year 7								
ENG3003 Engineering Management†		1,3				1,3		
AGR4305 Agricultural Soil Mechanics		1				1		
ENG4110 Engineering Research Methodology		2				2		
ENV4106 Irrigation Science		2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Year 7 Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)								
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)								
Year 8 Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
CIV3403 Geotechnical Engineering		2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE1301 Computer Engineering		1				1		
ELE2103 Linear Systems and Control		2				2		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN

Major study: Agricultural Engineering (Major Study Code: 16922)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV2201 Land Studies		1				1		
ENV4107 Water Resources Engineering		2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology[@]		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems[£]		1				1,3		
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2406 Introduction to Mechatronics and Automation		2				2		
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
CLI2201 Climate Change and Variability						2		
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.

Footnotes

§ Unavailable online in S3 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

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

@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Civil Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

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 click on the course link in the table below to ascertain if a course is offered in another term.

Approved courses are included in the list of Academic courses. Students should select these courses from the approved courses listing.

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2605 Construction Engineering	2	1				1		
Approved Course (Select from minor or approved course list)	2	2				1		
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV2503 Structural Design I	2	2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Academic Courses Year 3								
ENV3104 Hydraulics II	3	1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4505 Structural Analysis	3	1				1		Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4506 Concrete Structures	3	1				1		Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†	3	1				1,3		
CIV3403 Geotechnical Engineering	3	2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3105 Hydrology	3	2				2		
CIV3703 Transport Engineering	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
CIV3906 Civil Materials Practice	3	1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the fol lowing programs: ADCN or BCON or BCNH
CIV3907 Civil Systems Practice			3	3			M	Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: MENS or MEPR

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
CIV4508 Structural Design II	4	1				1		Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Courses (Select from minor or approved course list)	4	1				1		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Courses (Select from minor or approved course list)	4	1				1		
Approved Courses (Select from minor or approved course list)	4	2				2		
ENV4203 Public Health Engineering	4	2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	4	2				2		
Practice Courses Year 4								
CIV4908 Civil Design Practice				1,2			M	Co-requisite: CIV4508 or Stu dents must be enrolled in the following Program: MEPR or MENS
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
AGR3304 Soil Science		1				1		
CIV3603 Construction Methods						2		
CIV5704 Road and Street Engineering						2		
CIV5705 Pavement Design and Analysis						1		Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or GCAE or MEPR
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
ENV4107 Water Resources Engineering		2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1				1,3		
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2				2		
URP1001 Introduction to Urban and Regional Planning		1				1		

Footnotes

§ Unavailable online in S3 2023

† The semester 3 offering of this course is offered in odd numbered years only.

‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Civil Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Year 2								
ENG1004 Engineering Problem Solving Principles		1				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
SVY1500 Spatial Science for Engineers		2				2		
Year 2 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
Approved Course (Select from minor or approved course list)								
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
Year 3 Practice Courses								
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2605 Construction Engineering		1				1		
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
Year 4 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
Year 5								
ENV3104 Hydraulics II		1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4505 Structural Analysis		1				1		Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV3403 Geotechnical Engineering		2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3105 Hydrology		2				2		
Year 5 Practice Courses								
CIV3906 Civil Materials Practice		1		3			M	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 6								
CIV4506 Concrete Structures		1				1		Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†		1,3				1,3		
CIV3703 Transport Engineering		2				2		
Approved Course (Select from minor or approved course list)								
Year 6 Practice Courses								
CIV3907 Civil Systems Practice				3			M	Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
Year 7								
CIV4508 Structural Design II		1				1		Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Course (Select from minor or approved course list)								
ENG4110 Engineering Research Methodology		2				2		
ENV4203 Public Health Engineering		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Year 7 Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)								

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)								
Year 8 Practice Courses								
CIV4908 Civil Design Practice				1,2			M	Co-requisite: CIV4508 or Students must be enrolled in the following Program: MEPR or MENS
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
AGR3304 Soil Science		1				1		
CIV3603 Construction Methods						2		
CIV4803 Mechanics and Technology of Fibre Composites						1		Pre-requisite: CIV3506 or CIV4506 or (MEC2402 and MEC3203)
CIV5704 Road and Street Engineering						2		
CIV5705 Pavement Design and Analysis						1		Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or GCAE or MEPR
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ENV2201 Land Studies		1				1		
ENV4107 Water Resources Engineering		2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology@		1				1		Pre-requisite: ENV2105 or Students must be enrolled in

Major study: Civil Engineering (Major Study Code: 16923)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
GIS1402 Geographic Information Systems£		1				1,3		
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
URP3201 Sustainable Urban Design and Development		2				2		
URP1001 Introduction to Urban and Regional Planning		1				1		

Footnotes

§ Unavailable online in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Computer Systems Engineering major full-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
CSC1401 Foundation Programming£	1	2				1,2,3		
ELE1801 Electrical Technology§	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	1	2				1,2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
ELE1911 Electrical and Electronic Practice A~#	1	2		3			M	
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1				1		Pre-requisite: ELE1301
CSC2402 Object-Oriented Programming in C++	2	1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MAT1101 Discrete Mathematics for Computing	2	1				1		
ELE2103 Linear Systems and Control	2	2				2		
ENG2002 Technology, Sustainability and Society	2	2				1,2,3		
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
Approved Course (Select from minor or approved course list)	2	2				2		
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B#	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 3								
ELE2601 Telecommunications Principles	3	1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE3105 Computer Controlled Systems	3	1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or MEPR or MENS or METC or GEPR
ELE3305 Computer Systems and Communications Protocols	3	1				1		
Approved Course (Select from minor or approved course list)	3	1				1,2,3		
ELE4307 Real Time Systems	3	2				2		Pre-requisite: ELE1301 or S tudents must be enrolled in one of the following Program s: GCNS or GDNS or MENS or MEPR
Approved Course (Select from minor or approved course list)	3	2				2		
ELE3107 Signal Processing	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
ELE3914 Electrical and Electronic Practice D	3	1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
Approved Course (Select from minor or approved course list)	4	1				1		
CSC2408 Software Development Tools	4	1				1,2		Pre-requisite: CSC1401
ENG3003 Engineering Management†	4	1				1,3		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)	4	2				2		
CSC2401 Algorithms and Data Structures	4	2				2		Pre-requisite: CSC2402 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or METC or MCOT or MCTE or MCOP or MPIT
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	4	2				2,3		
Practice Courses Year 4								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
CSC3400 Database Systems£		1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
CSC3403 Comparative Programming Languages		1				1		Pre-req: CSC2408; and Pre-req or Co-req: CSC2402; or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT Enrolment is not permitted in CSC3403 if CIS3001 has been previous ly completed
CSC1310 Networking 1: Internetworking		1,2				1,2		Pre-requisite: CSC1050
CSC3412 System and Security Administration		1				1		Pre-requisite: CSC2408
CSC3413 Network Design and Analysis		2				2		Pre-requisite: CSC3412
CSC3420 Mobile Internet Technology		1				1		Pre-requisite: CSC3407 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
CSC3427 Switching, Wireless and WAN Technologies		2				2		Pre-requisite: CSC3407 or CSC1310 or Students must be enrolled in one of the fol lowing Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

§ Unavailable online in S3 2023

~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.

Computer Systems Engineering major part-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles		1				1,2		
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
CSC1401 Foundation Programming£		1,2				1,2,3		
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 2 Practice Courses								
ELE1911 Electrical and Electronic Practice A~#		2		3			M	
Year 3								
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2103 Linear Systems and Control		2				2		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
Year 3 Practice Courses								
ELE2912 Electrical and Electronic Practice B#		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4								
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
MAT1101 Discrete Mathematics for Computing		1				1		
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
Approved Course (Select from minor or approved course list)								
Year 4 Practice Courses								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Year 5								
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE4307 Real Time Systems		2				2		Pre-requisite: ELE1301 or S tudents must be enrolled in one of the following Program s: GCNS or GDNS or MENS or MEPR
Approved Course (Select from minor or approved course list)								
Year 5 Practice Courses								
ELE3914 Electrical and Electronic Practice D		1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
Year 6								
ELE3305 Computer Systems and Communications Protocols		1				1		
Approved Course (Select from minor or approved course list)								

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE3107 Signal Processing		2				2		
Approved Course (Select from minor or approved course list)								
Year 6 Practice Courses								
ELE3915 Electrical and Electronic Practice E		2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
Year 7								
CSC2408 Software Development Tools		1,2				1,2		Pre-requisite: CSC1401
Approved Course (Select from minor or approved course list)								
ENG4110 Engineering Research Methodology		2				2		
CSC2401 Algorithms and Data Structures		2				2		Pre-requisite: CSC2402 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
Year 7 Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG3003 Engineering Management†		1,3				1,3		
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)								
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Year 8 Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
CSC3400 Database Systems£		1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
CSC3403 Comparative Programming Languages		1				1		Pre-req: CSC2408; and Pre-req or Co-req: CSC2402; or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT Enrolment is not permitted in CSC3403 if CIS3001 has been previously completed
CSC1310 Networking 1: Internetworking		1,2				1,2		Pre-requisite: CSC1050
CSC3412 System and Security Administration		1				1		Pre-requisite: CSC2408
CSC3413 Network Design and Analysis		2				2		Pre-requisite: CSC3412
CSC3420 Mobile Internet Technology		1				1		Pre-requisite: CSC3407 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
CSC3427 Switching, Wireless and WAN Technologies		2				2		Pre-requisite: CSC3407 or CSC1310 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS

Major study: Computer Systems Engineering (Major Study Code: 16924)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.

Electrical and Electronic Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
MEC1201 Engineering Materials	1	2				1,2,3		
ELE1801 Electrical Technology§	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	1	2				1,2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			M	
ELE1911 Electrical and Electronic Practice A~#	1	2		3			M	
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1				1		Pre-requisite: ELE1301
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
ELE2601 Telecommunications Principles	2	1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE2103 Linear Systems and Control	2	2				2		
ELE4307 Real Time Systems	2	2				2		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
ELE2504 Electronic Design and Analysis	2	2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B#	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 3								
ELE3803 Electrical Plant	3	1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3305 Computer Systems and Communications Protocols	3	1				1		
Approved Course (Select from minor or approved course list)	3	1				1		
ELE3105 Computer Controlled Systems	3	1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3506 Electronic Measurement	3	2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
Approved Course (Select from minor or approved course list)	3	2				2		
ELE3107 Signal Processing	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
ELE3914 Electrical and Electronic Practice D	3	1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
ELE4605 Fields and Waves	4	1				1		Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the fol lowing Programs: MEPR or MENS or GCNS or GDNS
Approved Course (Select from minor or approved course list)	4	1				1		
ENG3003 Engineering Management†	4	1				1,3		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)	4	2				2		
ELE4606 Communication Systems	4	2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	4	2				2,3		
Practice Courses Year 4								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4807 Power Systems Analysis		1				1		
ELE4109 Measurement Science and Instrument Engineering*						1		
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
CSC1401 Foundation Programming£		1,2				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
* Offered in odd years only e.g. 2021, 2023 etc
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
‡ The semester 3 offering of this course is offered in even numbered years only.
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Electrical and Electronic Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles		1				1,2		
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 2 Practice Courses								
ELE1911 Electrical and Electronic Practice A~#		2		3			M	
Year 3								
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2103 Linear Systems and Control		2				2		
ELE4307 Real Time Systems		2				2		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
Year 3 Practice Courses								
ELE2912 Electrical and Electronic Practice B#		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
Year 4								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
Year 4 Practice Courses								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Year 5								
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3305 Computer Systems and Communications Protocols		1				1		
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
Approved Course (Select from minor or approved course list)		2				1		
Year 5 Practice Courses								
ELE3914 Electrical and Electronic Practice D		1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
Year 6								
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
Approved Course (Select from minor or approved course list)		1				1		
ELE3107 Signal Processing		2				2		
Approved Course (Select from minor or approved course list)		2				2		
Year 6 Practice Courses								
ELE3915 Electrical and Electronic Practice E		2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 7								
ELE4605 Fields and Waves		1				1		Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the fol lowing Programs: MEPR or MENS or GCNS or GDNS
Approved Course (Select from minor or approved course list)		1				1		
ENG4110 Engineering Research Methodology		2				2		
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
Year 7 Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG3003 Engineering Management†		1,3				1,3		
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)		2				2		
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Year 8 Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4807 Power Systems Analysis		1				1		
ELE4109 Measurement Science and Instrument Engineering*						1		
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
CSC1401 Foundation Programming£		1,2				1.2.3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must

Major study: Electrical and Electronic Engineering (Major Study Code: 16925)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
* Offered in odd years only e.g. 2021, 2023 etc
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
‡ The semester 3 offering of this course is offered in even numbered years only.
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Environmental Engineering major full-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
MEC1201 Engineering Materials	1	1				1,2,3		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1100 Introduction to Engineering Design	1	2				1,2		
ENG2002 Technology, Sustainability and Society	1	2				1,2,3		
SVY1500 Spatial Science for Engineers	1	2				2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
Academic Courses Year 2								
ENV2201 Land Studies	2	1				1		
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I	2	1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV2105 Applied Chemistry and Microbiology	2	1				1		
Approved Course (Select from minor or approved course list)	2	2				1,2,3		
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
CIV2403 Geology and Geomechanics	2	2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Approved Course (Select from minor or approved course list)	2	2				2		
Practice Courses Year 2								
CIV2901 Geology and Geomechanics Practice	2	2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV2902 Hydraulics Practice	2	2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
AGR2902 Field Practice^				3			M	
Academic Courses Year 3								
AGR3304 Soil Science	3	1				1		
ENV3104 Hydraulics II	3	1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†	3	1				1,3		
Approved Course (Select from minor or approved course list)	3	1				1		
ENV3103 Environmental Pollution	3	2				2		Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV3105 Hydrology	3	2				2		
ENV4203 Public Health Engineering	3	2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENV3904 Environmental Engineering Practice				3			M	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
ENV4204 Environmental Technology	4	1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Course (Select from minor or approved course list)	4	1				1		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
ENV4205 Water and Wastewater Treatment						1		Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Course (Select from minor or approved course list)	4	2				2		
ENV4106 Irrigation Science	4	2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4107 Water Resources Engineering	4	2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses Year 4								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
CLI1110 Weather and Climate		1				1		
CHE1110 Chemistry 1~		1		1			HR	
CHE2120 Chemistry 2~		2		2			HR	Pre-requisite: CHE1110

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV3403 Geotechnical Engineering		2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3703 Transport Engineering		2				2		
ECO1002 Market Behaviour		2				2		Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
ENG4004 Engineering Project and Operations Management‡		3				2,3		
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
GIS1402 Geographic Information Systems£		1				1,3		
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
MAT2200 Operations Research 1		2				2		Pre-requisite: MAT1102 or ENM1600 or equivalent or approval from the examiner. Enrolment is not permitted in MAT2200 if MAT1200 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		
URP1001 Introduction to Urban and Regional Planning		1				1		

Footnotes

§ Unavailable online in S3 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

~ CHE1110 and CHE2120 have a highly recommended residential school component in external mode.

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Environmental Engineering major part-time recommended enrolment pattern

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
SVY1500 Spatial Science for Engineers		2				2		
MEC1201 Engineering Materials		1,2				1,2,3		
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ENG1004 Engineering Problem Solving Principles		1				1,2		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
Year 3								
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENV2103 Hydraulics I		1				1		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
Approved Course (Select from minor or approved course list)								
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
Year 3 Practice Courses								
ENV2902 Hydraulics Practice		2		1,2,3			M	Pre-requisite or Co-requisite: ENV2103 or ENV1101
Year 4								
ENV2105 Applied Chemistry and Microbiology		1				1		
ENV2201 Land Studies		1				1		
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Program

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								s: GDET or METC or GDNS or MENS
Approved Course (Select from minor or approved course list)		2				2,3		
Year 4 Practice Courses								
CIV2901 Geology and Geomechanics Practice		2		2,3			M	Pre-requisite or Co-requisite: ENG1901 and CIV2403
Year 5								
ENV3104 Hydraulics II		1				1		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
AGR3304 Soil Science		1				1		
ENV3103 Environmental Pollution		2				2		Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV3105 Hydrology		2				2		
Year 5 Practice Courses								
AGR2902 Field Practice^				3			M	
Year 6								
ENV4203 Public Health Engineering		2				2		Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3003 Engineering Management†		1,3				1,3		
ENV4106 Irrigation Science		2				2		Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
Approved Course (Select from minor or approved course list)								
Year 6 Practice Courses								
ENV3904 Environmental Engineering Practice				3			M	Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR
Year 7								
ENV4204 Environmental Technology		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4107 Water Resources Engineering		2				2		Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4110 Engineering Research Methodology		2				2		
ENV4205 Water and Wastewater Treatment						1		Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the fol lowing Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
Year 7 Practice Courses								
AGR3903 Soil and Water Engineering Practice 2				2			M	
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)								
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)								
Year 8 Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi

Major study: Environmental Engineering (Major Study Code: 16926)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
AGR3305 Precision and Smart Technologies in Agriculture		2				2		
CLI1110 Weather and Climate		1				1		
CHE1110 Chemistry 1~		1		1			HR	
CHE2120 Chemistry 2~		2		2			HR	Pre-requisite: CHE1110
CIV3403 Geotechnical Engineering		2				2		Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3703 Transport Engineering		2				2		
ECO1002 Market Behaviour		2				2		Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
ENG4004 Engineering Project and Operations Management‡		3				2,3		
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
GIS1402 Geographic Information Systems£		1				1,3		
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
MAT2200 Operations Research 1		2				2		Pre-requisite: MAT1102 or ENM1600 or equivalent or approval from the examiner. Enrolment is not permitted in MAT2200 if MAT1200 has been previously completed.
URP3201 Sustainable Urban Design and Development		2				2		
SVY3202 Photogrammetry and Remote Sensing		1				1		
URP1001 Introduction to Urban and Regional Planning		1				1		

Footnotes

§ Unavailable online in S3 2023

^ The residential school for this course may involve overnight field trips for which each student will be responsible for their own accommodation costs.

† The semester 3 offering of this course is offered in odd numbered years only.

~ CHE1110 and CHE2120 have a highly recommended residential school component in external mode.

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Instrumentation Control and Automation Engineering major full-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles		1				1,2		
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1100 Introduction to Engineering Design		1,2				1,2		
MEC1201 Engineering Materials		1,2				1,2,3		
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
Practice Courses Year 1								
ENG1901 Engineering Practice 1		1,2		2,3			M	
ELE1911 Electrical and Electronic Practice A~#		2		3			M	
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics§		1				1,		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
Approved Course (Select from minor or approved course list)		1				1		
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
ELE2103 Linear Systems and Control		2				2		
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B#		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
Academic Courses Year 3								
MEC3107 Thermofluids		1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the following Programs: GCNS or GDNS Enrolment is not permitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
ENG3003 Engineering Management†		1				1,3		
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE4109 Measurement Science and Instrument Engineering>						1		
ELE4307 Real Time Systems		2				2		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: GCEN or METC or MEPR or MENS
ENG4110 Engineering Research Methodology		2				2		
Practice Courses Year 3								
ELE3914 Electrical and Electronic Practice D		1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
MEC3905 Mechatronic Practice				2			M	
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
MEC4108 Advanced Thermofluids		1				1		Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully completed, or are currently enrolled in, MEC4103
Approved Course (Select from minor or approved course list)		1				1		
ELE4506 Industrial Process Automation						1		Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
Approved Course (Select from minor or approved course list)		2				2		
Approved Course (Select from minor or approved course list)		2				2		

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses Year 4								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: MEPR or GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE3305 Computer Systems and Communications Protocols		1				1		
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
CSC1401 Foundation Programming£		1,2				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC5105 Combustion>						2		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
> Offered Odd Years Only
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
‡ The semester 3 offering of this course is offered in even numbered years only.
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Instrumentation Control and Automation Engineering major part-time recommended enrolment pattern

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2			1	1,2		
ENM1600 Engineering Mathematics	1	1,2			1	1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1100 Introduction to Engineering Design	1	1,2			1	1,2		
ENG1004 Engineering Problem Solving Principles	1	1			1	1,2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2	1	2,3			M	
Academic Courses Year 2								
ELE1301 Computer Engineering	2	1			2	1		
ELE1502 Electronic Circuits	2	1			2	1		
MEC1201 Engineering Materials	2	1,2			2	1,2,3		
ELE1801 Electrical Technology§	2	2			2	2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses Year 2								
ELE1911 Electrical and Electronic Practice A~‡	2	2	2	3			M	
Academic Courses Year 3								
ENM2600 Advanced Engineering Mathematics§	3	1			3	1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	3	1			3	1		Pre-requisite: ELE1301
ENG3104 Engineering Simulations and Computations	3	2			3	2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ELE2103 Linear Systems and Control	3	2			3	2		
Practice Courses Year 3								
ELE2912 Electrical and Electronic Practice B‡	3	1	3	3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 4								
ENG2002 Technology, Sustainability and Society	4	1,2			4	1,2,3		
Approved Course (Select from minor or approved course list)	4	1			4	1		
ELE2504 Electronic Design and Analysis	4	2			4	2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
MEC2106 Introduction to Thermofluids	4	2			4	2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
Practice Courses Year 4								
ELE2913 Electrical and Electronic Practice C					4	2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 5								
MEC3107 Thermofluids	5	1			5	1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
ENG3003 Engineering Management†	5	1			5	1,3		
ELE4307 Real Time Systems	5	2			5	2		Pre-requisite: ELE1301 or S tudents must be enrolled in one of the following Program s: GCNS or GDNS or MENS or MEPR
Approved Course (Select from minor or approved course list)	5	2			5	2		
Practice Courses Year 5								
ELE3914 Electrical and Electronic Practice D	5	1	5	3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
Academic Courses Year 6								
ELE3105 Computer Controlled Systems	6	1			6	1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE4109 Measurement Science and Instrument Engineering>					6	1		
MEC2501 Process Control Systems					6	2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
ELE3506 Electronic Measurement	6	2			6	2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
Practice Courses Year 6								
MEC3905 Mechatronic Practice			6	2			M	
Academic Courses Year 7								
MEC4108 Advanced Thermofluids	7	1			7	1		Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or S tudents must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully com

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								pleted, or are currently en rolled in, MEC4103
Approved Course (Select from minor or approved course list)	7	1			7	1		
ENG4110 Engineering Research Methodology	7	2			7	2		
MEC4406 Robotics and Machine Vision	7	2			7	2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
Practice Courses Year 7								
ENG3902 Professional Practice 1			7	2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 8								
ELE4506 Industrial Process Automation					8	1		Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ENG4111 Research Project Part 1	8	1			8	1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
ENG4112 Research Project Part 2	8	1,2			8	1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	8	2			8	2		
Practice Courses Year 8								
ENG4903 Professional Practice 2	8	1	8	2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional					8	1,2,3		

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: MEPR or GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE3305 Computer Systems and Communications Protocols		1				1		
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or S tudents must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or S tudents must be enrolled in the following Program: GCN S, GDNS, MENS or MEPR
CSC1401 Foundation Programming[£]		1,2				1,2,3		
CSC2402 Object-Oriented Programming in C++		1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN

Major study: Instrumentation Control and Automation Engineering (Major Study Code: 17741)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5105 Combustion>						2		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
‡ Unavailable in External mode in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
> Offered Odd Years Only
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Mechanical Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

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 click on the link in the table below to ascertain if a course is offered in another term.

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ENG1100 Introduction to Engineering Design	1	1				1,2		
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
Academic Courses								
MEC1201 Engineering Materials	1	2				1,2,3		
MEC2406 Introduction to Mechatronics and Automation	1	2				2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling	1	2				2		
Year 2								
Academic Courses								
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2401 Dynamics I	2	1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses								
MEC2901 Mechanical Practice 1	2	1		3			M	
MEC2902 Mechanical Practice 2	2	1		1			M	
Academic Courses								
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ELE1801 Electrical Technology§	2	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2106 Introduction to Thermofluids	2	2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
MEC2301 Design of Machine Elements	2	2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Year 3								
Academic Courses								
MEC3203 Materials Technology	3	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC2202 Manufacturing Processes	3	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC3107 Thermofluids	3	1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
MEC4302 Computational Mechanics in Design	3	1				1		Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC3204 Production Engineering	3	2				2		

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC3303 Mechanical and Mechatronic System Design	3	2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
ENG4110 Engineering Research Methodology	3	2				2		
MEC4403 Advanced Dynamics	3	2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR
Practice Courses								
MEC3903 Mechanical Practice 3	3	2		3			M	
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 4								
Academic Courses								
MEC4108 Advanced Thermofluids	4	1				1		Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or S tudents must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully com pleted, or are currently en rolled in, MEC4103
ENG3003 Engineering Management†	4	1				1,3		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from approved course list)	4	1				1,2,3		
Practice Courses								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								site: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Academic Courses								
Approved Course (Select from approved course list)	4	2				1,2,3		
MEC4104 Renewable Energy Technology	4	2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Courses (Select from approved course list)	4	2				1,2,3		
Practice Courses								
MEC3904 Mechanical Practice 4	4	2		2			M	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol lowing Programs: GDNS or MENS or MEPR
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5105 Combustion>						2		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV4803 Mechanics and Technology of Fibre Composites						1		Pre-requisite: CIV3506 or CIV4506 or (MEC2402 and MEC3203)
ELE1502 Electronic Circuits		1				1		
ELE2103 Linear Systems and Control		2				2		
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ENV4204 Environmental Technology[@]		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4004 Engineering Project and Operations Management[‡]		3				2,3		

Footnotes

§ Unavailable online in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
> Offered Odd Years Only. Students who intend to take this course in Year 3 should enrol in MEC3204 Production Engineering in Year 4.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.
‡ The semester 3 offering of this course is offered in even numbered years only.

Mechanical Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
MEC1201 Engineering Materials		1,2				1,2,3		
MEC2406 Introduction to Mechatronics and Automation		2				2		
Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
Academic Courses								
ENG1004 Engineering Problem Solving Principles		1				1,2		

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG1100 Introduction to Engineering Design		1,2				1,2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC2304 Solid Modelling		2				2		
Year 3								
Academic Courses								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
Practice Courses								
MEC2901 Mechanical Practice 1		1		3			M	
Year 4								
Academic Courses								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: MEPR or GCEN or GEPR
Practice Courses								
MEC2902 Mechanical Practice 2		1		1			M	
Year 5								
Academic Courses								
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
MEC3204 Production Engineering		2				2		
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
Practice Courses								
MEC3903 Mechanical Practice 3		2		3			M	
Year 6								
Academic Courses								
MEC3107 Thermofluids		1				1		Pre-requisite: (MEC2106 and ENM1600) or Students must be enrolled in one of the fol lowing Programs: GCNS or GDNS Enrolment is not per mitted in MEC3107 if MEC2101 or MEC3102 have been previously completed
MEC4302 Computational Mechanics in Design		1				1		Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC4403 Advanced Dynamics		2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR
Approved Course (Select from approved course list)		2				1,2,3		
Practice Courses								
MEC3904 Mechanical Practice 4		2		2			M	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GDNS or MENS or MEPR
Year 7								
Academic Courses								
MEC4108 Advanced Thermofluids		1				1		Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or S tudents must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully com pleted, or are currently en rolled in, MEC4103
ENG3003 Engineering Management†		1,3				1,3		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
ENG4110 Engineering Research Methodology		2				2		
Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
Academic Courses								
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from approved course list)		1				1,2,3		
Practice Courses								
ENG4909 Work Experience - Professional						1,2,3		
Academic Courses								
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Courses (Select from approved course list)		2				1,2,3		
Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requi site: ENG4111 or ENG4112 or ENG8411 or ENG8412
Select approved courses from the following or other elective courses as approved by the Program Coordinator								
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
MEC5100 Computational Fluid Dynamics						1		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5105 Combustion>						2		Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
CIV2503 Structural Design I		2				2		Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC Infrastructure Management major or BENS Infrastructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CIV4803 Mechanics and Technology of Fibre Composites						1		Pre-requisite: CIV3506 or CIV4506 or (MEC2402 and MEC3203)
ELE1502 Electronic Circuits		1				1		
ELE2103 Linear Systems and Control		2				2		
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR

Major study: Mechanical Engineering (Major Study Code: 16928)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENV4204 Environmental Technology[@]		1				1		Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4004 Engineering Project and Operations Management[‡]		3				2,3		

Footnotes

§ Unavailable online in S3 2023
† The semester 3 offering of this course is offered in odd numbered years only.
> Offered Odd Years Only.
@ Students who wish to enrol in ENV4204 Environmental Technology as an Approved course, should consult their Program Director.
‡ The semester 3 offering of this course is offered in even numbered years only.

Mechatronic Engineering major full-time recommended enrolment pattern (Toowoomba and Springfield campus)

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 click on the course link in the table below to ascertain if a course is offered in another term.

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ENG1100 Introduction to Engineering Design	1	1				1,2		
ELE1301 Computer Engineering	1	1				1		
Practice Courses								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
Academic Courses								
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
MEC2406 Introduction to Mechatronics and Automation	1	2				2		
CIV1501 Engineering Statics	1	2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC2304 Solid Modelling	1	2				2		

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 2								
Academic Courses								
MEC1201 Engineering Materials	2	1				1,2,3		
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
MEC2402 Stress Analysis	2	1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2401 Dynamics I	2	1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
Practice Courses								
MEC2901 Mechanical Practice 1	2	1		3			M	
MEC2902 Mechanical Practice 2	2	1		1			M	
Academic Courses								
ELE1801 Electrical Technology§	2	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
MEC2301 Design of Machine Elements	2	2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ELE2103 Linear Systems and Control	2	2				2		
Practice Courses								
ELE1911 Electrical and Electronic Practice A~#	2	2		3			M	
Year 3								
Academic Courses								
ELE1502 Electronic Circuits	3	1				1		
ENG2002 Technology, Sustainability and Society	3	1				1,2,3		

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC4302 Computational Mechanics in Design	3	1				1		Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE2303 Embedded Systems Design	3	1				1		Pre-requisite: ELE1301
MEC4403 Advanced Dynamics	3	2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR
MEC3303 Mechanical and Mechatronic System Design	3	2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
ELE2504 Electronic Design and Analysis	3	2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses								
MEC3905 Mechatronic Practice				2			M	
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 4								
Academic Courses								
MEC2202 Manufacturing Processes	4	1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
ELE3105 Computer Controlled Systems	4	1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ENG3003 Engineering Management†	4	1				1,3		
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								BENG or BENH Undergraduate students must have completed 22 units in their program.
Practice Courses								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Academic Courses								
Approved Course (Select from approved course list)	4	2				1,2,3		
ELE3506 Electronic Measurement	4	2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS
MEC4406 Robotics and Machine Vision	4	2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Select one (1) approved course from the following or other elective course as approved by the Program Director								
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ELE3305 Computer Systems and Communications Protocols		1				1		
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The Semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.

Mechatronic Engineering major part-time recommended enrolment pattern (Toowoomba and Springfield campus)

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
Academic Courses								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1004 Engineering Problem Solving Principles		1				1,2		
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
MEC2406 Introduction to Mechatronics and Automation		2				2		
Year 2								
Academic Courses								
ENG1100 Introduction to Engineering Design		1,2				1,2		
ELE1301 Computer Engineering		1				1		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC2304 Solid Modelling		2				2		
Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 3								
Academic Courses								
MEC1201 Engineering Materials		1,2				1,2,3		

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENM2600 Advanced Engineering Mathematics§		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE1801 Electrical Technology§		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
Year 4								
Academic Courses								
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2301 Design of Machine Elements		2				2		Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ELE2103 Linear Systems and Control		2				2		
Practice Courses								
MEC2901 Mechanical Practice 1		1		3			M	
MEC2902 Mechanical Practice 2		1		1			M	
ELE1911 Electrical and Electronic Practice A~#		2		3			M	
Year 5								
Academic Courses								
ELE1502 Electronic Circuits		1				1		
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		
MEC4403 Advanced Dynamics		2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC3303 Mechanical and Mechatronic System Design		2				2		Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
Year 6								
MEC4302 Computational Mechanics in Design		1				1		Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
Approved Course (Select from approved course list)								
Practice Courses								
MEC3905 Mechatronic Practice				2			M	
Year 7								
Academic Courses								
MEC2202 Manufacturing Processes		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: MEPR or GCEN
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS
ENG4110 Engineering Research Methodology		2				2		
Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 8								
Academic Courses								
ENG3003 Engineering Management†		1,3				1,3		
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
Practice Courses								
ENG4909 Work Experience - Professional						1,2,3		
Academic Courses								
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
Select one (1) approved course from the following or other elective course as approved by the Program Coordinator								
ENG4004 Engineering Project and Operations Management‡		3				2,3		
ELE3305 Computer Systems and Communications Protocols		1				1		
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR

Major study: Mechatronic Engineering (Major Study Code: 16929)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
MEC3203 Materials Technology		1				1		Pre-requisite: MEC1201 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3204 Production Engineering		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The Semester 3 offering of this course is offered in odd numbered years only.
‡ The semester 3 offering of this course is offered in even numbered years only.

Power Engineering major full-time recommended enrolment pattern

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.

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
ENG1100 Introduction to Engineering Design	1	2				1,2		
ELE1801 Electrical Technology§	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials	1	2				1,2,3		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1,2		2,3			M	
ELE1911 Electrical and Electronic Practice A~#	1	2		3			M	

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics§	2	1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design	2	1				1		Pre-requisite: ELE1301
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
Approved Course (Select from minor or approved course list)	2	1				1		
ELE2504 Electronic Design and Analysis	2	2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2103 Linear Systems and Control	2	2				2		
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
MEC2106 Introduction to Thermofluids	2	2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B#	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 3								
ELE3803 Electrical Plant	3	1				1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3105 Computer Controlled Systems	3	1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or MEPR or MENS or METC or GEPR
ENG3003 Engineering Management†	3	1				1,3		
ELE3305 Computer Systems and Communications Protocols	3	1				1		
ELE3805 Power Electronics Principles and Applications	3	2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Course (Select from minor or approved course list)	3	2				2		
Approved Course (Select from minor or approved course list)	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
Practice Courses Year 3								
ELE3914 Electrical and Electronic Practice D	3	1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 4								
ELE4807 Power Systems Analysis	4	1				1		
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4111 Research Project Part 1	4	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
Approved Course (Select from minor or approved course list)	4	1				1		
ELE2704 Electricity Supply Systems	4	2				2		Pre-requisite: ELE1801 or S tudents must be enrolled in

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								one of the following Programs: MEPR or GCEN or METC or GEPR
MEC4104 Renewable Energy Technology	4	2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
ENG4112 Research Project Part 2	4	2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from minor or approved course list)	4	2				2,3		
Practice Courses Year 4								
ENG4903 Professional Practice 2	4	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE4307 Real Time Systems		2				2		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4506 Industrial Process Automation						1		Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ELE4605 Fields and Waves		1				1		Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2605 Construction Engineering		1				1		
GIS1401 Geographic Data Presentation		2				2		
GIS1402 Geographic Information Systems£		1				1,3		
ENG4004 Engineering Project and Operations Management‡		3				2,3		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC4403 Advanced Dynamics		2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The Semester 3 offering of this course is offered in odd numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
‡ The Semester 3 offering of this course is offered in even numbered years only.
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Power Engineering major part-time recommended enrolment pattern

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENM1600 Engineering Mathematics		1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ENG1004 Engineering Problem Solving Principles		1				1,2		
ENG1002 Introduction to Engineering and Built Environment Applications		1,2				1,2		
ENG1100 Introduction to Engineering Design		1,2				1,2		
Year 1 Practice Courses								
ENG1901 Engineering Practice 1		1,2		2,3			M	
Year 2								
ELE1301 Computer Engineering		1				1		
ELE1502 Electronic Circuits		1				1		
ELE1801 Electrical Technology[§]		2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC1201 Engineering Materials		1,2				1,2,3		
Year 2 Practice Courses								
ELE1911 Electrical and Electronic Practice A[~#]		2		3			M	
Year 3								
ENM2600 Advanced Engineering Mathematics[§]		1				1,3		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
ELE2303 Embedded Systems Design		1				1		Pre-requisite: ELE1301
ELE2504 Electronic Design and Analysis		2				2		Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2103 Linear Systems and Control		2				2		
Year 3 Practice Courses								
ELE2912 Electrical and Electronic Practice B[#]		1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
Year 4								
ENG2002 Technology, Sustainability and Society		1,2				1,2,3		

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Course (Select from minor or approved course list)								
ENG3104 Engineering Simulations and Computations		2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
MEC2106 Introduction to Thermofluids		2				2		Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
Year 4 Practice Courses								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS
Year 5								
ELE3803 Electrical Plant		1				1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE3105 Computer Controlled Systems		1				1		Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3805 Power Electronics Principles and Applications		2				2		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Approved Course (Select from minor or approved course list)		2				1,2,3		
Year 5 Practice Courses								
ELE3914 Electrical and Electronic Practice D		1		3			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR
Year 6								
ENG3003 Engineering Management†		1,3				1,3		
ELE3305 Computer Systems and Communications Protocols		1				1		
Approved Course (Select from minor or approved course list)		2				1,2,3		

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE2704 Electricity Supply Systems		2				2		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
Year 6 Practice Courses								
ELE3915 Electrical and Electronic Practice E		2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or Students must be enrolled in one of the following Programs: MENS or MEPR
Year 7								
ELE4807 Power Systems Analysis		1				1		
ELE4804 Power Systems Protection						1		Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG4110 Engineering Research Methodology		2				2		
MEC4104 Renewable Energy Technology		2				2		Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
Year 7 Practice Courses								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Year 8								
ENG4111 Research Project Part 1		1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergraduate students must have completed 22 units in their program.
Approved Course (Select from minor or approved course list)								
ENG4112 Research Project Part 2		1,2				1,2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Course (Select from minor or approved course list)								
Year 8 Practice Courses								
ENG4903 Professional Practice 2		1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select a minor study or approved courses from the following or other elective courses as approved by the Program Director								
ELE2601 Telecommunications Principles		1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE3107 Signal Processing		2				2		
ELE4307 Real Time Systems		2				2		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4506 Industrial Process Automation						1		Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ELE4605 Fields and Waves		1				1		Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
CIV2403 Geology and Geomechanics		2				2		Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR
CIV2605 Construction Engineering		1				1		
GIS1401 Geographic Data Presentation		2				2		
GIS1402 Geographic Information Systems£		1				1,3		
ENG4004 Engineering Project and Operations Management‡		3				2,3		

Major study: Power Engineering (Major Study Code:16930)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
MEC2401 Dynamics I		1				1		Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1		Pre-requisite: CIV1501 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC4403 Advanced Dynamics		2				2		Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR
CHE1110 Chemistry 1^		1		1			HR	

Footnotes

§ Unavailable online in S3 2023
~ Unavailable in On-Campus mode in S2 2023
# Unavailable in External mode in S3 2023
† The Semester 3 offering of this course is offered in odd numbered years only.
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
‡ The Semester 3 offering of this course is offered in even numbered years only.
^ CHE1110 Chemistry 1 has a highly recommended residential school requirement in External mode.

Bachelor of Spatial Science (Honours) (BSPH) - BSpSc(Hons)

QTAC code (Australian and New Zealand applicants): Surveying (Springfield campus: 927221); Unspecified (Toowoomba campus: 907221; External: 907225)

CRICOS code (International applicants): 079520A

	On-campus^	External*
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) 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:	4 years full-time, 8 years part-time	
Program articulation:	From: Associate Degree of Spatial Science; Bachelor of Spatial Science Technology To: ; Master of Spatial Science Technology	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ Surveying is the only major available on-campus at Springfield.

* Students enrolled in the external mode of study should note that there are mandatory on-campus residential schools held at UniSQ Springfield for some courses in this program.

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 Bachelor of Spatial Science (Honours) (Surveying) is fully accredited by the Surveyors Board of Queensland and is recognised in every Australian state and in New Zealand through reciprocal arrangements. The degree, together with relevant industry experience, enables registration and/or licensing as a professional surveyor with the Boards of Surveyors in Australia and New Zealand.

Graduates from the Bachelor of Spatial Science (Honours) are eligible to apply for membership with the Surveying and Spatial Science Institute Australia.

Program aims

The Bachelor of Spatial Science (Honours) program provides students with the educational requirements to become a professional spatial scientist and the ability to undertake postgraduate studies. The program equips students with a core of theoretical, scientific, analytical, managerial, professional, research and communication skills that will permit them to undertake an in-depth study of the fundamental science and practice of spatial science in one of two fields: Geographic Information Systems (GIS) or Surveying. The program provides

students with sufficient knowledge of surveying and spatial information systems to be eligible to gain employment, certification and, where appropriate, registration as a Professional Surveyor or Spatial Scientist.

In addition, students obtain knowledge of the natural, legal, commercial, industrial and social environments in which they will function as professionals. The program instils in students the need for continuing professional development and is designed to identify, and award honours to, students who have the capacity to undertake study at an advanced level and to make an original contribution to the fundamental science and practice of spatial science. The class of honours will be determined by academic performance. Refer to the Honours section of this entry for further details.

Program objectives

A student who successfully completes the Bachelor of Spatial Science (Honours) should be able to apply:

- advanced knowledge in the theories, concepts, methods and technologies in the areas of surveying and spatial science
- skills and knowledge in the analysis, synthesis and evaluation of appropriate technologies, methods and processes to solve and complete a range of surveying and spatial science
- development of advanced technical and cognitive skills to create innovative and sustainable solutions utilising cutting-edge technologies, supported by research to collect, store and manipulate spatial data
- knowledge and skills to accept responsibility and autonomously apply well-informed judgements regarding professional practices, theories and processes
- advanced oral and written communication skills to transmit and convey the necessary information and ideas to relevant stakeholders
- consistent adaptation and application of academic norms and ethical standards in decision making when working collaboratively in a professional capacity
- knowledge of surveying and spatial information systems of sufficient depth to be eligible for employment, certification and, where appropriate, registration as a Professional Surveyor or Spatial Scientist.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **74.15**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

Applicants are advised to also address the following:

- Recommended Prior Study: Physics (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Spatial Science (Honours) is a 32-unit program comprising Academic courses plus Practice courses.

Academic courses are normally one-unit courses and involve approximately 155 hours of student workload per unit.

Practice courses are zero unit courses and each involves approximately 50 hours of student workload.

Required time limits

Students have a maximum of 10 years to complete this program.

Electives/Approved courses

Approved courses are part of the Academic program and students must select approved courses from a specified list.

Practice courses

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern in the following table. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.

Practical experience

Work experience is desirable and encouraged but is not required for the completion of the Bachelor of Spatial Science (Honours) program. Students are encouraged to obtain work experience during vacation periods.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

PSG3900 Professional Week 1** and ENG4110 Engineering Research Methodology are to be studied in the student's penultimate year. After completing PSG3900 Professional Week 1, students must study the following courses;PSG4111 Research Project A and PSG4112 Research Project B and PSG4900 Professional Week 2** in the same academic year.

** The residential school for PSG3900 Professional Week 1 and PSG4900 Professional Week 2 will be held at the Springfield Campus.

Exit points

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

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Spatial Science (Honours) program.

Honours

The level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule, using Schedule B for overall GPA and EITHER: the average grade across both PSG4111 Research Project A and PSG4112 Research Project B; OR the grade in PSG4112 Research Project B alone (whichever is the higher) to satisfy the 'Performance in honours project component'.

Geographic Information Systems major recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Full-time recommended enrolment pattern

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
GIS1402 Geographic Information Systems[£]	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment[$]	1	1,2				1,2		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2				1,2		
SVY1110 Introduction to Global Positioning System	1	2				2		
CSC1401 Foundation Programming[£]	1	2				2		
Practice Course Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	1	1			M	
Year 2, Semester 1								
Academic Courses								
ENV2201 Land Studies	2	1				1		
URP1001 Introduction to Urban and Regional Planning	2	1				1		
GIS3407 GIS Programming and Visualisation	2	1				1		Pre-requisite: GIS1402 and CSC1401 or Students must

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
ENG2002 Technology, Sustainability and Society	2	1				1,2,3		
Year 2, Semester 2								
URP2002 Local Government Planning Practice and Technology	2	2				2		
Approved course (Select from the approved courses list)	2	2				2		
SVY3302 Property Valuation and Development	2	2				2		
GIS3406 Remote Sensing and Image Processing	2	2				2		
Practice Courses Year 2								
GPL2901 GIS and Planning Practice 1£			2	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS)
GPL3902 GIS and Planning Practice 2£			2	3			M	Pre-requisite: (GIS1402 or URP2001) Pre-requisite or Co-requisite: GPL2901
Year 3, Semester 1								
Academic Courses								
CSC3400 Database Systems£	3	1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
Approved course (Select from the approved courses list)	3	1				1		
SVY3202 Photogrammetry and Remote Sensing	3	1				1		
SVY4309 Practice Management for Spatial Scientists	3	1				1		
Year 3, Semester 2								
Academic Courses								
GIS3008 Applications of GIS and Remote Sensing	3	2				2		Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
GIS2405 Spatial Analysis and Modelling	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
GIS2407 Web Based Geographic Information System	3	2				2		Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
Practice Courses Year 3								
PSG3900 Professional Week 1~			3	2			M	Pre-requisite: Students must be enrolled in one of the fol

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: BSPS or BSPH or BURP
Year 4, Semester 1								
Academic Courses								
Approved course (Select from the approved courses list)	4	1				1		
CSC2402 Object-Oriented Programming in C++	4	1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
PSG4111 Research Project A^+	4					1		Pre-requisite: (PSG3900 or ENG3902) and ENG4110 and Students must be en rolled in one of the following Programs: BSPS or BSPH or BURP. Students must com plete PSG4111 and PSG4112 in the same year.
LAW2107 Environmental Law**	4					2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
Year 4, Semester 2								
Academic Courses								
Approved course (Select from the approved courses list)	4	2				2		
Approved course (Select from the approved courses list)	4	2				2		
CSC2406 Web Technology 1	4	2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
PSG4112 Research Project B^++						1,2		Pre-requisite: PSG4111 and Students must be enrolled in one of the following Program s: BSPS or BSPH or BURP. Students must complete PSG4111 and PSG4112 in the same year.
Practice Courses Year 4								
PSG4900 Professional Week 2~			4	2			M	Pre-requisite: (PSG3900 or ENG3902) and Students must be enrolled in one of the following Programs: BSPS or BSPH or BURP. Students cannot enrol in PSG3900 and

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								PSG4900 in the same semester.
Approved Courses (Select 5 courses from the following)								
URP2001 Planning Structures and Statutory Planning		1				1		
URP3201 Sustainable Urban Design and Development		2				2		
URP4002 Urban and Regional Planning Theory		1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
CSC2406 Web Technology 1		2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
REN2200 Ecology for Sustainability		1				1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
STA1003 Fundamental Statistics[§]		1,2				1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previous ly completed. Students en rolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
MGT1101 Human Capabilities for Business[£]		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
MKT1001 Marketing Fundamentals		1,2				1,2		Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
ENM2600 Advanced Engineering Mathematics[§]		1				1		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ACC1201 Data Insights and Financial Performance[£]		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
AGR2301 Agricultural Science		2				2		
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
REN3302 Sustainable Resource Use		2				2		
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol

Major study: Geographic Information Systems (Major Study Code: 15407)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GCST or GDST or MSPT

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
$ Unavailable online S2 2023
~ The residential school for PSG3900 and PSG4900 will be held at the Springfield Campus.
^ It is recommended that these courses are undertaken in the same academic year.
+ It is recommended that students should have completed PSG3900 prior to undertaking this course.
** Course is offered in the interim trimester layer, please consult for interim trimester dates.
++ It is recommended that students should also be enrolled in PSG4900 while undertaking this course.
§ Unavailable online in S3 2023

Notes:

Other courses may be admissible as an approved course. However students must obtain approval from the Faculty of Health, Engineering and Sciences prior to enrolling in the course. Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an approved course with the approval of the Faculty of Health, Engineering and Sciences.

Geographic Information Systems major recommended enrolment pattern (part-time)

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
GIS1402 Geographic Information Systems£	1	1				1,3		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
SVY1110 Introduction to Global Positioning System	1	2				2		
Year 2, Semester 1								
SVY1102 Surveying A	2	1				1		
ENG1002 Introduction to Engineering and Built Environment Applications	2	1				1, 2		
Year 2, Semester 2								
CSC1401 Foundation Programming£	2	2				2		
ENG1003 Problem Solving in Engineering and the Built Environment$	2	1,2				1,2		
Practice Course Year 2								
SVY1901 Surveying and Spatial Science Practice 1	2	1	2	1			M	
Year 3, Semester 1								
ENV2201 Land Studies	3	1				1		
URP1001 Introduction to Urban and Regional Planning	3	1				1		

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 3, Semester 2								
URP2002 Local Government Planning Practice and Technology	3	2				2		
Approved course (Select from the approved courses list)	3	2				2		
Year 4, Semester 1								
GIS3407 GIS Programming and Visualisation	4	1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT
ENG2002 Technology, Sustainability and Society	4	1,2				1,2,3		
Year 4, Semester 2								
SVY3302 Property Valuation and Development	4	2				2		
GIS3406 Remote Sensing and Image Processing	4	2				2		
Practice Courses Year 4								
GPL2901 GIS and Planning Practice 1[£]			4	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)
GPL3902 GIS and Planning Practice 2[£]			4	3			M	Pre-requisite: (GIS1402 or URP2001) Pre-requisite or Co-requisite: GPL2901
Year 5, Semester 1								
CSC3400 Database Systems[£]	5	1				1,3		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
Approved course (Select from the approved courses list)	5	1				1		
Year 5, Semester 2								
GIS3008 Applications of GIS and Remote Sensing	5	2				2		Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT
GIS2405 Spatial Analysis and Modelling	5	2				2		
Year 6, Semester 1								
SVY3202 Photogrammetry and Remote Sensing	6	1				1		
SVY4309 Practice Management for Spatial Scientists	6	1				1		
Year 6, Semester 2								
ENG4110 Engineering Research Methodology	6	2				2		
GIS2407 Web Based Geographic Information System	6	2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or MSPT or GCNS or GDNS or MENS
Practice Courses Year 6								
PSG3900 Professional Week 1~				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BSPS or BSPH or BURP
Year 7, Semester 1								
Approved course (Select from the approved courses list)	7	1				1		
CSC2402 Object-Oriented Programming in C++	7	1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
Year 7, Semester 2								
Approved course (Select from the approved courses list)	7	2				2		
CSC2406 Web Technology 1	7	2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
Year 8, Semester 1								
PSG4111 Research Project A^+						1		Pre-requisite: (PSG3900 or ENG3902) and ENG4110 and Students must be en rolled in one of the following Programs: BSPS or BSPH or BURP. Students must com plete PSG4111 and PSG4112 in the same year.
LAW2107 Environmental Law**	8					2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
Year 8, Semester 2								
Approved course (Select from the approved courses list)	8	2				2		
PSG4112 Research Project B^++						1,2		Pre-requisite: PSG4111 and Students must be enrolled in one of the following Program s: BSPS or BSPH or BURP. Students must complete PSG4111 and PSG4112 in the same year.

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses Year 8								
PSG4900 Professional Week 2~				2			M	Pre-requisite: (PSG3900 or ENG3902) and Students must be enrolled in one of the following Programs: BSPS or BSPH or BURP. Students cannot enrol in PSG3900 and PSG4900 in the same semester.
Approved Courses (Select 5 courses from the following)								
URP2001 Planning Structures and Statutory Planning		1				1		
URP3201 Sustainable Urban Design and Development		2				2		
URP4002 Urban and Regional Planning Theory		1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
CSC2406 Web Technology 1		2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
REN2200 Ecology for Sustainability		1				1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
STA1003 Fundamental Statistics§		1,2				1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previous ly completed. Students en rolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
MGT1101 Human Capabilities for Business£		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
MKT1001 Marketing Fundamentals		1,2				1,2		Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Mar keting major students)
ENM2600 Advanced Engineering Mathematics§		1				1		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
AGR2301 Agricultural Science		2				2		

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
REN1201 Environmental Studies		1				1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
REN3302 Sustainable Resource Use		2				2		
SVY1104 Survey Computations A		2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
$ Unavailable online S2 2023
~ The residential school for PSG3900 and PSG4900 will be held at the Springfield Campus.
^ It is recommended that these courses are undertaken in the same academic year.
+ It is recommended that students should have completed PSG3900 prior to undertaking this course.
** Course is offered in the interim trimester layer, please consult for interim trimester dates.
++ It is recommended that students should also be enrolled in PSG4900 while undertaking this course.
§ Unavailable online in S3 2023

Notes:

Other courses may be admissible as an approved course. However students must obtain approval from the Faculty of Health, Engineering and Sciences prior to enrolling in the course. Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an approved course with the approval of the Faculty of Health, Engineering and Sciences.

Surveying Major recommended enrolment pattern (Toowoomba and Springfield campus)

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 specification to ascertain if a course is offered in another term.

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ENM1600 Engineering Mathematics	1	1,2				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed
GIS1402 Geographic Information Systems£	1	1				1,3		
SVY1102 Surveying A	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment$	1	1,2				1,2		
Year 1, Semester 2								
SVY1110 Introduction to Global Positioning System	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	1,2				1,2		
SVY1104 Survey Computations A	1	2				2		Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								lowing Programs: GCST or GDST or MSPT
GIS1401 Geographic Data Presentation	1	2				2		
Practice Courses Year 1								
SVY1901 Surveying and Spatial Science Practice 1	1	1	2	1			M	
Year 2, Semester 1								
Academic Courses								
SVY2301 Automated Surveying Systems	2	1			2	1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A	2	1				1		Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3202 Photogrammetry and Remote Sensing	2	1				1		
SVY2302 Mine Surveying	2	1				1		Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSPT
Year 2, Semester 2								
CSC1401 Foundation Programming£	2	1,2				1,2,3		
SVY2303 Construction Surveying	2	2				2		Pre-requisite: SVY1104
ENG2002 Technology, Sustainability and Society	2	1,2				1,2,3		
Choose one of the following two courses:								
SVY3304 Cadastral Surveying (Queensland)^^	2	2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)^^						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
Practice Courses Year 2								
SVY2902 Surveying and Spatial Science Practice 2£	2	1	2	3			M	Pre-requisite: SVY1901 and SVY1104 and SVY1110 and GIS1401
SVY2903 Surveying and Spatial Science Practice 3£	2	2	2	3			M	Pre-requisite: SVY1901 and SVY2301 and (SVY3304 or SVY3306)

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 3, Semester 1								
Academic Courses								
CIV2701 Road Design and Location	3	1				1		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or GCEN or GEPR
ENV2201 Land Studies	3	1				1		
URP1001 Introduction to Urban and Regional Planning	3	1				1		
SVY2105 Survey Computations B	3	1				1		Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
Year 3, Semester 2								
SVY3400 Advanced Surveying	3	2				2		Pre-requisite: (SVY2106 and SVY2105) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSPT or MENS
URP3201 Sustainable Urban Design and Development	3	2				2		
ENG4110 Engineering Research Methodology	3	2				2		
SVY3107 Geodetic Surveying B	3	2				2		Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT
Practice Courses Year 3								
SVY3904 Surveying and Spatial Science Practice 4[£]			3	2,3			M	Pre-requisite: SVY2902 or SVY2903 and SVY3304 or SVY3306 and SVY3202
PSG3900 Professional Week 1[~]				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BSPS or BSPH or BURP
Year 4, Semester 1								
Academic Courses								
SVY4309 Practice Management for Spatial Scientists	4	1				1		
Approved Course (Select from the Approved Course list)	4	1				1		
PSG4111 Research Project A[^+]						1		Pre-requisite: (PSG3900 or ENG3902) and ENG4110 and Students must be en rolled in one of the following Programs: BSPS or BSPH or BURP. Students must com plete PSG4111 and PSG4112 in the same year.
Approved Course (Select from the Approved Course list)	4	1				1		

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 4, Semester 2								
Approved Course (Select from the Approved Course list)	4	2				2		
SVY4304 Land and Cadastral Law^*	4	2				2		
SVY3302 Property Valuation and Development	4	2				2		
PSG4112 Research Project B^++						1,2		Pre-requisite: PSG4111 and Students must be enrolled in one of the following Program s: BSPS or BSPH or BURP. Students must complete PSG4111 and PSG4112 in the same year.
Practice Courses Year 4								
PSG4900 Professional Week 2~			4	2			M	Pre-requisite: (PSG3900 or ENG3902) and Students must be enrolled in one of the following Programs: BSPS or BSPH or BURP. Students cannot enrol in PSG3900 and PSG4900 in the same semester.
Approved Courses (Select 3 courses from the following)								
URP2001 Planning Structures and Statutory Planning		1				1		
URP2002 Local Government Planning Practice and Technology		2				2		
URP4002 Urban and Regional Planning Theory		1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
CIV2605 Construction Engineering		1				1		
SVY3304 Cadastral Surveying (Queensland)**		2				2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3306 Cadastral Surveying (New South Wales)**						2		Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS
GIS3407 GIS Programming and Visualisation		1				1		Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT
MGT1101 Human Capabilities for Business£		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.

Major study: Surveying (Major Study Code: 15408)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
ENM2600 Advanced Engineering Mathematics§		1				1		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
CIV3703 Transport Engineering		2				2		
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR
GIS2405 Spatial Analysis and Modelling		2				2		
GIS3406 Remote Sensing and Image Processing		2				2		
LAW2107 Environmental Law*						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
$ Unavailable online S2 2023
^^ Students should study the course appropriate to their intended jurisdiction of practice.
~ The residential school for PSG3900 and PSG4900 will be held at the Springfield Campus.
^ It is recommended that these courses are undertaken in the same academic year.
+ It is recommended that students should have completed PSG3900 prior to undertaking this course.
^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus
++ It is recommended that students should also be enrolled in PSG4900 while undertaking this course.
** The alternative to the previously completed Cadastral core course may be taken as an elective/approved course.
§ Unavailable online in S3 2023
* Course is offered in the interim trimester layer, please consult for interim trimester dates.

Notes:

Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an Elective with the approval of the Faculty of Health, Engineering and Sciences.

Bachelor of Urban and Regional Planning (Honours) (BURP) - BUrbRegPlan

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907241; External: 907245

CRICOS code (International applicants): 098374D

	On-campus	External~
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	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:	4 years full-time, 8 years part-time	
Program articulation:	From: Associate Degree of Spatial Science	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

~ Students enrolled in the external mode of study should note that there are mandatory on-campus residential schools held at UniSQ Toowoomba and UniSQ Springfield for some courses in this program.

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 Bachelor of Urban and Regional Planning (Honours) is accredited by the Planning Institute of Australia and graduates may seek Planner registration with the Planning Institute of Australia (PIA).

Program aims

The Bachelor of Urban and Regional Planning (Honours) program provides students with the educational requirements to become a professional planner and the ability to undertake postgraduate studies. The program equips students with a core of theoretical, scientific, analytical, managerial, professional, research and communication skills that will permit them to undertake an in-depth study of the fundamental science and practice of Urban and Regional Planning. The program provides students with sufficient knowledge of urban and regional planning to be eligible to gain employment, certification and, where appropriate, registration as a professional planner.

In addition, students obtain knowledge of the natural, legal, commercial, industrial and social environments in which they will function as professionals. The program instils in students the need for continuing professional

development and is designed to identify, and award honours to, students who have the capacity to undertake study at an advanced level and to make an original contribution to the fundamental science and practice of urban and regional planning. The class of honours will be determined by academic performance. Refer to the Honours section of this entry for further details.

Program objectives

A student who successfully completes the Bachelor of Urban and Regional Planning (Honours) should be able to:

- review and apply theories, concepts, methods and technologies, with initiative and judgement, to a range of diverse contexts associated with urban and regional planning
- critically analyse, consolidate, synthesise and evaluate information to generate innovative and sustainable solutions to solve complex Urban and Regional planning problems
- apply advanced technical and cognitive skills to design, collect, store and manipulate research data
- accept responsibility for own learning and autonomously apply well-informed judgements regarding professional practices, theories and processes
- employ a range of advanced oral and written communication skills to clearly and coherently communicate concepts, information and ideas to relevant stakeholders
- consistently apply academic norms and ethical standards to decision making processes when working collaboratively in a professional capacity.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **65.6**, or equivalent qualification.^

- Subject Pre-requisite: English (Units 3 & 4, C).
- English Language Proficiency requirements for Category 2.

Applicants are advised to also address the following:

- Assumed knowledge expectations: General Mathematics

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Bachelor of Urban and Regional Planning (Honours) is a 32-unit program comprising academic courses plus Practice courses.

Required time limits

Students have a maximum of 10 years to complete this program.

Electives/Approved courses

Approved courses are part of the Academic program and students must select approved courses from a specified list.

Practice courses

The majority of the practical and professional experience requirements for the program are contained within the major recommended enrolment pattern in the following table. These are zero unit courses, which are a **compulsory part** of the program, however they do not attract a student contribution charge for Australian Residents or a tuition fee for international students.

Practical experience

Practical experience is desirable and encouraged but is not required for the completion of the Bachelor of Urban and Regional Planning (Honours) program. Students are encouraged to obtain practical experience during vacation periods.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

- GPL2901 GIS and Planning Practice 1
- GPL3902 GIS and Planning Practice 2
- PSG3900 Professional Week 1~
- PSG4900 Professional Week 2~

~ The residential school for PSG3900 and PSG4900 will be held at the Springfield Campus.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Urban and Regional Planning (Honours) and who satisfy all of the requirements of the Associate Degree of Spatial Science may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Urban and Regional Planning (Honours) program.

Honours

The level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule, using Schedule B for overall GPA and EITHER: the average grade across both

PSG4111 Research Project A and PSG4112 Research Project B; OR the grade in PSG4112 Research Project B alone (whichever is the higher) to satisfy the 'Performance in honours project component'.

Recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1, Semester 1								
Academic Courses								
ANT1001 Cultural Diversity: an Introduction to Anthropology[£]	1	1				1,3		
GIS1402 Geographic Information Systems[£]	1	1				1		
URP1001 Introduction to Urban and Regional Planning	1	1				1		
ENG1003 Problem Solving in Engineering and the Built Environment[$]	1	1				1,2		
Year 1, Semester 2								
GIS1401 Geographic Data Presentation	1	2				2		
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
LAW1501 Business Law and Ethics	1	2				2		Enrolment is not permitted in LAW1501 if LAW1500 has been previously completed.
URP2002 Local Government Planning Practice and Technology	1	2				2		
Year 2, Semester 1								
Academic Courses								
ENV2201 Land Studies	2	1				1		
PRL2002 Community Consultation and Engagement	2	1				1		
URP2001 Planning Structures and Statutory Planning	2	1				1		
Approved course (Select from the approved course list)	2	1				1		
Year 2, Semester 2								
ECO1002 Market Behaviour	2	2				2		Enrolment is not permitted in ECO1002 if ECO1000 has been previously completed
STA2100 Evaluating Information	2	2				2		Enrolment is not permitted in STA2100 if STA3100 has been previously completed.
SVY1110 Introduction to Global Positioning System	2	2				2		
URP3201 Sustainable Urban Design and Development	2	2				2		
Practice Courses Year 2								
GPL2901 GIS and Planning Practice 1[£]			2	3			M	Pre-requisite: (GIS1401 and GIS1402) or (URP2001) or (Students must be enrolled in one of the following Pro grams: GCNS or GDNS or MENS)

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
GPL3902 GIS and Planning Practice 2£			2	3			M	Pre-requisite: (GIS1402 or URP2001) Pre-requisite or Co-requisite: GPL2901
Year 3, Semester 1								
Academic Courses								
SVY3202 Photogrammetry and Remote Sensing	3	1				1		
CMG1001 Introduction to Construction Management and the Built Environment##	3	1				1		
CLI3301 Climate and Environment Risk Assessment					3	1		
Approved course (Select from the approved course list)	3	1				1		
Year 3, Semester 2								
REN3302 Sustainable Resource Use	3	2				2		
URP4001 Movement Network Planning	3	2				2		Pre-requisite: URP1001 or SVY4203 or Students must be enrolled in one of the fol lowing Programs: BENH or MEPR
URP3200 Regional planning	3	2			3	2		Pre-requisite: URP1001
ENG4110 Engineering Research Methodology	3	2				2		
Practice courses Year 3								
PSG3900 Professional Week 1~				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BSPS or BSPH or BURP
Year 4, Semester 1								
Academic Courses								
SVY4309 Practice Management for Spatial Scientists	4	1				1		
URP4002 Urban and Regional Planning Theory	4	1				1		Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
Approved course (Select from the approved course list)	4	1				1		
PSG4111 Research Project A^+						1		Pre-requisite: (PSG3900 or ENG3902) and ENG4110 and Students must be en rolled in one of the following Programs: BSPS or BSPH or BURP. Students must com plete PSG4111 and PSG4112 in the same year.
Year 4, Semester 2								
Approved Course (Select from the Approved Course list)	4	2				2		
SVY3302 Property Valuation and Development	4	2				2		
GIS2407 Web Based Geographic Information System	4	2				2		Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								or MSPT or GCNS or GDNS or MENS
PSG4112 Research Project B^++						2		Pre-requisite: PSG4111 and Students must be enrolled in one of the following Program s: BSPS or BSPH or BURP. Students must complete PSG4111 and PSG4112 in the same year.
Practice Courses Year 4								
PSG4900 Professional Week 2~				2			M	Pre-requisite: (PSG3900 or ENG3902) and Students must be enrolled in one of the following Programs: BSPS or BSPH or BURP. Students cannot enrol in PSG3900 and PSG4900 in the same semester.
Approved Courses (Select 4 courses from the following)								
ACC1201 Data Insights and Financial Performance£		1,2				1,2		Enrolment is not permitted in ACC1201 if ACC1101 has been previously completed.
ANT3006 Indigenous Peoples in the Nation State*		2				2		
AGR3304 Soil Science		1				1		
ECO3030 Sustainable Economies						2		
ECO2000 The Macro-economy and Business						2		
LAW2107 Environmental Law**						2		Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)
CLI3302 Adaptation to Climate Change						2		
GIS2405 Spatial Analysis and Modelling		2				2		
GIS3406 Remote Sensing and Image Processing		2				2		
MGT1101 Human Capabilities for Business£		1				1,2,3		Enrolment is not permitted in MGT1101 if MGT1000 has been previously completed.
PRL3005 Reputation, Issues and Crisis						1		
SVY1102 Surveying A						1		
SVY4304 Land and Cadastral Law^*		2				2		

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
$ Unavailable online S2 2023
Only available in on-campus mode at Springfield.
~ The residential school for PSG3900 and PSG4900 will be held at the Springfield Campus.
^ It is recommended that these courses are undertaken in the same academic year.
+ It is recommended that students should have completed PSG3900 prior to undertaking this course.
++ It is recommended that students should also be enrolled PSG4900 while undertaking this course.
* This course is offered in odd years only.
** Course is offered in the interim trimester layer, please consult for interim trimester dates.
^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus

Notes:

For students transferring from one program to another a complete list of enrolment requirements are available in the course specification.

Students may undertake only one appropriate level five or level eight course from this program or another program in the area of Engineering and Built Environment as an approved course with the approval of the Faculty of Health, Engineering and Sciences.

Bachelor of Engineering Science and Bachelor of Vocational Education & Training (BNBV) - BENS BVET

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907702; External: 907705

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this area of study should contact us.

	On-campus	External	Online
Start:	No new admissions	No new admissions	No new admissions
Campus:	Toowoomba		-
Fees:	Commonwealth supported place Domestic full fee paying place	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:	4 years full-time, 8 years part–time		
Program articulation:	From: Associate Degree of Engineering; Bachelor of Engineering Science To: Bachelor of Engineering (Honours); Master of Professional Engineering		

Contact us

Current students
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

Professional accreditation for this program will be sought from Engineers Australia. Graduates from this program are eligible to apply for graduate membership of Engineers Australia as an Engineering Technologist. After further professional development, a graduate member with a Bachelor or Engineering Technology may apply for chartered status as an Engineering Technologist, and when granted, may use the post-nominal TMIEAust CEngT.

Graduates who choose to extend EDV3500 Competency Based Training and Assessment to meet the requirements for the VET qualification course TAE40110 - Certificate IV in Training and Assessment will have met the industry standard for training delivery in Australia's VET system. The program is not accredited with the Queensland College of Teachers.

Program aims

- To equip graduates with the academic, personal, professional and technical knowledge, skills and understanding required to commence practice as a Graduate Engineering Technologist in Australia or overseas with appropriate social, cultural, industrial and environmental contexts.
- To graduate students who can demonstrate the knowledge, skills, practices and values inherent in contemporary understandings of best practice in vocational education and training, particularly as these understandings are reflected in the expectations of industry and key training organisations.

- To equip graduates with knowledge and understanding appropriate to working as educators with learners in the post-compulsory years and in a range of adult education and training settings.

Admission requirements

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

- 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
- have access to an approved instructional setting in the post-compulsory education and training sector. Such access must enable the applicant to plan, implement and evaluate actual instructional programs as required by specified courses within the program. Written verification of such access will be required before enrolment can be confirmed.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The combined Bachelor of Engineering Science and Bachelor of Vocational Education & Training program comprises 32 academic units and involves four years of full-time study or eight years of part-time study. The program is available in both on-campus and external mode of study.

The combined program consists of 19 core, 13 major study and six practical courses. Students enrolled in the program may undertake a professional specialisation in one of the following major discipline areas:

- Civil Engineering
- Electrical and Electronic Engineering; or
- Mechanical Engineering

To satisfy the requirements of the program students must complete all the Academic and Practice courses in the following tables that show the recommended enrolment patterns for on-campus and external students. Students following a non-standard enrolment pattern should consult the course specification to ascertain if a course is offered in another term.

Required time limits

Full-time students have a maximum of six years to complete this program. Part-time students have a maximum of 10 years to complete this program. A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Practical experience

To be eligible to graduate from the Bachelor of Engineering Science, students must obtain an aggregate of at least 45 days of suitable Engineering 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 ENG3909 Work Experience - Technologist in the latter part of their program and keep a record of appropriate experience as outlined 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 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.

To be eligible to graduate from the Bachelor of Vocational Education & Training students must obtain an aggregate of 100 hours of professional Vocational Education & Training experience. Professional experience placements may be scheduled outside usual University teaching weeks. Travel to locations away from the areas local to the student's home campus may be necessary to complete the professional experience requirements. The professional experience components of the Bachelor of Vocational Education and Training program are all tied to four identified courses. In order to undertake courses to which professional experience placements are attached at any stage in the program it is a requirement that students will have satisfactorily completed all Vocational Education & Training professional experience courses in previous years in the program enrolment pattern. Students may complete their professional experience in approved placements. As students are studying wholly at a distance from UniSQ campus, special requirements will need to be met in relation to completion of professional experience, including submission of two digital video recordings of teaching sessions. For further information see Professional Experience. It is required that Queensland-based students hold a current positive notice indicating that they are deemed suitable for working with children and young people. Further information about the "Blue Card" suitability process is available from the commission for Children and Young People.

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

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

Students 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 can articulate into the Bachelor of Engineering (Honours) and Master of Professional Engineering programs.

Exit points

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

Students who, for whatever reason, are unable to complete The Bachelor of Vocational Education & Training degree and who satisfy all of the requirements of either the Associate Degree in Education Studies (DAES) and the Diploma of Education Studies (DPES) may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Civil Engineering Major recommended enrolment pattern

To satisfy the requirements of the program, students must complete all of the Academic and Practice Courses in the following tables that show 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 specification to ascertain if a course is offered in another term.

Major study: Civil Engineering (Major Study Code:16749)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
Academic Courses									
ENG1002 Introduction to Engineering and Built Environment Applications	1	1	1	1					
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not per mitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
ENG1101	1	1	2	1,2					
EDC1100	1	1	2			1			
ENG1100 Introduction to Engineering Design	1	2	1	1,2					
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR	
EDC1300 The Collaborative Educator	1	2	2			2		Pre-requisite: ESP3100 and Stu dents must be en rolled in one of the following Programs: BEDU or BSED	
ENG2102	1	2	2	2,3					
MEC1201 Engineering Materials	2	1	3	1,2,3					
EDC1200	2	1	3			1			
ENV2103 Hydraulics I	2	1	4	1				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the follow ing Program: GCEN or GEPR	
CIV2605 Construction Engineering	2	1	4	1					
CIV2403 Geology and Geomechanics	2	2	3	2				Pre-requisite: CIV1501 or CIV1500 or Students must be enrolled in one of the following Programs: MENS or GCEN or GEPR	
SVY1500 Spatial Science for Engineers	2	2	3	2					
EDC1400	2	2	4		2				25 hours profes sional experi ence
EDC2300 Assessment Practices for Secondary£	2	2	4			2		Pre-requisite: ES P1200 or EDC1400 or EDU1100 and Stu	

Major study: Civil Engineering (Major Study Code:16749)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								dents must be en rolled in one of the following Programs: BEDU or BSED	
CIV2701 Road Design and Location	3	1	5	1				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR	
MEC2402 Stress Analysis	3	1	5	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
EDC2400 Educating Learners with Special Needs Across Contexts£	3	1	6			1			
EDC3100 ICT and Pedagogy	3	1	6			1			25 hours profes sional experi ence
CIV2503 Structural Design I	3	2	5	2				Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students enrolled in one of the following: BETC In frastructure Manage ment major or BENS Infrastructure Manage ment Engineering major) or Students must be enrolled in: GCEN or GEPR	
CIV2502 Structural and Building Technology	3	2	5	2					
ENV3105 Hydrology	3	2	6	2					
EDU5221 ^	3		6			2			
EDC2100 Supportive Learning Environments: Cultivating Effective Classrooms	4	1	7			1		Students must be en rolled in: BEDU (Early Child) or BEDU (Pri mary) or BEDU (Pri mary+Special Ed) or BEDU (Special Ed) or BEDU (HPE Primary) or BEDU (SHPE Pri mary) or BECH or MOLT (Primary) or BEED or BPED Co-requisite: BEDU (Pri	

Major study: Civil Engineering (Major Study Code:16749)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								mary) or BPED Only - EDP2111	
ENG3003 Engineering Management†	4	1	7	1,3					
EDV3401 ^	4		8			1			25 hours professional experience
EDV3551 Vocational and Workplace Literacies^	4		8			1			
CMG2001 Job Organisation	4	2	7	2					
CIV2702 Municipal Services	4	2	7	2				Pre-requisite: ENV2103 or ENV1101	
EDV3500 Competency Based Training and Assessment^	4		8			2			25 hours professional experience
ENG3111 Technology Design Project	4	2	8	1,2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.	
Practice Courses									
ENG1901 Engineering Practice 1	1	1,2	2	2,3			C		
CIV2901 Geology and Geomechanics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENG1901 and CIV2403	
ENV2902 Hydraulics Practice	2	2	3	2,3			C	Pre-requisite or Co-requisite: ENV2103 or ENV1101	
CIV3906 Civil Materials Practice	3	1	4	3			C	Pre-requisite: MEC1201 and ENG1901 or Students must be enrolled in one of the following programs: ADCN or BCON or BCNH	
CIV3907 Civil Systems Practice*	3		6	3			C	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: MENS or MEPR	
ENG3909 Work Experience - Technologist*	3		6	1,3					

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ On-Campus students should enrol in the external or online offering of this course.

† The semester 3 offering of this course is offered in odd numbered years only.

* On-campus students should enrol in the external offering of this course.

Electrical and Electronic Engineering Major recommended enrolment pattern

To satisfy the requirements of the program, students must complete all of the Academic and Practice Courses in the following tables that show 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 specification to ascertain if a course is offered in another term.

Major study: Electrical and Electronic Engineering (Major Study Code:16750)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
ENG1002 Introduction to Engineering and Built Environment Applications	1	1	1	1,2					
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not per mitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
ENG1101	1	1	2	1,2					
EDC1100	1	1	2			1			
ENG1100 Introduction to Engineering Design	1	2	1	1,2					
ELE1502 Electronic Circuits	1	2	1	2					
EDC1300 The Collaborative Educator	1	2	2			2		Pre-requisite: ESP3100 and Stu dents must be en rolled in one of the following Programs: BEDU or BSED	
ENG2102	1	2	2	2,3					
MEC1201 Engineering Materials	2	1	3	1,2,3					
EDC1200	2	1	3			1			
ELE1301 Computer Engineering	2	1	4	1					
ELE2303 Embedded Systems Design	2	1	4	1				Pre-requisite: ELE1301	
ELE1801 Electrical Technology	2	2	3	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR	
ELE2503 Electronic Systems	2	2	3	2				Pre-requisite: ELE1502 or Students must be enrolled in the following Pro gram: GCEN or GEPR Students can not be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previously completed	
EDC1400	2	2	4			2			25 hours profes sional experi ence

Major study: Electrical and Electronic Engineering (Major Study Code:16750)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
EDC2300 Assessment Practices for Secondary£	2	2	4			2		Pre-requisite: ES P1200 or EDC1400 or EDU1100 and Students must be enrolled in one of the following Programs: BEDU or BSED	
ELE2601 Telecommunications Principles	3	1	5	1				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR	
ELE2702 Electrical Measurement and Analysis	3	1	5	1				Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN	
EDC2400 Educating Learners with Special Needs Across Contexts£	3	1	6			1			
EDC3100 ICT and Pedagogy	3	1	6			1			25 hours professional experience
ELE2501 Electronic Workshop and Production	3	2	5	2				Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN	
ELE2101 Control and Instrumentation	3	2	5	2				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR	
EDC2100 Supportive Learning Environments: Cultivating Effective Classrooms	3	2	6			2		Students must be enrolled in: BEDU (Early Child) or BEDU (Primary) or BEDU (Primary+Special Ed) or BEDU (Special Ed) or BEDU (HPE Primary) or BEDU (SHPE Primary) or BECH or MOLT (Primary) or BEED or BPED Co-requisite: BEDU (Primary) or BPED Only - EDP2111	
EDU5221 ^	3		6			2			

Major study: Electrical and Electronic Engineering (Major Study Code:16750)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
ELE3803 Electrical Plant	4	1	7	1				Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
ENG3003 Engineering Management†	4	1	7	1,3					
EDV3401 ^	4		8			1			25 hours professional experience
EDV3551 Vocational and Workplace Literacies^	4		8			1			
ELE3805 Power Electronics Principles and Applications	4	2	7	2				Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ELE3506 Electronic Measurement	4	2	7	2				Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS	
EDV3500 Competency Based Training and Assessment^	4		8			2			25 hours professional experience
ENG3111 Technology Design Project	4	2	8	1,2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.	
Practice Courses									
ENG1901 Engineering Practice 1	1	1,2	1	2,3			C		
ELE1911 Electrical and Electronic Practice A	1	2	2	3			C		
ELE2912 Electrical and Electronic Practice B	2	1	3	3			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students	

Major study: Electrical and Electronic Engineering (Major Study Code:16750)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								must be enrolled in one of the following Programs: GDNS or MENS	
ELE2913 Electrical and Electronic Practice C	2	2		2			C	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GDNS or MENS	
ELE3914 Electrical and Electronic Practice D	3	1	5	2			C	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR	
ENG3909 Work Experience - Technologist*	3		6	1,3					

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ On-campus students should enrol in the external or online offering of this course.

† The semester 3 offering of this course is offered in odd numbered years only.

* On-campus students should enrol in the external offering of this course.

Mechanical Engineering Major recommended enrolment pattern

To satisfy the requirements of the program, students must complete all of the Academic and Practice Courses in the following tables that show 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 specification to ascertain if a course is offered in another term.

Major study: Mechanical Engineering (Major Study Code:16751)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
ENG1002 Introduction to Engineering and Built Environment Applications	1	1	1	1,2					
ENM1600 Engineering Mathematics	1	1	1	1,2				Enrolment is not per mitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
ENG1101	1	1	2	1,2					
EDC1100	1	1	2			1			
MEC1201 Engineering Materials	1	2	1	1,2,3					
CIV1501 Engineering Statics	1	2	1	2,3				Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following	

Major study: Mechanical Engineering (Major Study Code:16751)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								Programs: MEPR or GCEN or GEPR	
EDC1300 The Collaborative Educator	1	2	2			2		Pre-requisite: ESP3100 and Students must be enrolled in one of the following Programs: BEDU or BSED	
ENG2102	1	2	2	2,3					
ENG1100 Introduction to Engineering Design	2	1	3	1,2					
EDC1200	2	1	3			1			
MEC2202 Manufacturing Processes	2	1	4	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN	
MEC2402 Stress Analysis	2	1	5	1				Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
ELE1801 Electrical Technology	2	2	3	2,3				Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR	
MEC2106 Introduction to Thermofluids	2	2	3	2				Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR	
EDC1400	2	2	4			2			25 hours professional experience
EDC2300 Assessment Practices for Secondary£	2	2	4			2		Pre-requisite: ESP1200 or EDC1400 or EDU1100 and Students must be enrolled in one of the following Programs: BEDU or BSED	
MEC2101	3	1	4	1					
MEC2405 Machine Dynamics	3	1	5	1				Pre-requisite: CIV1501 or Students must be enrolled in	

Major study: Mechanical Engineering (Major Study Code:16751)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								the following Program: GCEN	
EDC2400 Educating Learners with Special Needs Across Contexts£	3	1	6			1			
EDC3100 ICT and Pedagogy	3	1	6			1			25 hours professional experience
MEC2304 Solid Modelling	3	2	5	2					
MEC2301 Design of Machine Elements	3	2	5	2				Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR	
EDC2100 Supportive Learning Environments: Cultivating Effective Classrooms	3	2	6			2		Students must be enrolled in: BEDU (Early Child) or BEDU (Primary) or BEDU (Primary+Special Ed) or BEDU (Special Ed) or BEDU (HPE Primary) or BEDU (SHPE Primary) or BECH or MOLT (Primary) or BEED or BPED Co-requisite: BEDU (Primary) or BPED Only - EDP2111	
EDU5221 ^	3		6			2			
MEC3203 Materials Technology	4	1	7	1				Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS	
ENG3003 Engineering Management†	4	1	7	1,3					
EDV3401 ^	4		8			1			25 hours professional experience
EDV3551 Vocational and Workplace Literacies^	4		8			1			
MEC3204 Production Engineering	4	2	7	2					
MEC3303 Mechanical and Mechatronic System Design	4	2	7	2				Pre-requisite: MEC2301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or	

Major study: Mechanical Engineering (Major Study Code:16751)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
								GDNS or MEPR or MENS	
EDV3500 Competency Based Training and Assessment^	4		8			2			25 hours professional experience
ENG3111 Technology Design Project	4	2	8	1,2				Pre-requisite: (ENG2102 or ENG1003 or ENG1101) and Undergraduate students must have completed 14 courses in their program.	
Practice Courses									
ENG1901 Engineering Practice 1	1	1	2	2,3			C		
MEC2901 Mechanical Practice 1	1	1	3				C		
MEC2902 Mechanical Practice 2	2	1	4	1			C		
MEC3903 Mechanical Practice 3	2	2	4	2			C		
MEC3904 Mechanical Practice 4	3	2	6	2			C	Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the following Programs: GDNS or MENS or MEPR	
ENG3909 Work Experience - Technologist*	3		6	1,3					

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ On-campus students should enrol in the external or online offering of this course.

† The semester 3 offering of this course is offered in odd numbered years only.

* On-campus students should enrol in the external offering of this course.

Bachelor of Engineering (Honours) Bachelor of Business (BEHB) - BEng(Hons) BBus

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

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 Semester 1, 2017.**

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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.

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

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 United States of America, Canada, Ireland, Hong Kong, New Zealand and South Africa.

Program aims

This combination of an Engineering program with a program in Business provides students with the opportunity to become qualified Engineers with a strong background in business principles and practice. There is an increasing need for engineering graduates to have business qualifications early in their career as they are often required to manage complex projects with both tight schedules and budgets. In some sectors of the industry a business qualification can be one of the criteria for promotion. Many engineers have completed a Master of

Business Administration to satisfy this requirement. This program enables students to obtain qualifications in both disciplines at the same time.

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 (Honours)sections of this Handbook.

Program objectives

Graduates of the Bachelor of Engineering (Honours) and Bachelor of Business program will have met the separate objectives of the Bachelor of Engineering (Honours) and the Bachelor of Business programs.

Admission requirements

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

- have studied four semester units and achieved an exit assessment of 'Sound Achievement' or better in each of the following Queensland Senior Secondary School subjects: English and Mathematics B. It is recommended that applicants should also have satisfactorily completed the subject: Physics, 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

Applicants should ensure they are able to complete this program within the maximum duration of eight years. To achieve this, students will need to complete a minimum of 5 units of study per year or be eligible for 16 units of credit.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The program involves five years of full-time study.

Students may apply for admission to study part-time or by distance education however applicants should ensure they are able to complete this program within the maximum duration of eight years. To achieve this, students will need to complete a minimum of 5 units of study per year or be eligible for 16 units of credit.

The combined Bachelor of Engineering (Honours) 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.

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

Program Component	Number of Academic Courses	Number of Practice Courses
Core Studies	15	4
Engineering Major Study	17	4–5 depending upon the major
Business Major Study	8	0
Total Courses	40	8–9
Total Units	40	0

Required time limits

Full-time students have a maximum of seven years to complete this program. Part-time or distance education students have a maximum of eight years to complete this program.
A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Core courses

The courses that comprise the core studies program are shown in the following table:

Course	Units
Academic Courses - Business	
ACC1101	1
LAW1101	1
MGT1000	1
MKT1001 Marketing Fundamentals	1
AND	
POL1000	1
OR	
FIN1101 Corporate Finance	
OR	
ECO1000	
Academic Courses - Engineering	
ENM1600 Engineering Mathematics	1
ENM2600 Advanced Engineering Mathematics	1

ENG1002 Introduction to Engineering and Built Environment Applications	1
ENG1100 Introduction to Engineering Design	1
ENG1101	1
ENG2102	1
ENG3104 Engineering Simulations and Computations	1
ENG4110 Engineering Research Methodology	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
Practice Courses - Engineering	
ENG1901 Engineering Practice 1	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

When compared to the Core Studies program in the Bachelor of Engineering (Honours) 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 majors as their Engineering major.

Engineering major studies:
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 (Honours) section of this Handbook. Students enrolled in the Bachelor of Engineering (Honours) and Bachelor of Business program only study 17 of the 20 courses listed in an Engineering major.

Of the 20 courses listed for each major, the three courses that are not required are:

Engineering Major	Courses not to be studied from the Major
Agricultural Engineering	3 Electives
Civil Engineering	3 Electives
Computer Systems Engineering	3 Electives
Electrical and Electronic Engineering	3 Electives

Environmental Engineering	3 Electives
Instrumentation and Control Engineering	3 Electives
Mechanical Engineering	3 Electives
Mechatronic Engineering	3 Electives
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:

Business major studies:
Human Resource Management
Information Technology Management
International Business
Management and Leadership
Marketing
Supply Chain Management
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.

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.

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

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 is to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1, students must study ENG4111 Research Project Part 1 and ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering (Honours) and Bachelor of Business and who satisfy all of the requirements of either the Bachelor of Engineering (Honours), the Bachelor of Engineering Science, 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 UniSQ Credit and Exemption Procedure.

Course transfers

Students who are enrolled in either the Bachelor of Engineering (Honours) 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 level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule.

Recommended enrolment patterns

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

Commencing on-campus students should enrol in the standard first year courses in the engineering major that they have selected. Towards the end of their first year they should consult the Faculty of Health, Engineering and Sciences for advice on the enrolment pattern to be followed in later years of the program.

Bachelor of Engineering (Honours) Bachelor of Business (BEBC) - BEng(Hons) BusCom

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907451; External: 907455; Springfield campus: 927451

CRICOS code (International applicants): 093152C

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area please contact us directly .

	On-campus#	External
Start:	No new admissions	No new admissions
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 the Program Structure section.

Footnotes

Not all of the Bachelor of Engineering (Honours) majors are available at UniSQ Springfield. Not all of the Bachelor of Business and Commerce majors are fully available at all campuses.

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

A graduate of this program will complete the accredited Bachelor of Engineering (Honours) program; a number of Business and Commerce majors are also accredited. For more details, please refer to the individual Bachelor of Business .. and Bachelor of Engineering (Honours) programs of this Handbook.

Program aims

This combination of an Engineering program with a program in Business or Commerce provides students with the opportunity to become qualified Engineers with a strong background in business or commerce principles and practice. There is an increasing need for engineering graduates to have business or commerce qualifications early in their career as they are often required to manage complex projects with both tight schedules and budgets. In some sectors of the industry a business or commerce qualification can be one of

the criteria for promotion. Many engineers have completed a Master of Business Administration to satisfy this requirement. This program enables students to obtain qualifications in both disciplines at the same time.

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 or commerce 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 (Honours)sections of this Handbook.

Program objectives

Graduates of the Bachelor of Engineering (Honours) Bachelor of Business and Commerce program will have met the separate objectives of the Bachelor of Engineering (Honours) and the Bachelor of Business .. programs.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **74.15**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

Applicants are advised to also address the following:

- Recommended Prior Study: Physics (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

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 to complete a minimum of four units of study per year. To complete the program part-time within the standard duration of eight years, students will need to complete a minimum of five units of study per year.

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.

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 (Honours) sections of this Handbook.

The Bachelor of Engineering (Honours) Bachelor of Business and Commerce 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 components of the program are shown in the following table:

Program Component	Academic Courses		Practice Courses	
	Number of Courses	Units	Number of Courses	Units
Core Studies	10	10	4	0
Engineering Major Study	15 or 16 depending on the Major	15 or 16 depending on the Major	5	0
Engineering Major approved courses	0 or 1 depending on the Major	0 or 1 depending on the Major	0	0

Business or Commerce Major Study	14	14	0	0
Total	40	40	9	0

Required time limits

Students have a maximum of 10 years to complete this program.

Core courses

The courses that comprise the Engineering core studies are shown in the following table:

Course	Units
ENM1600 Engineering Mathematics	1
ENM2600 Advanced Engineering Mathematics	1
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENG1100 Introduction to Engineering Design	1
ENG1004 Engineering Problem Solving Principles	1
ENG2002 Technology, Sustainability and Society	1
ENG3104 Engineering Simulations and Computations	1
ENG4110 Engineering Research Methodology	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
Practice Courses - Engineering	
ENG1901 Engineering Practice 1	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

When compared to the Core Studies program in the Bachelor of Engineering (Honours) program the following change has been made:

- the following course has been deleted from the program: ENG3003 Engineering Management, although some students will still study this course, depending on their selection of Commerce major.

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 majors as their Engineering major.

Students should consult the Bachelor of Engineering (Honours) entry of this Handbook for details on the campus(es) where each major is offered in on-campus mode.

Engineering major studies:
Civil Engineering
Computer Systems Engineering
Electrical and Electronic Engineering
Environmental Engineering
Power Engineering

The courses in each of the Engineering majors are listed in the Bachelor of Engineering (Honours) section of this Handbook. Students enrolled in the Bachelor of Engineering (Honours) Bachelor of Business and Commerce program study all of the Core courses listed in an Engineering major.

Of the courses listed for each major, the courses that are not required are:

Engineering Major	Courses not to be studied from the Major
Civil Engineering	5 Approved courses
Computer Systems Engineering	5 Approved courses
Electrical and Electronic Engineering	5 Approved courses
Environmental Engineering	5 Approved courses
Power Engineering	5 Approved courses

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

Business and Commerce majors

Students must select a business and commerce major from one of the following eight-unit majors.

Students should consult the Bachelor of Business .. entry of this Handbook for details on the campus(es) where each major is offered in on-campus mode; not all majors are available in on-campus mode.

Business and Commerce major studies:
Accounting^
Business Administration
Business Economics
Finance
Human Resource Management
Management and Leadership
Marketing

Footnotes

^ For accreditation details of these majors, applicants are asked to refer to the Bachelor of Business .. section of this Handbook.

The eight courses that comprise each of the Business and Commerce majors are listed in the relevant sections of this Handbook. In addition to those courses, the following courses must be studied for each major:

Note: In Semester 3, 2023 CIS1000 will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Business and Commerce Major	Core courses to be studied
Accounting	• ACC1101 • CIS1000 Digital Disruption • ECO1000 • FIN1101 Corporate Finance • LAW1500 • ENG3003 Engineering Management

Business Administration	• ACC1101 • MGT1000 • MKT1001 Marketing Fundamentals • FIN1101 Corporate Finance • LAW1500 • CIS1000 Digital Disruption
Business Economics	• ACC1101 • CIS1000 Digital Disruption • ECO1000 • FIN1101 Corporate Finance • ENG3003 Engineering Management • STA1003 Fundamental Statistics
Finance	• ACC1101 • CIS1000 Digital Disruption • ECO1000 • FIN1101 Corporate Finance • ENG3003 Engineering Management • STA1003 Fundamental Statistics
Human Resource Management	• ACC1101 • CIS1000 Digital Disruption • LAW1500 • MGT1000 • MKT1001 Marketing Fundamentals • STA1003 Fundamental Statistics
Management and Leadership	• ACC1101 • CIS1000 Digital Disruption • ECO1000 • LAW1500 • MGT1000 • MKT1001 Marketing Fundamentals
Marketing	• ACC1101 • CIS1000 Digital Disruption • ECO1000 • LAW1500 • MGT1000 • MKT1001 Marketing Fundamentals

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.

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

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 is to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1, students must study ENG4111 Research Project Part 1 and ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering (Honours) Bachelor of Business and Commerce and who satisfy all of the requirements of either the Bachelor of Engineering (Honours), the Bachelor of Engineering Science, 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 UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Engineering (Honours) Bachelor of Business and Commerce program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG4909 Work Experience - Professional practice course.

Course transfers

Students who are enrolled in either the Bachelor of Engineering (Honours) 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 level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule.

Recommended enrolment patterns

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

Commencing on-campus students should enrol in the standard first year courses in the engineering major that they have selected. Towards the end of their first year they should consult the Faculty of Health, Engineering and Sciences for advice on the enrolment pattern to be followed in later years of the program.

Bachelor of Engineering (Honours) Bachelor of Information Technology (BEHI) - BEng(Hons) BIT

QTAC code (Australian and New Zealand applicants): External: 907351; Toowoomba campus: 907352

CRICOS code (International applicants): 079517G

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area please contact us directly .

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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 the Program Structure section.

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

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 United States of America, Canada, Ireland, Hong Kong, New Zealand and South Africa.

The Bachelor of Information Technology program is accredited at professional level by the Australian Computer Society and through the Seoul Accord, is recognised in other countries.

Program aims

This combination of an Engineering program with a program in Information Technology provides students with the opportunity to become qualified Engineers with a very strong background in Computer Systems and Applied Computer Science.

Graduates of this combined program will have a high level of knowledge of both hardware and software components of computer systems and the interrelationships between the two. They will have well-developed skills in both hardware and software design and development.

For more details of the two programs that comprise this award, applicants are asked to refer to the Engineering and Built Environment and the Information Technology sections of this Handbook.

Program objectives

Graduates of the Bachelor of Engineering (Honours) Bachelor of Information Technology program will have met the separate objectives of the Bachelor of Engineering (Honours) and the Bachelor of Information Technology programs.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **74.15**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- Recommended Prior Study: Physics (Units 3 & 4, C) or equivalent.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or

equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

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 to complete a minimum of four units of study per year. To complete the program part-time within the standard duration of eight years, students will need to complete a minimum of five units of study per year.

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 Bachelor of Engineering (Honours) Bachelor of Information Technology is a 40 unit program consisting of Academic courses and Practice courses.

Academic courses are one-unit courses and involve approximately 155 hours of student work per unit.

Practice courses are zero unit courses and each involves approximately 50 hours of student work.

Required time limits

Students have a maximum of 10 years to complete this program.

Electives/Approved courses

Approved courses are included in the list of Academic courses. Students should select these courses from the approved courses list.

Practical experience

To be eligible to graduate from the Bachelor of Engineering (Honours) Bachelor of Information Technology, 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. Specialist software is required for some courses.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology is to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1, students must study ENG4111 Research Project Part 1 and ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2 in the same academic year.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Engineering (Honours) Bachelor of Information Technology and who satisfy all of the requirements of any of the Bachelor of Engineering (Honours), the Bachelor of Engineering Science, 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 UniSQ Credit and Exemption Procedure.

Work Experience

Work and industrial experience that has not been formally assessed, does not normally qualify for course credit in the Bachelor of Engineering (Honours) Bachelor of Information Technology program. Existing work experience may be used to satisfy the practical/work experience requirements when completing the ENG4909 Work Experience - Professional practice course.

Course transfers

Students who are enrolled in either the Bachelor of Engineering (Honours) program or the Bachelor of Information Technology 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 level of honours awarded will be determined based on the UniSQ procedure. Please refer to the Class of Honours Standard Schedule.

Computer Systems Engineering and Applied Computer Science recommended enrolment pattern

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 specification to ascertain if a course is offered in another term.

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Academic Courses Year 1								
ENG1004 Engineering Problem Solving Principles	1	1				1,2		
ENM1600 Engineering Mathematics	1	1				1,2		Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed
ELE1301 Computer Engineering	1	1				1		
ELE1502 Electronic Circuits	1	1				1		
CSC1401 Foundation Programming[£]	1	2				1,2,3		
ENG1100 Introduction to Engineering Design	1	2				1,2		

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE1801 Electrical Technology§	1	2				2,3		Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
ENG1002 Introduction to Engineering and Built Environment Applications	1	2				1,2		
Practice Courses Year 1								
ENG1901 Engineering Practice 1	1	1		2,3			M	
ELE1911 Electrical and Electronic Practice A	1	2		3			M	
Academic Courses Year 2								
ENM2600 Advanced Engineering Mathematics	2	1				1		Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN
MAT1101 Discrete Mathematics for Computing	2	1				1		
ELE2303 Embedded Systems Design	2	1				1		Pre-requisite: ELE1301
CSC2402 Object-Oriented Programming in C++	2	1				1		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN
ENG2002 Technology, Sustainability and Society	2	2				1,2,3		
ENG3104 Engineering Simulations and Computations	2	2				2		Pre-requisite: (ENM2600 or MAT2100 or MAT2500) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS
ELE2103 Linear Systems and Control	2	2				2		
ELE2504 Electronic Design and Analysis	2	2				2		Pre-requisite: ELE1502 or S tudents must be enrolled in one of the following Program s: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
Practice Courses Year 2								
ELE2912 Electrical and Electronic Practice B	2	1		3			M	Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
Academic Courses Year 3								
ELE3105 Computer Controlled Systems	3	1				1		Pre-requisite: ELE2103 or S tudents must be enrolled in one of the following Program s: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE3305 Computer Systems and Communications Protocols	3	1				1		
Approved course (Select from the approved course list)	3	1				1		
ELE2601 Telecommunications Principles	3	1				1		Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE3107 Signal Processing	3	2				2		
ELE3307	3	2				2		
CSC2406 Web Technology 1	3	2				2		Pre-requisite: CSC1401 or Students must be enrolled in one of the following Program s: UCCC or GDTI or GCEN or METC or MCOT or MCTE or MCOP or MPIT or MCTN or BSED
CSC2407	3	2				2		
Practice Courses Year 3								
ELE2913 Electrical and Electronic Practice C						2		Pre-requisite: (ELE1301 and ELE1502 and ELE1801) or Students must be enrolled in one of the following Program s: GDNS or MENS
ELE3914 Electrical and Electronic Practice D	3	1		2			M	Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR
ELE3915 Electrical and Electronic Practice E	3	2		2			M	Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR
Academic Courses Year 4								
CIS3002 Agile Methods	4	1				1,2		Pre-requisite: CIS2000
CSC3400 Database Systems£	4	1				1		Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
CSC3412 System and Security Administration	4	1				1		Pre-requisite: CSC2408
CSC2408 Software Development Tools	4	1,2				1,2		Pre-requisite: CSC1401
Approved course (Select from the approved course list)	4	1,2				1,2		
CSC3600 ICT Professional Project^^	4	2				2		Students enrolled from 2023 - Pre-requisite: CSC2000 and at least 16 courses including six other BITC core courses Students enrolled prior to 2023 - Pre-requisite: CIS3002 and at least 16 courses includ ing seven other BITC core courses

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CSC2401 Algorithms and Data Structures	4	2				2		Pre-requisite: CSC2402 or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
ENG4110 Engineering Research Methodology	4	2				2		
Practice Courses Year 4								
ENG3902 Professional Practice 1				2			M	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS
Academic Courses Year 5								
ENG4111 Research Project Part 1	5	1				1		Pre-requisite: ENG3902 and ENG4110 and Students must be enrolled in one of the fol lowing Programs: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH Undergradu ate students must have com pleted 22 units in their pro gram.
CSC3403 Comparative Programming Languages	5	1				1		Pre-req: CSC2408; and Pre-req or Co-req: CSC2402; or Students must be enrolled in one of the following Program s: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT Enrolment is not permitted in CSC3403 if CIS3001 has been previous ly completed
ENG3003 Engineering Management†	5	1				1,3		
Approved course (Select from the approved course list)	5	1				1		
ENG4112 Research Project Part 2^	5	2				2		Pre-requisite: ENG4111 and Students must be enrolled in one of the following Program s: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH
Approved Course (Select from the approved course list)	5	2				2		
Approved Course (Select from the approved course list)	5	2				2		
CSC2404 Operating Systems	5	2				2		Pre-requisite: CSC1401 or CSC2408 or have experience using Linux systems or stu dents must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Practice Courses Year 5								
ENG4903 Professional Practice 2	5	1		2			M	Pre-requisite: ENG3902 and Students must be enrolled in: BCNH or BCON or BEBB or BEBC or BEHB or BEHI or BEHS or BENG or BENH or MENS. Students cannot enrol in ENG3902 & ENG4903 in the same semester. Co-requisite: ENG4111 or ENG4112 or ENG8411 or ENG8412
ENG4909 Work Experience - Professional						1,2,3		
Select approved courses from the following or other elective courses as approved by the Program Coordinator:								
CSC3407		1				1		
CSC3413 Network Design and Analysis		2				2		Pre-requisite: CSC3412
CSC3420 Mobile Internet Technology		1				1		Pre-requisite: CSC3407 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
CSC3426 Web Technology 2		2				2		Pre-requisite: CSC2406
CSC3427 Switching, Wireless and WAN Technologies		2				2		Pre-requisite: CSC3407 or CSC1310 or Students must be enrolled in one of the following Programs: GDTI or GCSC or GCEN or METC or MCOT or MCTE or MCOP or MPIT
ELE3506 Electronic Measurement		2				2		Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS
ELE3804 Power Systems Protection						1		
ELE4606 Communication Systems		2				2		Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1		Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5001 Industrial Communications Protocols		1				1		Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR

Major study: Computer Systems Engineering; Applied Computer Science (Major Study Code: 11985)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG4004 Engineering Project and Operations Management‡						2,3		
MEC2501 Process Control Systems						2		Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
MEC4406 Robotics and Machine Vision		2				2		Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN
CIV1501 Engineering Statics		2				2,3		Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Program s: MEPR or GCEN or GEPR

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

§ Unavailable online in S3 2023

^^ Students who have completed at least 24-units in the program (prior to S1 2021) are encouraged to complete CSC3600 as one of their approved courses. Students who have completed less than 24-units in the program (prior to S1 2021) must complete CSC3600 instead of one approved course.

† The semester 3 offering of this course is offered in odd numbered years only.

^ It is recommended that students should also be enrolled in ENG4903 Professional Practice 2 while undertaking this course.

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

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

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907361; External: 907365; Springfield campus: 927361

CRICOS code (International applicants): 079518F

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area please contact us directly .

	On-campus#	External
Start:	No new admissions	No new admissions
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 the Program Structure section.

Footnotes

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.

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

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 United States of America, Canada, Ireland, Hong Kong, New Zealand and South Africa.

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 flexibility as they are able to select from a wide range of Engineering majors and combine it with one of the numerous Science majors.

Program objectives

Graduates of the Bachelor of Engineering (Honours) Bachelor of Science program will have met the separate objectives of the Bachelor of Engineering (Honours) and the programs.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

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

Program Information Set

View UniSQ's admission criteria, student profiles and a summary of all offers made under Course Admission Information Set via the QTAC website.

Admission requirements

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

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **74.15**, or equivalent qualification.^

- Subject Pre-requisites: English (Units 3 & 4, C) and Mathematical Methods (Units 3 & 4, C) or equivalent.
- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- Recommended Prior Study (Engineering): Physics (Units 3 & 4, C) or equivalent.
- Recommended Prior Study (Science): Applicants should refer to the for the recommended prior study for their selected Bachelor of Science major.

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.

^ These are determined by the University for specific programs each Semester. The 2023 ATAR and tertiary entrance ranks are based on agreed QTAC schedules which assess formal study at Year 12 or equivalent level, tertiary, preparatory, professional or vocational qualifications or work experience, as detailed in the QTAC Assessment of Qualifications Manual and QTAC Assessor Guidelines.

Adjustment factors may help you get into the program of your choice by increasing your entrance rank. The additional points don't apply to all applicants or all programs. Please read the information about UniSQ's Adjustment Factors carefully to find out what you may be eligible for.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

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 to complete a minimum of four units of study per year. To complete the program part-time within the standard duration of eight years, students will need to complete a minimum of five units of study per year.

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.

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

The Bachelor of Engineering (Honours) Bachelor of Science is a 40-unit program consisting of Academic courses and Practice courses.

Academic courses are one-unit courses and 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 Bachelor of Engineering (Honours) program consists of 32 units of study. To satisfy the requirements of the chosen Bachelor of Science major, in the Bachelor of Engineering (Honours) Bachelor of Science program students will require an additional 10–12 units of study, depending on the chosen Science major. To reduce the total study load to 40 units, students must reduce the required number of Approved courses from the chosen Engineering major by 2–4, depending on the chosen Science major. The courses required for each Science major are listed below.

Required time limits

Students have a maximum of 10 years to complete this 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.

Engineering major studies:
Agricultural Engineering
Civil Engineering
Computer Systems Engineering
Electrical and Electronic Engineering
Environmental Engineering
Instrumentation Control and Automation Engineering
Mechanical Engineering *
Power Engineering

Footnotes

* Students undertaking this Engineering major cannot complete the following Science major within 40 units: Computing.

Core courses

The courses in each of the Engineering majors are listed in the Bachelor of Engineering (Honours) section of this Handbook. Students enrolled in the Bachelor of Engineering (Honours) Bachelor of Science program study all of the Core courses listed in an Engineering major.

Course	Units
Academic Courses	
ENG1002 Introduction to Engineering and Built Environment Applications	1
ENG1004 Engineering Problem Solving Principles	1
ENG1100 Introduction to Engineering Design	1
ENG2002 Technology, Sustainability and Society	1
ENG3003 Engineering Management	1
ENG3104 Engineering Simulations and Computations	1
ENG4110 Engineering Research Methodology	1
ENG4111 Research Project Part 1	1
ENG4112 Research Project Part 2	1
Total	**9**
Practice Courses	
ENG1901 Engineering Practice 1	0
ENG3902 Professional Practice 1	0
ENG4903 Professional Practice 2	0
ENG4909 Work Experience - Professional	0

Three approved courses are to be deleted from the list of courses in each Engineering major.

Science majors

The Science major will enable students to increase their knowledge and skills in a particular field of science. Students must select one of the following eight-unit majors as their Science major.

Science major studies:
Plant Agricultural Science

Biology
Computing ^+
Environment and Sustainability
Food Science
Human Physiology
Mathematics+
Physical Sciences
Statistics +
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 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 Approved Courses in Engineering major
Biology	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	3
Computing	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1000 Communication and Scholarship • CSC1401 Foundation Programming • STA1003 Fundamental Statistics • MAT1101 Discrete Mathematics for Computing	4

Environment and Sustainability	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	3
Food Science	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	3
Human Physiology	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	3
Mathematics	• CMS1100 Communicating in the Sciences • CSC1401 Foundation Programming • STA1003 Fundamental Statistics • SCI1001 Succeeding in Science • Students study MAT1102 Algebra and Calculus I and MAT2100 Algebra and Calculus II as part of this Science Major, therefore do not study the equivalent courses ENM1600 Engineering Mathematics nor ENM2600 Advanced Engineering Mathematics.	2

Physical Sciences	• CMS1100 Communicating in the Sciences • CSC1401 Foundation Programming • STA1003 Fundamental Statistics • SCI1001 Succeeding in Science • Students study MAT1102 Algebra and Calculus I and MAT2100 Algebra and Calculus II as part of this Science Major, therefore do not study the equivalent courses ENM1600 Engineering Mathematics nor ENM2600 Advanced Engineering Mathematics.	3
Plant Agricultural Science	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	3
Statistics	• CMS1100 Communicating in the Sciences • CSC1401 Foundation Programming • STA1003 Fundamental Statistics • SCI1001 Succeeding in Science • Students study MAT1102 Algebra and Calculus I and MAT2100 Algebra and Calculus II as part of this Science Major, therefore do not study the equivalent courses ENM1600 Engineering Mathematics nor ENM2600 Advanced Engineering Mathematics.	2

Wine Science	• ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics	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 Director, 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. Specialist software is required for some courses.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

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, students should confirm the requirements before attending residential schools for Practice courses.

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

ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology are to be studied in the student's penultimate year. Upon completion of ENG3902 Professional Practice 1 and ENG4110 Engineering Research Methodology, students must study ENG4111 Research Project Part 1, ENG4112 Research Project Part 2 and ENG4903 Professional Practice 2

Postgraduate programs

Graduate Certificate of Advanced Engineering (GCAE) - GradCertAdvEng

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this area of study should contact us.

	Online
Start:	No new admissions
Fees:	Domestic full fee paying place International full fee paying place
Standard duration:	1-2 years part-time
Program articulation:	From: Bachelor of Engineering (Honours) To: Master of Advanced Engineering

Notes:

Some of the courses in the Engineering Management and Engineering Project Management specialisations may be available on-campus at Springfield.

Contact us

Current students
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 Graduate Certificate of Advanced Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

Students who successfully complete the Graduate Certificate of Advanced Engineering will be able to demonstrate an ability to:

- complete a postgraduate program that will lead to an advanced theoretical and technical knowledge in an engineering discipline or engineering management and practice.
- critically evaluate knowledge from professional journals and other information sources relevant to their specialisation to communicate complex ideas and theoretical concepts.
- acquire advanced and integrated understanding of a complex body of knowledge in one or more disciplines or areas of professional practice.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Certificate of Advanced Engineering comprises four single-unit courses.

Required time limits

Students have a maximum of 2 years to complete this program.

Specialisation

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

- Advanced Structural Engineering Design
- Engineering Management
- Engineering Project Management
- Civil and Structural Engineering

IT requirements

Access to an up-to-date computer is necessary. Students should be able to access a computer with the following minimum standards. 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. Specialist software is required for some courses.

Articulation

Students who complete this program are eligible to articulate into the Master of Advanced Engineering degree. They will receive full credit for the courses studied if they study the same specialisation in both programs. The standing of degrees awarded by an overseas institution will be determined by reference to the National Office of Overseas Skills Recognition (NOOSR).

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Advanced Structural Engineering Design specialisation recommended enrolment pattern

.

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 Course Students must complete two of the courses in this schedule							
CIV8801 Code-Based Structural Design						1	
CIV8802 Advanced Prestressed Concrete ^						2	
CIV8804 Advanced Design Practice using Finite Element Analysis						2	
Schedule B: Core Course Students must complete two of the courses in this schedule							
ENG8104						1	
ENG8205						2	
ENG8208						1	

Footnotes

^ Offered Odd Years Only

Engineering Management specialisation recommended enrolment pattern

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 Course Students must complete two of the courses in this schedule							
ENG8103						2	
ENG8104						1	
ENG8205						2	
Schedule B: Core Course Students must complete two of the courses in this schedule							
ENG8101						1	
ENG8207 £						3	
ENG8208						1	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Notes:

Some courses may be offered on-campus at Springfield.

Engineering Project Management specialisation recommended enrolment pattern

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 Course							

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 two of the courses in this schedule							
MGT8022 Project-Based Management *						2, 3	
ENG8111 +						2	
ENG8208						1	
Schedule B: Core Course Students must complete two of the courses in this schedule							
ENG8103						2	
ENG8104						1	
ENG8205						2	

Footnotes

* It is strongly recommended that students enrol in MGT8022 prior to, or at the same time as, enrolling in subsequent project management courses.

\+ This course will not be offered in S2, 2020.

Notes:

Some courses may be offered on-campus at Springfield.

Civil and Structural Engineering specialisation recommended enrolment pattern

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 Course Students must complete the two courses in this schedule							
CIV5704 Road and Street Engineering						2	
CIV5705 Pavement Design and Analysis						1	Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or G CAE or MEPR
Schedule B: Core Course Students must complete two of the courses in this schedule							
CIV8801 Code-Based Structural Design						1	
CIV8802 Advanced Prestressed Concrete ^						2	
CIV8804 Advanced Design Practice using Finite Element Analysis						2	
ENG8111 +						2	

Footnotes

^ Offered odd years only

\+ This course will not be offered in S2, 2020.

Graduate Certificate of Engineering Practice (GEPR) - GradCertEngPrac

	On-campus	Online
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Toowoomba	-
Fees:	Commonwealth supported place Domestic full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
Standard duration:	1 semester full-time or 2 semesters part-time	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

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 Graduate Certificate of Engineering Practice is not accredited by any professional bodies.

Program aims

The aim of the Graduate Certificate of Engineering Practice is to produce graduates who are equipped with specialised management knowledge and skills at an advanced level in engineering practice and management. The program enables students to enhance their knowledge and skills in areas of engineering to undertake advanced professional practice.

Program objectives

On completion of this program graduates should be able to:

- Critically analyse, reflect and synthesise information to interpret and transmit knowledge, skills and ideas to a variety of professional and non-professional audiences.
- Apply an advanced and integrated understanding of a complex body of knowledge and theories, concepts and processes to solve complex engineering problems.
- Employ expert and specialised cognitive and technical skills and competencies of contemporary practices and trends.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work 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 three-year bachelor degree in engineering, science or technology, 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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Certificate of Engineering Practice comprises four single unit academic courses as follows:

Schedule A: Two courses (two units) to be selected from the following list:

- ENG6104 Asset Management in an Engineering Environment
- ENG6205 Project Management Practice
- ENG6208 Advanced Engineering Project Management

Schedule B: Two courses (two units) to be selected from the recommended enrolment pattern.

Required time limits

Students have a maximum of 2 years to complete this program.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Candidates for admission to this program should note that some of the courses specify enrolment requirements. This may mean that successful applicants will be enrolling in courses for which they do not have sufficient pre-requisite knowledge. Applicants should refer to the course specification to determine the enrolment requirements for the courses they intend enrolling in. Graduate students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the relevant courses. Alternatively, they should enrol in the pre-requisite course(s). These courses will not contribute to the requirements for program completion.

Graduate Certificate of Engineering Practice recommended enrolment pattern

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: Students must complete two of the courses listed in this schedule.							
ENG6104 Asset Management in an Engineering Environment		1				1	
ENG6208 Advanced Engineering Project Management		1				1	
ENG6205 Project Management Practice		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.#							
AGR3304 Soil Science		1				1	
CIV1501 Engineering Statics		2				2,3	Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or G CEN or GEPR
CIV2403 Geology and Geomechanics		2				2	Pre-requisite: CIV1501 or CIV1500 or Stu dents must be enrolled in one of the follow ing Programs: MENS or GCEN or GEPR
CIV2502 Structural and Building Technology		2		2			
CIV2503 Structural Design I		2				2	Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students en rolled in one of the following: BETC Infras tructure Management major or BENS Infras tructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR
CIV2605 Construction Engineering		1				1	
CIV2701 Road Design and Location		1				1	Pre-requisite: ENM1500 or ENM1600 or S tudents must be enrolled in one of the follow ing Programs: GCST or GDST or GCEN or GEPR
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs:

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	
							GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV3603 Construction Methods						2	
ENV2103 Hydraulics I		1				1	Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV2105 Applied Chemistry and Microbiology		1				1	
ENV2201 Land Studies		1				1	
ENV3103 Environmental Pollution		2				2	Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV3105 Hydrology		2				2	
ELE1801 Electrical Technology<		2				2,3	Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ELE2101 Control and Instrumentation		2				2	Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
ELE2103 Linear Systems and Control		2				2	
ELE2503 Electronic Systems		2				2	Pre-requisite: ELE1502 or Students must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previously completed
ELE2504 Electronic Design and Analysis		2				2	Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE2601 Telecommunications Principles		1				1	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE2704 Electricity Supply Systems		2				2	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR
ELE3105 Computer Controlled Systems		1				1	Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3803 Electrical Plant		1				1	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2106 Introduction to Thermofluids		2				2	Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in one of the following Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2301 Design of Machine Elements		2				2	Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the following Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling		2				2	

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	
MEC2401 Dynamics I		1				1	Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC2402 Stress Analysis		1				1	Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
MEC2501 Process Control Systems						2	Pre-requisite: ELE2103 or (MEC1501 and ELE2101 as Co-requisite or Pre-requisite) or Students must be enrolled in the following Program: GEPR
ENG8101		1				1	
ENG8103		2				2	
ENG6207 Innovation Management and New Product Development£						3	

Footnotes

Approved Courses will normally be Engineering, Science or Technology courses not lower than Level 2. Consult the Program Convenor via usq.support@usq.edu.au to seek approval to substitute higher level courses if desired.

< Unavailable online in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Graduate Certificate of Professional Engineering (GCNS) - GradCertProfEng

CRICOS code (International applicants): 067687K

	On-campus*	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	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:	1 semester full-time or 1 year part-time	
Program articulation:	To: Graduate Diploma of Professional Engineering; Master of Professional Engineering	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

* The GCNS is available full-time on-campus commencing in Semester 1 only. International visa holders are only eligible for Semester 1 entry.

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 Graduate Certificate of Professional Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

On completion of this program graduates should be able to:

- demonstrate an integrated understanding of a relevant body of knowledge in one or more disciplines or areas of practice; and
- apply specialised cognitive and technical skills within a relevant body of knowledge in one or more disciplines or area of practice; and
- collect and reflect upon sources of information to interpret and transmit knowledge, skills and ideas to specialist and non-specialist audiences.

Program Rules

Students are required to:

- Satisfactorily complete 4 credit points as listed in the standard progression to graduate from the program.

- Satisfactorily complete all courses within 2 years.
- Maintain satisfactory academic achievement throughout the duration of the program, consistent with the UniSQ Student Academic Progress Procedure.
- Immunisations and vaccinations according to national standards requirements for on-campus mode studies.
- Meet the Inherent Requirements for the Graduate Certificate of Professional Engineering.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work 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 three or four year Bachelor degree in the area of engineering in the relevant cognate specialisation (major), or equivalent.
  Or
  Completion of an Australian university four year Bachelor degree in the area of engineering in a non-cognate specialisation (major field) or equivalent.
- English Language Proficiency requirements for Category 3.

The standing of degrees awarded by an overseas institution will be determined by reference to the Sydney Accord, of which Engineers Australia (EA) is a signatory, and the federal government agency, International Education group, an agency of the Department of Education and Training.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Certificate of Professional Engineering comprises four single unit academic courses as follows:

Schedule A: Two core courses:

- ENG5001 Professional Skills in Engineering†
- One specified Advanced Management course per discipline as per discipline major enrolment patterns

† Unavailable in S3 2023

Schedule B: A two-course specialisation

Required time limits

Students have a maximum of 2 years to complete this program.

Specialisation

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

- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Engineering Management and Enterprise
- Environmental Engineering
- Mechanical Engineering
- Power Engineering
- Structural Engineering

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

The Graduate Certificate of Professional Engineering , the Graduate Diploma of Professional Engineering, and the Master of Professional Engineering are a nested suite of programs. Students who have completed the Graduate Certificate of Professional Engineering via a normal program enrolment pattern are able to apply to articulate with full credit to the Graduate Diploma of Professional Engineering. Students using the program for transitional studies to fill minor gaps in requisite undergraduate knowledge and skill will be assessed for any partial credits that can be given on entering either of the other programs in this nested group.

Applicants with similar discipline engineering specialisations but who may have minor gaps in their requisite knowledge to undertake the Master of Professional Engineering can also use this program as a transition articulation pathway entry into the Master of Professional Engineering. For further information or advice on this program option, please contact the School of Engineering Post-graduate Program Director via usq.support@usq.edu.au and provide prior engineering degree award and academic transcript copies.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Students should note that some of the courses specify enrolment requirements (prerequisites). Students should therefore refer to the Course Specification to determine the enrolment requirements for the courses they intend enrolling in. Students should avoid enrolling in courses for which they do not have sufficient pre-requisite knowledge. Students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the relevant courses. Students should contact the School of Engineering Post-graduate Program Director via usq.support@usq.edu.au if they encounter problems while enrolling in courses with requisites.

Agricultural Engineering specialisation recommended enrolment pattern

Specialisation: Agricultural Engineering (Specialisation Study Code: 16197)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
ENV5104 Advanced Hydraulic Systems		1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
Choose one selective from the following							
AGR4305 Agricultural Soil Mechanics		1				1	
AGR6305 Applications of Advanced Technology in Agriculture*							
CLI8003 Climate, Food, Water and Energy Security						2	
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4204 Environmental Technology		1				1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

* First Offer in 2024 academic year

Civil Engineering specialisation recommended enrolment pattern

Specialisation: Civil Engineering (Specialisation Study Code: 16198)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Choose one selective from the following							
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5704 Road and Street Engineering						2	
CIV6803 Advanced Mechanics and Technology of Fibre Composites						1	Pre-requisite: CIV3506 or MEC3203 or Students must be enrolled in one of the following Programs: PGCN or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2				2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5104 Advanced Hydraulic Systems		1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Electrical and Electronic Engineering specialisation recommended enrolment pattern

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16199)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
ELE5605 Electro-Magnetic Modelling		2				2,3	Pre-requisite: ELE4605 or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS
Choose one selective from the following							
ELE4605 Fields and Waves		1				1	Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE4606 Communication Systems		2				2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE4807 Power Systems Analysis		1				1	
ELE5001 Industrial Communications Protocols		1				1	Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Engineering Management and Enterprise specialisation recommended enrolment pattern

Specialisation: Engineering Management and Enterprise (Specialisation Study Code: TBA)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	

Specialisation: Engineering Management and Enterprise (Specialisation Study Code: TBA)							
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	
ENG6104 Asset Management in an Engineering Environment		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
Mandatory - choose one Technical Engineering course from another GCNS specialisation Schedule B (1 unit)							
Choose one selective from the following							
FIN8201 Corporate Finance		1				1,3	
GIS2407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
MGT8049 Building an Engaged Workforce						2,3	
ENG6207 Innovation Management and New Product Development£						3	

Footnotes

† Unavailable in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Environmental Engineering specialisation recommended enrolment pattern

Specialisation: Environmental Engineering (Specialisation Study Code: 16200)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6205 Project Management Practice		2				2	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
Choose one selective from the following							
AGR4305 Agricultural Soil Mechanics		1				1	
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4107 Water Resources Engineering		2				2	Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol

Specialisation: Environmental Engineering (Specialisation Study Code: 16200)							
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	
							lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology		1				1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Mechanical Engineering specialisation recommended enrolment pattern

Specialisation: Mechanical Engineering (Specialisation Study Code: 16202)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
MEC4108 Advanced Thermofluids						1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Stu dents cannot enrol in MEC4108 if they have successfully completed, or are currently en rolled in, MEC4103
Choose one selective from the following							
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC4302 Computational Mechanics in Design		1				1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC4403 Advanced Dynamics		2				2	Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR

Specialisation: Mechanical Engineering (Specialisation Study Code: 16202)							
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	
MEC5107 Thermofluids		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS
MEC5203 Fibre Reinforced Composites		2				2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Power Engineering specialisation recommended enrolment pattern

Specialisation: Power Engineering (Specialisation Study Code: 16203)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6205 Project Management Practice		2				2	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
ELE5805 Power Electronics and Drive Systems		2				2	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
Choose one selective from the following							
ELE4307 Real Time Systems		2				2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4506 Industrial Process Automation						1	Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ELE4708 Electricity Supply Systems and Operations		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4807 Power Systems Analysis		1				1	
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR

Specialisation: Power Engineering (Specialisation Study Code: 16203)							
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	
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Structural Engineering specialisation recommended enrolment pattern

Specialisation: Structural Engineering (Specialisation Study Code: 16204)							
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 listed in Schedule A.							
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6104 Asset Management in an Engineering Environment		1				1	
Schedule B: Specialisation Courses Students must complete two of the courses listed in Schedule B - one mandatory discipline course plus one selective.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree require a special enrolment pattern in lieu of Schedule B courses.*							
Mandatory							
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
Choose one selective from the following							
CIV4506 Concrete Structures		1				1	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV8801 Code-Based Structural Design						1	
CIV6803 Advanced Mechanics and Technology of Fibre Composites						3	Pre-requisite: CIV3506 or MEC3203 or Stu dents must be enrolled in one of the follow ing Programs: PGCN or MEPR or GCNS or GDNS or MENS

Specialisation: Structural Engineering (Specialisation Study Code: 16204)							
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	
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Graduate Certificate of Engineering Technology (GCEN) - GradCertEngTech

'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 Graduate Certificate of Engineering Practice **which will be offered from Semester 2, 2020.**

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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:	1 semester full-time or 2 semesters part-time	

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 Graduate Certificate of Engineering Technology is not accredited by any professional bodies, but is accredited by the University of Southern Queensland.

Program aims

To enable students to complete a postgraduate program that will lead to an advanced level of knowledge in a specialised area of engineering.

Program objectives

Students who successfully complete the Graduate Certificate of Engineering Technology should be able to apply a body of knowledge of a specialised area of engineering at an advanced level.

Admission requirements

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

- Completion of an Australian university three year Bachelor degree in engineering, science or technology 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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Certificate of Engineering Technology comprises four single unit academic courses as follows:

Schedule A: Two courses (two units) to be selected from the following list:

- ENG8103
- ENG8104
- ENG8205
- ENG8208

Schedule B: A two course specialisation (two units) to be selected from the recommended enrolment pattern.

Required time limits

Students have a maximum of 2 years to complete this program.

Specialisation

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

- Agricultural Engineering
- Civil Engineering
- Computer Systems Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Management in Engineering
- Mechanical Engineering

- Power Systems Engineering
- Structural Engineering
- Transdisciplinary Engineering

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. Students should be able to access a computer with the following minimum standards. 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.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Candidates for admission to this program should note that some of the courses specify enrolment requirements. This may mean that successful applicants will be enrolling in courses for which they do not have sufficient pre-requisite knowledge. Applicants should refer to the course specification to determine the enrolment requirements for the courses they intend enrolling in. Graduate students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the relevant courses. Alternatively, they should enrol in the pre-requisite course(s). These courses will not contribute to the requirements for program completion.

Agricultural Engineering specialisation recommended enrolment pattern

Specialisation: Agricultural Engineering (Specialisation Study Code: 12600)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
AGR2302 Agricultural Machinery		1				1	
AGR3304 Soil Science		1				1	
MEC2402 Stress Analysis		1				1	Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
AGR2301 Agricultural Science		2				2	
ENV3105 Hydrology		2				2	
MEC2301 Design of Machine Elements		2				2	Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR

Civil Engineering specialisation recommended enrolment pattern

Specialisation: Civil Engineering (Specialisation Study Code: 15394)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
CIV2605 Construction Engineering		1				1	
CIV2701 Road Design and Location		1				1	Pre-requisite: ENM1500 or ENM1600 or Students must be enrolled in one of the following Programs: GCST or GDST or GCEN or GEPR
ENV2103 Hydraulics I		1				1	Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
CIV2502 Structural and Building Technology		2		2			
CIV2702 Municipal Services*		2				2	Pre-requisite: ENV2103 or ENV1101
CIV3603 Construction Methods						2	

Footnotes

* Only available in on-campus mode at Toowoomba in 2020.

Computer Systems Engineering specialisation recommended enrolment pattern

Specialisation: Computer Systems Engineering (Specialisation Study Code: 17242)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
ELE1301 Computer Engineering		1				1	
ELE2303 Embedded Systems Design		1				1	Pre-requisite: ELE1301
ELE2601 Telecommunications Principles		1				1	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or GEPR
ELE2103 Linear Systems and Control		2				2	
ELE3307		2				2	
ELE4606 Communication Systems		2				2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS

Electrical and Electronic Engineering specialisation recommended enrolment pattern

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 17241)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
ELE2601 Telecommunications Principles		1				1	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2702 Electrical Measurement and Analysis		1				1	Pre-requisite: (ENM1500 or ENM1600) and ELE1801 or Students must be enrolled in the following Program: GCEN
ELE3803 Electrical Plant		1				1	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ELE1801 Electrical Technology[<]		2				2,3	Pre-requisite: ENM1500 or ENM1600 or S tudents must be enrolled in one of the follow ing Programs: MEPR or GCEN or GEPR
ELE2101 Control and Instrumentation		2				2	Pre-requisite: ENM1500 or ENM1600 or S tudents must be enrolled in one of the follow ing Programs: MEPR or GCEN or GEPR
ELE2501 Electronic Workshop and Production		2				2	Pre-requisite: (ELE1502 and ELE1301) or Students must be enrolled in the following Program: GCEN
ELE2503 Electronic Systems		2				2	Pre-requisite: ELE1502 or Students must be enrolled in the following Program: GCEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester Enrolment is not permitted in ELE2503 if ELE2504 has been previously completed

Footnotes

< Unavailable online in S3 2023

Environmental Engineering specialisation recommended enrolment pattern

Specialisation: Environmental Engineering (Specialisation Study Code: 12601)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	

Specialisation: Environmental Engineering (Specialisation Study Code: 12601)							
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 B: Technical courses Students must complete two of the courses listed in this schedule.							
CLI3301 Climate and Environment Risk Assessment						1	
ENV2103 Hydraulics I		1				1	Pre-requisite: CIV1500 or CIV1501 or Students must be enrolled in the following Program: GCEN or GEPR
ENV2105 Applied Chemistry and Microbiology		1				1	
ENV2201 Land Studies		1				1	
ENV4204 Environmental Technology		1				1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3103 Environmental Pollution		2				2	Pre-requisite: ENV2105 and ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENV3105 Hydrology		2				2	
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.

Management in Engineering specialisation recommended enrolment pattern

Specialisation: Management in Engineering (Specialisation Study Code: 17243)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
CIS8000 Global Information Systems Strategy		1,2				1,2	
ENG8101		1				1	
ENG4004 Engineering Project and Operations Management*						2,3	
ENG8207 £						3	

Footnotes

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

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Mechanical Engineering specialisation recommended enrolment pattern

Specialisation: Mechanical Engineering (Specialisation Study Code: 15395)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
MEC2202 Manufacturing Processes		1				1	Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: MEPR or GCEN
MEC2405 Machine Dynamics		1				1	Pre-requisite: CIV1501 or Students must be enrolled in the following Program: GCEN
CIV1501 Engineering Statics		2				2,3	Pre-requisite: ENM1600 or (ENM1500 and CIV1500) or Students must be enrolled in one of the following Programs: MEPR or G CEN or GEPR
MEC2106 Introduction to Thermofluids		2				2	Pre-requisite: CIV1500 or CIV1501 or Stu dents must be enrolled in one of the follow ing Programs: BENH or BEBC or BEHS or GCEN or MENS or GEPR
MEC2301 Design of Machine Elements		2				2	Pre-requisite: (MEC2402 and ENG1100) or Students must be enrolled in one of the fol lowing Programs: MEPR or GCEN or GEPR
MEC2304 Solid Modelling		2				2	
MEC2401 Dynamics I		1				1	Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR

Power Systems Engineering specialisation recommended enrolment pattern

Specialisation: Power Systems Engineering (Specialisation Study Code: 15638)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
ELE2303 Embedded Systems Design		1				1	Pre-requisite: ELE1301
ELE3804 Power Systems Protection						1	
ENV2201 Land Studies		1				1	
ELE2101 Control and Instrumentation		2				2	Pre-requisite: ENM1500 or ENM1600 or S tudents must be enrolled in one of the follow ing Programs: MEPR or GCEN or GEPR

Specialisation: Power Systems Engineering (Specialisation Study Code: 15638)							
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	
ELE2504 Electronic Design and Analysis		2				2	Pre-requisite: ELE1502 or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or G CEN or GEPR Students cannot be enrolled in ELE2503 and ELE2504 in the same semester
ELE3107 Signal Processing		2				2	
ELE3506 Electronic Measurement		2				2	Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS

Structural Engineering specialisation recommended enrolment pattern

Specialisation: Structural Engineering (Specialisation Study Code: 13421)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
CIV3505		1				1	
MEC2402 Stress Analysis		1				1	Pre-requisite: CIV1501 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV2403 Geology and Geomechanics		2				2	Pre-requisite: CIV1501 or CIV1500 or Stu dents must be enrolled in one of the follow ing Programs: MENS or GCEN or GEPR
CIV2502 Structural and Building Technology		2		2			
CIV2503 Structural Design I		2				2	Pre-requisite: (ENG1100 and MEC2402) or (ENG1100 and CIV1501 for students en rolled in one of the following: BETC Infras tructure Management major or BENS Infras tructure Management Engineering major) or Students must be enrolled in: GCEN or GEPR

Transdisciplinary Engineering specialisation recommended enrolment pattern

Specialisation: Transdisciplinary Engineering (Specialisation Study Code: 15640)							
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: Students must complete two of the courses listed in this schedule.							
ENG8104		1				1	
ENG8208		1				1	
ENG8103		2				2	
ENG8205		2				2	
Schedule B: Technical courses Students must complete two of the courses listed in this schedule.							
Approved Courses+		1,2		1,2			
Approved Courses+		1,2		1,2			

Footnotes

+ Approved Courses will normally be Engineering, Science or Technology courses not lower than Level 2. Consult the Program Coordinator via usq.support@usq.edu.au to seek approval.

Graduate Certificate of Spatial Science Technology (GCST) - GradCertSpScTech

CRICOS code (International applicants): 066078K

	On-campus#^	Online*
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Campus:	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:	1 semester full-time or 2 semesters part-time or by distance learning	
Program articulation:	To: Graduate Diploma of Spatial Science Technology; Master of Spatial Science Technology	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

The Graduate Certificate of Spatial Science Technology (Geographic Information Systems) is available full-time on-campus commencing in Semester 1 only. The Graduate Certificate of Spatial Science Technology (Surveying) is not available full-time on-campus and therefore is not available to international on-campus students.

^ The Graduate Certificate of Spatial Science Technology is not available full-time on-campus commencing in Semester 2.

* Semester 3 commencement — only the Geographic Information Systems major is available for part–time commencement in Semester 3.

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 Graduate Certificate of Spatial Science Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The Graduate Certificate of Spatial Science Technology (GCST) program produces graduates who are skilled in the area of spatial science theory and evaluation. It allows students to develop and extend their knowledge of a spatial science discipline area for industry application or management purposes.

Program objectives

On completion of this program graduates should be able to:

- develop and apply specialised theoretical knowledge and technical skills in a spatial science discipline

- evaluate knowledge from professional journals and other information sources to exercise independent judgement and communicate relevant ideas and theoretical concepts in their specialisation
- acquire and demonstrate an integrated understanding of a relevant body of knowledge in a spatial science discipline or area of professional practice.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work 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 three or four year Bachelor degree in the area of a discipline approved by the Faculty of Health, Engineering and Sciences, or equivalent
  Or
  A minimum of five (5) years' professional work experience equivalent to a qualification at AQF Level 7.
- 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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Certificate of Spatial Science Technology consists of four units.

Students may commence their studies at the beginning of either Semester 1 or Semester 2 depending on the mode of offer. Students may select one of the two specialisations in the program, either Geographic Information Systems or Surveying. The courses offered in each specialisation are shown in the recommended enrolment patterns which follow.

Students completing the Graduate Certificate of Spatial Science Technology select four courses from the appropriate recommended enrolment pattern,as follows

Schedule A: Two core courses (two units)

Schedule B: Two specialisation courses (two units)

Required time limits

Students have a maximum of 2 years to complete this program.

Specialisation

The specialisation provides students with knowledge and skills in a specific discipline. The two specialisation study areas in the Graduate Certificate of Spatial Science Technology are:

- Geographic Information Systems
- Surveying.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

Graduates from this program may articulate with full credit into the Graduate Diploma of Spatial Science Technology and Master of Spatial Science Technology

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Geographic Information Systems specialisation recommended enrolment pattern

Specialisation: Geographic Information Systems (Specialisation Study Code: 12613)							
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: Students must complete the following two core courses							
GIS1402 Geographic Information Systems[£]		1				1,3	
ENG6104 Asset Management in an Engineering Environment		1				1	
Schedule B: Select the remaining two courses from the following list							
CSC1401 Foundation Programming[£]		1,2				1,2,3	

Specialisation: Geographic Information Systems (Specialisation Study Code: 12613)							
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	
GIS3407 GIS Programming and Visualisation		1				1	Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
GIS2405 Spatial Analysis and Modelling		2				2	
GIS3406 Remote Sensing and Image Processing		2				2	
GIS2407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
SVY1110 Introduction to Global Positioning System		2				2	
SVY3202 Photogrammetry and Remote Sensing		1				1	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Surveying specialisation recommended enrolment pattern

Specialisation: Surveying (Specialisation Study Code: 12614)							
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: Students must complete the following two core courses							
SVY1104 Survey Computations A		2				2	Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
ENG6104 Asset Management in an Engineering Environment		1				1	
Schedule B: Select the remaining two courses from the following list							
SVY1110 Introduction to Global Positioning System		2				2	
SVY2301 Automated Surveying Systems		1				1	Pre-requisite: SVY1104 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
SVY2106 Geodetic Surveying A		1				1	Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3304 Cadastral Surveying (Queensland)		2				2	Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3107 Geodetic Surveying B		2				2	Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT
SVY3202 Photogrammetry and Remote Sensing		1				1	
SVY4304 Land and Cadastral Law^*		2				2	

Footnotes

^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus

Postgraduate Certificate of Engineering (PGCN) - PGradCertEng

This program is offered to continuing students. No new admissions will be accepted after the Semester 2, 2015 intake. Students who are interested in this area should consider the Graduate Certificate of Advanced Engineering

	External	Online
Start:	No new admissions	No new admissions
Campus:		-
Fees:	Domestic full fee paying place International full fee paying place	Domestic full fee paying place International full fee paying place
Standard duration:	1-2 years part-time	
Program articulation:	From: Bachelor of Engineering (Honours) To: Master of Advanced Engineering	

Notes:

Some of the courses in the Engineering Management and Engineering Project Management majors may be available on-campus at Springfield.

Contact us

Current students
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 Postgraduate Certificate of Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

Students who successfully complete the Postgraduate Certificate of Engineering will be able to demonstrate an ability to:

- Critically evaluate knowledge from the professional journals and other information sources relevant to their field.
- Apply the specialist knowledge and skills acquired in their major.

Admission requirements

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

Possess a four year Bachelor of Engineering degree awarded by an Australian university, or an equivalent qualification awarded by an overseas institution. Candidates who wish to study a technical major will be expected to have completed an appropriate major in their undergraduate program.

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

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Postgraduate Certificate of Engineering comprises four single-unit courses.

Required time limits

Full-time students have a maximum of one year to complete this program. Part-time students have a maximum of two years to complete this program.

A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Major studies

The major study provides students with knowledge and skills in a specific discipline. The four major study areas in the Postgraduate Certificate of Engineering are:

- Advanced Structural Engineering Design
- Engineering Management
- Engineering Project Management
- Road Engineering

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.

Articulation

Students who complete this program are eligible to articulate into the Master of Advanced Engineering degree. They will receive full credit for the courses studied if they study the same major in both programs.
The standing of degrees awarded by an overseas institution will be determined by reference to the National Office of Overseas Skills Recognition (NOOSR).

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Advanced Structural Engineering Design Major recommended enrolment pattern

.

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 Course Students must complete the course in this schedule							
CIV8801 Code-Based Structural Design						1	
Schedule B: Elective courses Students must complete three of the courses in this schedule							
CIV8802 Advanced Prestressed Concrete]						2	
CIV8803						1	
CIV8804 Advanced Design Practice using Finite Element Analysis						2	
ENG8104				1			
ENG8208				1			

Footnotes

] Offered Odd Years Only

Engineering Management Major recommended enrolment pattern

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 Course Students must complete the two courses in this schedule							
ENG8103				2			
ENG8104				1			
Schedule B: Elective courses Students must complete two of the courses in this schedule							
ENG8101				1			
ENG8102 Towards Sustainable Development#				2			
ENG8205				2			
ENG8207				2			
ENG8208				1			

Footnotes

This course will not be available in 2015. ECO8012 can be undertaken in lieu.

Notes:

Some courses may be offered on-campus at Springfield.

Engineering Project Management Major recommended enrolment pattern

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 Course Students must complete the two courses in this schedule							
MGT8022 Project-Based Management*				1, 3		1, 3	
ENG8111				2			
Schedule B: Elective courses Students must complete two of the courses in this schedule							
ENG8103				2			
ENG8104				1			
ENG8205				2			
MGT8025 Project Scope, Time and Cost Management				1		1	
ENG8208				1			

Footnotes

* It is strongly recommended that students enrol in MGT8022 prior to, or at the same time as, enrolling in subsequent project management courses.

Notes:

Some courses may be offered on-campus at Springfield.

Road Engineering Major recommended enrolment pattern

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 Course Students must complete the two courses in this schedule							
CIV5704 Road and Street Engineering				2			
CIV5705 Pavement Design and Analysis				1			Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or G CAE or MEPR
Schedule B: Elective courses Students must complete two of the courses in this schedule							
ENG8206 Whole of Life Facilities Management				2			
FIN5003				1,3		1,3	
ENG8103				2			
ENG8104				1			
ENG8205				2			
MGT8028 Project Tendering and Contracting				1		1	
ENG8208				1			

Graduate Diploma of Professional Engineering (GDNS) - GradDipProfEng

CRICOS code (International applicants): 067688J

	On-campus^	External
Start:	Semester 1 (February) Semester 2 (July) Semester 3 (November)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Campus:	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:	1 year full-time or 2 years part-time	
Program articulation:	From: Graduate Certificate of Professional Engineering, To: Master of Professional Engineering	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ Semester 3 intake for Domestic students On-campus and External. For International Students External intake only.

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 Graduate Diploma of Professional Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

On completion of this program graduates should be able to:

- demonstrate and interpret an integrated understanding of a complex body of knowledge in one or more disciplines or areas of practice: and
- apply specialised cognitive and technical skills in an advanced body of knowledge or practice in one or more disciplines or areas of practice; and
- critically analyse and reflect upon sources of information to interpret and transmit knowledge, skills and ideas to specialist and non-specialist audiences.

Program Rules

Students are required to:

- Satisfactorily complete 8 credit points as listed in the standard progression to graduate from the program.
- Satisfactorily complete all courses within 4 years.
- Maintain satisfactory academic achievement throughout the duration of the program, consistent with the UniSQ Student Academic Progress Procedure.
- Meet all mandatory course requirements including attendance of mandatory residential school requirements where this is present in courses.
- Mandatory compliance to program needs for the graduate engineering ePortfolio associated with the program.
- Immunisations and vaccinations according to national standards requirements for on-campus mode studies.
- Meet the Inherent Requirements for the Graduate Diploma of Professional Engineering.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work 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 three or four-year Bachelor degree in the area of engineering in the relevant cognate specialisation (major), or equivalent.
  Or
  Completion of an appropriate four-year embedded honours Bachelor degree in the area of engineering in a non-cognate specialisation (major field), or equivalent.
- English Language Proficiency requirements for Category 3.

The standing of degrees awarded by an overseas institution will be determined by reference to the Sydney Accord, of which Engineers Australia (EA) is a signatory, and the federal government agency, International Education group, an agency of the Department of Education and Training.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Diploma of Professional Engineering comprises eight single unit academic courses as follows:

Schedule A: Four Core courses (four units)

Schedule B: Four Specialisation courses (four units)

Required time limits

Students have a maximum of 4 years to complete this program.

Specialisation

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

- Aerospace Engineering
- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Engineering Management and Enterprise
- Environmental Engineering
- Mechanical Engineering
- Power Engineering
- Structural Engineering

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

The Graduate Certificate of Professional Engineering, the Graduate Diploma of Professional Engineering, and the Master of Professional Engineering are a nested suite of programs. Students who have completed the Graduate Diploma of Professional Engineering from prior engineering degree awards are able to apply to articulate with 6-8 credits (depends on selectives taken) to the Master of Professional Engineering.

Students who have completed the Graduate Diploma of Professional Engineering from prior science degree awards are able to apply to articulate with partial credit to the Master of Professional Engineering. Credit / Exemptions applications are reviewed on a case-by-case basis.

Applicants with similar discipline specialisations from science degrees to those offered can use this program to complete necessary requisite engineering knowledge to then articulate into the Master of Professional En

gineering. This transitional studies are for scientist graduates either working in engineering field already or planning a career extension into an engineering field of practice. For further information on this program option, please contact the School of Engineering Post-graduate Program Director via usq.support@usq.edu.au, and provide with the contact the science degree testamur and academic transcript.

Exit points

Students who have completed four courses in the program may satisfy the requirements for the Graduate Certificate of Professional Engineering and therefore may apply to exit the program with a Graduate Certificate of Professional Engineering.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Students should note that some of the courses specify enrolment requirements (prerequisites). Students should therefore refer to the Course Specification section to determine the enrolment requirements for the courses they intend enrolling in. Students should avoid enrolling in courses for which they do not have sufficient pre-requisite knowledge. Students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the relevant courses. Students should contact the School of Engineering Program Director (Post-Graduate) via usq.support@usq.edu.au if they encounter problems while enrolling in courses with requisites.

Aerospace Engineering specialisation recommended enrolment pattern

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG5500 Advanced Aerospace Systems		2				2	Pre-requisite: Students must be enrolled in the following Program: MENS (Aerospace Engineering specialisation)
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule. Students from Mechanical undergraduate engineering programs choose from MECxxxx courses, and students from Electrical undergraduate engineering programs choose from ELExxxx courses							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
ELE4109 Measurement Science and Instrument Engineering^						1	
ELE4605 Fields and Waves		1				1	Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE4606 Communication Systems		2				2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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	
							lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE5605 Electro-Magnetic Modelling		2				2,3	Pre-requisite: ELE4605 or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS
ELE6005 Electronic Systems Integration*							
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENG6208 Advanced Engineering Project Management		1				1	
MEC4108 Advanced Thermofluids						1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Stu dents cannot enrol in MEC4108 if they have successfully completed, or are currently en rolled in, MEC4103
MEC4302 Computational Mechanics in Design		1				1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC5100 Computational Fluid Dynamics						1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5107 Thermofluids		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS
MEC5109 Aerospace Propulsion Systems		2				2	Pre-requisite: MEC3107 or MEC4108 or MEC5107
MEC5203 Fibre Reinforced Composites		2				2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS
MEC6203 Advanced Materials Technology*							
MEC6306 Advanced Aerospace Transport Structures*							
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023
^ Offered odd years only
* First Offer in 2024 academic year

Agricultural Engineering specialisation recommended enrolment pattern

Specialisation: Agricultural Engineering (Specialisation Study Code: 16206)							
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 all four courses listed in this schedule.							
AGR8003 Critical Issues in Agriculture		2				2	
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
AGR4305 Agricultural Soil Mechanics		1				1	
AGR6002 Emerging Technologies in Agriculture*	2						
AGR6305 Applications of Advanced Technology in Agriculture*	2						
CLI8003 Climate, Food, Water and Energy Security						2	
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4204 Environmental Technology		1				1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5104 Advanced Hydraulic Systems		1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

* First Offer in 2024 academic year

Civil Engineering specialisation recommended enrolment pattern

Specialisation: Civil Engineering (Specialisation Study Code: 16207)							
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 all four courses listed in this schedule.							
CIV5403 Advanced Geotechnical Engineering						3	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the following Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5704 Road and Street Engineering						2	
CIV5705 Pavement Design and Analysis						1	Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or GCAE or MEPR
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENG6104 Asset Management in an Engineering Environment		1				1	
ENV4203 Public Health Engineering		2				2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5104 Advanced Hydraulic Systems		1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Electrical and Electronic Engineering specialisation recommended enrolment pattern

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16208)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ELE4606 Communication Systems		2				2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
ELE4605 Fields and Waves		1				1	Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE4607 Advanced Digital Communications		1				1	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
ELE4807 Power Systems Analysis		1				1	
ELE5001 Industrial Communications Protocols		1				1	Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
ELE5605 Electro-Magnetic Modelling		2				2,3	Pre-requisite: ELE4605 or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENG6104 Asset Management in an Engineering Environment		1				1	
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Engineering Management and Enterprise specialisation recommended enrolment pattern

Specialisation: Engineering Management and Enterprise (Specialisation Study Code: TBA)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6104 Asset Management in an Engineering Environment		1				1	
ENG6207 Innovation Management and New Product Development£						3	
Schedule B: Specialisation Courses Students must complete one Schedule B technical engineering course from another GDNS technical specialisation (i.e., discipline major) plus three of the courses listed in this schedule							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
Choose 1 Schedule B technical engineering course from another GDNS technical specialisation (ie. discipline major).							
Choose 3 courses from the following							
ENG6205 Project Management Practice		2				2	
FIN8201 Corporate Finance		1				1,3	
GIS2407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
MGT8049 Building an Engaged Workforce						2,3	
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Environmental Engineering specialisation recommended enrolment pattern

Specialisation: Environmental Engineering (Specialisation Study Code: 16209)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol

Specialisation: Environmental Engineering (Specialisation Study Code: 16209)							
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	
							lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6205 Project Management Practice		2				2	
ENV5104 Advanced Hydraulic Systems		1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
AGR4305 Agricultural Soil Mechanics		1				1	
CLI8204 Global Environmental Systems						1	
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
MEC5100 Computational Fluid Dynamics						1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
REN8101 Environment, Society and Sustainability						1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
STA6200 Statistics for Quantitative Researchers		1				1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Mechanical Engineering specialisation recommended enrolment pattern

Specialisation: Mechanical Engineering (Specialisation Study Code: 16211)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6208 Advanced Engineering Project Management		1				1	
MEC5203 Fibre Reinforced Composites		2				2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must

Specialisation: Mechanical Engineering (Specialisation Study Code: 16211)							
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	
							be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS
Schedule B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENG6104 Asset Management in an Engineering Environment		1				1	
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC4403 Advanced Dynamics		2				2	Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR
MEC5100 Computational Fluid Dynamics						1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5107 Thermofluids		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

Power Engineering specialisation recommended enrolment pattern

Specialisation: Power Engineering (Specialisation Study Code: 16212)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ELE5805 Power Electronics and Drive Systems		2				2	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6205 Project Management Practice		2				2	

Specialisation: Power Engineering (Specialisation Study Code: 16212)							
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 B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
ELE4307 Real Time Systems		2				2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4506 Industrial Process Automation						1	Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
ELE4708 Electricity Supply Systems and Operations		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4807 Power Systems Analysis		1				1	
ELE6804 Advances in Power Engineering*		2				2	
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

* First Offer in 2024 academic year

Structural Engineering specialisation recommended enrolment pattern

Specialisation: Structural Engineering (Specialisation Study Code: 16213)							
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 all four courses listed in this schedule.							
EBE5003 Research Training		1,3				1,3	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5001 Professional Skills in Engineering†		1,2,3				1,2,3	
ENG6104 Asset Management in an Engineering Environment		1				1	
CIV8801 Code-Based Structural Design						1	

Specialisation: Structural Engineering (Specialisation Study Code: 16213)							
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 B: Specialisation Courses Students must complete four of the courses listed in this schedule.							
**** Students undertaking transitional studies from a non-engineering undergraduate degree may require a special enrolment pattern in lieu of some or all of schedule B courses..*							
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4506 Concrete Structures		1				1	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV6802 Advanced Prestressed Concrete^						2	
CIV6803 Advanced Mechanics and Technology of Fibre Composites						1	Pre-requisite: CIV3506 or MEC3203 or Stu dents must be enrolled in one of the follow ing Programs: PGCN or MEPR or GCNS or GDNS or MENS
ENG5105 Advanced Numerical Modelling		2				2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
*** Please contact the School of Engineering Program Director (Post-graduate) via usq.support@usq.edu.au for alternative of up to 4 units of advanced undergraduate courses to complete pre-requisite engineering knowledge to allow future potential articulation into Master of Professional Engineering.							

Footnotes

† Unavailable in S3 2023

^ Offered odd years only

Graduate Diploma of Spatial Science Technology (GDST) - GradDipSpScTech

CRICOS code (International applicants): 072982E

	On-campus	Online*
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Campus:	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:	2 semesters full-time or 4 semesters part-time or by distance learning	
Program articulation:	From: Graduate Certificate of Spatial Science Technology To: Master of Spatial Science Technology	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

* Semester 3 commencement — only the Geographic Information Systems major is available for part-time commencement in Semester 3.

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 Graduate Diploma of Spatial Science Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The Graduate Diploma of Spatial Science Technology (GDST) program produces graduates who are skilled in the area of spatial science theory and evaluation. It allows students to advance their knowledge of a spatial science discipline area for industry application, research or management purposes.

Program objectives

On completion of this program graduates should be able to:

- apply and analyse advanced theoretical knowledge and technical skills in a spatial science discipline.
- critically evaluate knowledge from professional journals and other information sources to exercise independent judgement and communicate relevant ideas and theoretical concepts in their specialisation.

- acquire and demonstrate an integrated understanding of a complex body of knowledge in a spatial science discipline or area of professional practice.

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 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work 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 three or four year Bachelor degree in the area of a discipline approved by the Faculty of Health, Engineering and Sciences, or equivalent
  Or
  A minimum of five (5) years' professional work experience equivalent to a qualification at AQF Level 7.
- 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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Graduate Diploma of Spatial Science Technology consists of eight units and is a one year full time on-campus program that may also be studied online over two years.
Students completing the Graduate Diploma of Spatial Science Technology select eight courses from the appropriate recommended enrolment pattern, as follows:

Schedule A: five core courses (five units)

Schedule B: A three course specialisation (three units)

Required time limits

Students have a maximum of 4 years to complete this program.

Specialisation

The specialisation study provides students with knowledge and skills in a specific discipline. The two specialisation study areas in the Graduate Diploma of Spatial Science Technology are:

- Geographic Information Systems
- Surveying.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

Graduates from this program may articulate with full credit into the Master of Spatial Science Technology in the same specialisation.

Exit points

Students who for whatever reason, are unable to complete the Graduate Diploma of Spatial Science Technology, and who satisfy all of the requirements of the Graduate Certificate of Spatial Science Technology, may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Geographic Information Systems specialisation recommended enrolment pattern

Specialisation: Geographic Information Systems (Specialisation Study Code: 12704)							
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: Students must complete the following four core courses							
GIS1402 Geographic Information Systems[£]		1				1,3	
EBE5003 Research Training		1,2				1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG6104 Asset Management in an Engineering Environment		1				1	
CIS5310 IS/ICT Project Management[£]		1				1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.

Specialisation: Geographic Information Systems (Specialisation Study Code: 12704)							
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 B: Select the remaining four courses from the following list							
GIS2405 Spatial Analysis and Modelling		2				2	
GIS3406 Remote Sensing and Image Processing		2				2	
GIS3407 GIS Programming and Visualisation		1				1	Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the following Programs: GDST or MSST or GCST or MENS or MSPT
SVY3202 Photogrammetry and Remote Sensing		1				1	
GIS2407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
SVY1110 Introduction to Global Positioning System		2				2	
SVY3302 Property Valuation and Development		2				2	
URP4002 Urban and Regional Planning Theory		1				1	Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the following Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
GIS3008 Applications of GIS and Remote Sensing		2				2	Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
CSC1401 Foundation Programming[£]		1,2				1,2,3	

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Surveying specialisation recommended enrolment pattern

Specialisation: Surveying (Specialisation Study Code: 12705)							
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: Students must complete the following three core courses							
SVY1104 Survey Computations A		2				2	Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
EBE5003 Research Training		1,2				1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the following Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG6104 Asset Management in an Engineering Environment		1				1	
Schedule B: Select the remaining five courses from the following list							
SVY2106 Geodetic Surveying A		1				1	Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS
SVY3107 Geodetic Surveying B		2				2	Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT

Specialisation: Surveying (Specialisation Study Code: 12705)							
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	
SVY2301 Automated Surveying Systems		1				1	Pre-requisite: SVY1104 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
SVY3202 Photogrammetry and Remote Sensing		1				1	
SVY1110 Introduction to Global Positioning System		2				2	
SVY4304 Land and Cadastral Law^*		2				2	
SVY3302 Property Valuation and Development		2				2	
SVY2302 Mine Surveying		1				1	Pre-requisite: SVY1104 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSPT
SVY4309 Practice Management for Spatial Scientists		1				1	
SVY3304 Cadastral Surveying (Queensland)		2				2	Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS

Footnotes

^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus

Master of Advanced Engineering (MAEN) - MAdvEng

This program will accept no new admissions from Semester 1, 2023. The information relating to this program is applicable to currently enrolled students and students intending to enrol prior to last semester offered Semester 3, 2022. Students who are interested in this study area should contact us.

	Online
Start:	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

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

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

For information technology requirements, please refer to the minimum computing standards.

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 Graduate Certificate of Professional Engineering and apply to exit the Master of Advanced Engineering program with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Structural Engineering Design specialisation recommended enrolment pattern

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:							
EBE5003 Research Training		1,2				1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG6104 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	
CIV6803 Advanced Mechanics and Technology of Fibre Composites						1	Pre-requisite: CIV3506 or MEC3203 or Stu dents must be enrolled in one of the follow ing Programs: PGCN or MEPR or GCNS or GDNS or MENS
CIV8804 Advanced Design Practice using Finite Element Analysis						2	
CIV6802 Advanced Prestressed Concrete[]						2	
Schedule C Capstone Project Students must complete this course:							
ENG8308 Industry Project[#]						2	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)

Footnotes

] Offered odd years only

2 units

Engineering and Project Management specialisation recommended enrolment pattern

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:							
EBE5003 Research Training		1,2				1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG6104 Asset Management in an Engineering Environment						1	
Schedule B: Specialisation Courses Students must complete the four courses in this schedule:							
ENG6208 Advanced Engineering Project Management						1	
ENG6205 Project Management Practice						2	
ENG6207 Innovation Management and New Product Development[£]						3	
MGT8022 Project-Based Management						2, 3	
Schedule C Capstone Project Students must complete an Industry Project from this schedule:							
ENG8308 Industry Project[#]						2	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

2 units

Master of Engineering (MENC) - MEng

This program is only offered to continuing students. No new admissions will be accepted. Students who are interested in this study area should consider the Master of Advanced Engineering which will be offered from S1 2014.

	External
Start:	No new admissions
Campus:	Toowoomba
Fees:	Domestic full fee paying place International full fee paying place
Standard duration:	1.5 - 2 years by distance education
Program articulation:	From: Postgraduate Certificate of Engineering ; Bachelor of Engineering (Honours)

Notes:

Some of the courses in the Engineering Management and Engineering Project Management majors may be offered on-campus at the Springfield Campus

Formerly Master of Engineering Management (MENM)

Contact us

Current students
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 Engineering is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The aim of the Master of Engineering program is to produce graduates that are equipped with essential management knowledge and an appreciation of the latest technologies in addition to their initial specialisation. The skill set would therefore allow the graduate to manage more complex technological or engineering businesses.

Program objectives

Students who successfully complete the Master of Engineering will be able to demonstrate their ability to:

- Critically evaluate knowledge from literature and other information sources relevant to their field
- Apply asset management theory and practice to the management of engineering assets
- Evaluate the importance of technological innovation and risk in engineering businesses
- Apply the specialist knowledge and skills acquired in their major

Admission requirements

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

Possess a four year Bachelor of Engineering degree awarded by an Australian university, or an equivalent qualification awarded by an overseas institution. Candidates who wish to study a technical major will be expected to have completed an appropriate major in their undergraduate program.

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

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Engineering comprises eight single unit Academic courses as follows:

- Two core courses:
  ENG8103
- ENG8104
- A four course major; and
- Two Elective courses.

Major studies objectives

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

- Advanced Structural Engineering Design
- Engineering Management
- Engineering 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 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.

Articulation

Students who have completed the Postgraduate Certificate of Engineering are able to apply to articulate with full credit into the Master of Engineering program if they study the same major in this program and satisfy admission requirements to the Master of Engineering program.

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

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Advanced Structural Engineering Design Major recommended enrolment pattern

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:							
ENG8103				2			
ENG8104				1			
Schedule B: Major Courses Students must complete the four courses in this schedule:							
CIV8801 Code-Based Structural Design						1	
CIV8803						1	
CIV8804 Advanced Design Practice using Finite Element Analysis						2	
CIV8802 Advanced Prestressed Concrete						2	
Schedule C Elective Courses Students must complete two courses from this schedule:							
ENG8011				1			
ENG8206 Whole of Life Facilities Management				2			
ENG8205						2	

Notes:

With the prior approval of the Faculty of Health, Engineering and Sciences, students may complete a postgraduate structural engineering course at another university as one of their Elective courses.

Engineering Management Major recommended enrolment pattern

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:							
ENG8103				2			
ENG8104				1			
Schedule B: Major Courses							

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 the four courses in this schedule:							
ENG8101				1			
ENG8102 Towards Sustainable Development#				2			
ENG8205				2			
ENG8207				2			
Schedule C Elective Courses Students must complete two courses from this schedule:							
ACC5502				1,3			
ENG8011				1			
ENG8111				2		2	
ENG8204 Management of Environmental Technology**				2			
ENG8206 Whole of Life Facilities Management				2			
FIN5003				1,3		1,3	
MGT5000 Managing Organisational Behaviour				1,3		1,3	

Footnotes

This course is not available in 2013. Students should instead substitute ECO8012

** Not available in 2013

Notes:

Some courses may be offered on-campus at Springfield.

Engineering Project Management Major recommended enrolment pattern

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:							
ENG8103				2			
ENG8104				1			
Schedule B: Major Courses Students must complete the four courses in this schedule:							
MGT8022 Project-Based Management*				1,3		1,3	
ENG8111				2			
ENG8205				2			
MGT8025 Project Scope, Time and Cost Management				1			
Schedule C Elective Courses Students must complete two courses from this schedule:							
ENG8101				1			
ENG8102 Towards Sustainable Development#				2			
ENG8204 Management of Environmental Technology**				2			
ENG8206 Whole of Life Facilities Management				2			
ENG8207				2			
MGT8003 Supply Chain Management				1			
MGT8021 Project Sustainability Management				1		1	

Footnotes

* It is strongly recommended that students enrol in MGT8025 prior to, or at the same time as, enrolling in subsequent project management courses.

\# This course is not available in 2013. Students should instead substitute ECO8012

** Not available in 2013

Notes:

Some courses may be offered on-campus at Springfield.

Master of Engineering Practice (MEPR) - MEngPrac

	External^*
Start:	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Fees:	Commonwealth supported place Domestic full fee paying place International full fee paying place
Standard duration:	6 semesters part-time
Program articulation:	From: Bachelor of Engineering Science

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Footnotes

^ External students must be able to attend mandatory residential schools at a UniSQ campus.

* This program is not available to international students unless living in Australia and holding a valid visa with a duration of no less than 3 years.

Contact us

Future Australian and New Zealand 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 Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Professional accreditation

The program is accredited by Engineers Australia and graduates are eligible for Graduate membership at the Professional Engineer level.

Provisional accreditation for the Public Works and Infrastructure specialisation has been approved from 2018.

Program aims

To enable experienced Engineering Technologists to demonstrate and/or acquire the academic, personal, professional, and technical knowledge, skills and understanding required to commence practice as a graduate Professional Engineer in Australia or overseas within appropriate social, cultural, industrial and environmental contexts.

Program objectives

On completion of this program students should be able to:

- justify, evaluate and illustrate the professional attributes, competencies and capabilities that will lead to recognition by Engineers Australia as a professional engineer
- acquire expert and specialised cognitive and technical skills and competencies in one of the following fields: Civil Engineering; Electrical and Electronic Engineering; Environmental Engineering, Mechanical Engineering; Power Systems Engineering, Public Works and Infrastructure, or Structural Engineering
- demonstrate and/or acquire an advanced and integrated understanding of a complex body of knowledge and theories, concepts and processes in their chosen discipline as a professional engineer
- critically analyse, reflect and synthesise information to interpret and transmit knowledge, skills and ideas to a variety of professional and non-professional audiences

- meet eligibility to apply for Stage 1 Professional Engineer membership of Engineers Australia and to benchmark competency attributes to Engineers Australia Stage 2 Experienced Professional Engineer.

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 three year Bachelor degree in the area of engineering science or engineering technology in the relevant cognate major or equivalent and a minimum of five years' professional work experience, or equivalent.[#*]
- English Language Proficiency requirements for Category 3.

Candidates may be admitted on the basis of professional registration as a Technologist Member of Engineers Australia. Candidates must be able to demonstrate that they have at least five years' relevant and significant engineering experience usually after graduation and are required to provide a Curriculum Vitae (CV) to demonstrate their industry experience.

* This program is not available to international students unless living in Australia and holding a valid visa with a duration of no less than 3 years. The standing of degrees awarded by an overseas institution will be determined by reference to the Sydney Accord, of which Engineers Australia (EA) is a signatory, and Australian Education International (AEI) which is a federal government agency.

Prospective students are encouraged to talk to the Faculty of Health, Engineering and Sciences before completing an application form.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Engineering Practice program is a 12-unit program made up of the following three components:

Schedule A: Five core courses (seven units)

- ENG8300 Self-Assessment Portfolio
- ENG8311 Workplace Portfolio (2 units)
- ENG8308 Industry Project (2 units)
- ENM1600 Engineering Mathematics
- ENG6208 Advanced Engineering Project Management or ENG6104 Asset Management in an Engineering Environment or ENG6205 Project Management Practice

ENG8300 Self-assessment Portfolio

The course ENG8300 Self-Assessment Portfolio is the first course students undertake in the program and it is designed to enable students to assess their existing attributes and capabilities and nominate the specific workplace experiences they will use to demonstrate their level of competency in the courses: ENG8311 Workplace Portfolio and ENG8308 Industry Project. Students will also nominate the Academic courses they will undertake in the program to enable them to satisfy the remaining attribute and capability requirements in the program objectives. It may also be necessary for them to identify some specific types of industrial experience they need to undertake to be able to satisfy any remaining requirements. The outcome of this self-assessment process will be a Pathway to Graduation Plan prepared by the student in consultation with the examiner of the course.

A second component of this course will require students to show that they can write a Career Episode Report that demonstrates their achievement of two of the specified attributes and capabilities. To do this successfully students will have to demonstrate they are able to accurately reflect on their experience and that they have the communication skills that are necessary to write such a report. The information in a Career Episode Report must be verified and endorsed by a professional engineer who is preferably a member of Engineers Australia. Achievement of this component of the course is critical because students will use Career Episode Reports to demonstrate Engineers Australia's Stage 2 and discipline specific competencies in the Workplace Portfolio and Industry Project courses.

At the end of this course students will submit a portfolio containing their Curriculum Vitae, the Career Episode Reports and the Pathway to Graduation Plan. The Examiner of the course will assess the portfolio and either:

(1) Approve the Pathway to Graduation Plan
(2) Request modifications to the Plan before it is approved, or
(3) Decide that the student does not have the required knowledge, experience, attributes or capabilities to be able to satisfactorily complete the program. In this case the student will be cancelled from this program and counselled on alternative ways of achieving their goals. Students in this category may still be awarded a passing grade in the course. If a student has passed this course, they will then be granted an exemption when they enrol in another program in the area of Engineering and Built Environment.

Once a Pathway to Graduation Plan has been approved a student may enrol in the remaining courses in the Plan. The Plan will, in due course, be used by the Faculty to assess the student's eligibility to graduate.

Prospective students should visit the Engineers Australia web site to gain an understanding of the processes which will be followed. In particular, they should view the Stage Two Competencies and the guidelines for achieving Chartered status.

The Workplace Portfolio and Industry Project courses

The Workplace Portfolio course and the Industry Project course are designed to enable students to develop Portfolios that will enable them to obtain credit for their achievements during their employment as an Engineering Technologist. The courses are:

- ENG8311 Workplace Portfolio (2 units)
- ENG8308 Industry Project (2 units).

The core course ENM1600 Engineering Mathematics is designed to give students the enabling skills in mathematics and problem solving needed to undertake the Technical courses in their program.

Schedule B: Five technical courses

During the preparation of their Pathway to Graduation Plan students must nominate how they are going to demonstrate achievement of the objectives of each of the **Technical Courses** defined for their specialisation and listed in this Schedule. They may do this by studying a course or by demonstrating achievement of the objectives of the course in their Workplace Portfolio.

The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if:

- the student demonstrates prior knowledge and industrial experience in the Self-assessment Portfolio to cover all listed courses by Workplace Integrated Learning,
- or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.

Schedule C: One Practice Course

Students must complete the practice course allocated in the recommended enrolment pattern for their specialisation (0 units).

Required time limits

Students have a maximum of 5 years to complete this program.

Specialisation

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

- Civil Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Mechanical Engineering
- Power Systems Engineering
- Public Works and Infrastructure
- Structural Engineering

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools,

visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

Students are required to undertake practical and professional activities relevant to their program through enrolment in a Practice course 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 the relevant Practice course is shown in the Recommended Enrolment Pattern for the program in this Handbook.

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

External students must attend a single mandatory residential school during their program to obtain experience in practical and professional activities appropriate to the program. The mandatory residential school is included in the Practice course which is conducted in Semester 3 or during the recess period in Semester 2. The dates for each mandatory 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 mandatory residential school prior to enrolling in a Practice course. Personal protective equipment is compulsory in many engineering, construction and spatial science laboratories, students should confirm the requirements before attending residential schools for Practice courses.

Civil Engineering

- CIV4908 Civil Design Practice

Electrical and Electronic Engineering

- ELE3914 Electrical and Electronic Practice D OR
- ELE3915 Electrical and Electronic Practice E

Environmental Engineering

- ENV3904 Environmental Engineering Practice

Mechanical Engineering

- MEC3904 Mechanical Practice 4

Power Systems Engineering

- ELE3914 Electrical and Electronic Practice D OR
- ELE3915 Electrical and Electronic Practice E

Public Works and Infrastructure

- CIV3907 Civil Systems Practice OR
- ENV3904 Environmental Engineering Practice

Structural Engineering

- CIV4908 Civil Design Practice

Exit points

Students may apply to transfer to the Bachelor of Engineering (Honours) program and may apply to have the courses completed in the Master of Engineering Practice program credited to their new program.

Students who have completed four courses as per the following requirements: ENG8300 plus one course from (ENG8104, ENG8205, ENG8208) plus two Master of Engineering Practice Schedule B courses, will satisfy the requirements to be awarded the Graduate Certificate of Engineering Practice and may apply to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Students should note that some of the courses specify enrolment requirements (prerequisites). Students should therefore refer to the Course Specification section to determine the enrolment requirements for the courses they intend enrolling in. Students should avoid enrolling in courses for which they do not have sufficient pre-requisite knowledge. Students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study.

Students should contact Faculty Administration if they encounter problems while enrolling in courses with requisites.

Civil Engineering specialisation recommended enrolment pattern

Specialisation: Civil Engineering (Specialisation Study Code: 15209)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or	

Specialisation: Civil Engineering (Specialisation Study Code: 15209)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							METC or MEPR or GCNS or GDNS or MENS	
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
CIV4506 Concrete Structures		1				1	Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV3703 Transport Engineering		2				2		
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV3104 Hydraulics II		1				1	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
Select one of the following two courses:								
ENV4203 Public Health Engineering		2				2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV5705 Pavement Design and Analysis						1	Pre-requisite: CIV3703 or S tudents must be enrolled in one of the following Program s: GCNS or GDNS or MENS or PGCN or GCAE or MEPR	
Schedule C: One Practice Course Students must complete the practice course.								
CIV4908 Civil Design Practice				1,2			Co-requisite: CIV4508 or Stu dents must be enrolled in the following Program: MEPR or MENS	

Electrical and Electronic Engineering specialisation recommended enrolment pattern

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 15210)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
ELE4307 Real Time Systems		2				2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR	
ELE5805 Power Electronics and Drive Systems		2				2	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ELE5001 Industrial Communications Protocols		1				1	Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR	
ELE3105 Computer Controlled Systems		1				1	Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS	

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 15210)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							or MEPR or MENS or METC or GEPR	
ELE3107 Signal Processing		2				2		
ELE3305 Computer Systems and Communications Protocols		1				1		
ELE3506 Electronic Measurement		2				2	Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or MENS	
Schedule C: One Practice Course Students must complete one of the following two practice courses:								
ELE3914 Electrical and Electronic Practice D		1		3			Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Program s: MENS or MEPR	
ELE3915 Electrical and Electronic Practice E		2		2			Pre-requisite: ELE1801 and ELE1301 and ELE1502 or S tudents must be enrolled in one of the following Program s: MENS or MEPR	

Environmental Engineering specialisation recommended enrolment pattern

Specialisation: Environmental Engineering (Specialisation Study Code: 15211)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		

Specialisation: Environmental Engineering (Specialisation Study Code: 15211)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
ENV3104 Hydraulics II		1				1	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4107 Water Resources Engineering		2				2	Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4203 Public Health Engineering		2				2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4204 Environmental Technology		1				1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4205 Water and Wastewater Treatment						1	Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the fol lowing Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4106 Irrigation Science		2				2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.	
LAW2107 Environmental Law**						2	Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)	

Specialisation: Environmental Engineering (Specialisation Study Code: 15211)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule C: One Practice Course Students must complete the practice course.								
ENV3904 Environmental Engineering Practice				3			Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR	

Footnotes

** Course is offered in the interim trimester layer, please consult for interim trimester dates.

Mechanical Engineering specialisation recommended enrolment pattern

Specialisation: Mechanical Engineering (Specialisation Study Code: 15212)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
MEC4403 Advanced Dynamics		2				2	Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Program	

Specialisation: Mechanical Engineering (Specialisation Study Code: 15212)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							s: MENS or MEPR or GCNS or GDNS or GEPR	
MEC4108 Advanced Thermofluids		1				1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or S tudents must be enrolled in one of the following Program s: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully com pleted, or are currently en rolled in, MEC4103	
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR	
MEC4302 Computational Mechanics in Design		1				1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Program s: GCEN or METC or MEPR or GCNS or GDNS or MENS	
MEC3303 Mechanical and Mechatronic System Design		2				2	Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program s: GCEN or METC or GCNS or GDNS or MEPR or MENS	
Select one of the following two courses:								
MEC5100 Computational Fluid Dynamics[#]						1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR	
MEC5105 Combustion[+#]						2	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR	
Select one of the following two courses:								
MAT2100 Algebra and Calculus II[^]		2				2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or S tudents must be enrolled in the following program: MSCN or MEPR or BSED	
ENM2600 Advanced Engineering Mathematics[^§]		1				1	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN	

Specialisation: Mechanical Engineering (Specialisation Study Code: 15212)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule C: One Practice Course Students must complete the practice course.								
MEC3904 Mechanical Practice 4		2		2			Pre-requisite: MEC3102 or MEC2106 or Students must be enrolled in one of the fol lowing Programs: GDNS or MENS or MEPR	

Footnotes

Students may choose either MEC5100 Computational Fluid Dynamics or MEC5105 Combustion to fit their enrolment pattern.
+ Offered odd years only.
^ Students may choose either MAT2100 Algebra and Calculus II or ENM2600 Advanced Engineering Mathematics to fit their enrolment pattern.
§ Unavailable online in S3 2023

Power Systems Engineering specialisation recommended enrolment pattern

Specialisation: Power Systems Engineering (Specialisation Study Code: 16025)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previous ly completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
ELE3107 Signal Processing		2				2		

Specialisation: Power Systems Engineering (Specialisation Study Code: 16025)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ELE4307 Real Time Systems		2				2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR	
ELE3803 Electrical Plant		1				1	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
ELE4804 Power Systems Protection						1	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ELE5805 Power Electronics and Drive Systems		2				2	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ELE4807 Power Systems Analysis		1				1		
Select one of the following three courses:+								
ELE2704 Electricity Supply Systems		2				2	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: MEPR or GCEN or METC or GEPR	
ELE4506 Industrial Process Automation						1	Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR	
MEC4104 Renewable Energy Technology		2				2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR	
Schedule C: One Practice Course Students must complete one of the following practice courses:								
ELE3914 Electrical and Electronic Practice D		1		3			Pre-requisite: (ELE1801 and ELE1301 and ELE1502) or Students must be enrolled in one of the following Programs: MENS or MEPR	
ELE3915 Electrical and Electronic Practice E		2		2			Pre-requisite: ELE1801 and ELE1301 and ELE1502 or Students must be enrolled in one of the following Programs: MENS or MEPR	

Footnotes

+ Network supply students should select ELE2704 Electricity Supply Systems; instrumentation (or metering) and communication systems students should select ELE4506 Industrial Process Automation; and power generation students should select MEC4104 Renewable Energy Technology.

Public Works and Infrastructure specialisation recommended enrolment pattern

Specialisation: Public Works and Infrastructure (Specialisation Study Code: 17971)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete five courses (seven units) from this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV3603 Construction Methods						2		
CIV3703 Transport Engineering		2				2		
ENV3104 Hydraulics II		1				1	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	

Specialisation: Public Works and Infrastructure (Specialisation Study Code: 17971)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Select three of the following six courses:								
ENV4203 Public Health Engineering		2				2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4107 Water Resources Engineering		2				2	Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV4205 Water and Wastewater Treatment						1	Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the fol lowing Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV5704 Road and Street Engineering						2		
CIV5705 Pavement Design and Analysis						1	Pre-requisite: CIV3703 or S tudents must be enrolled in one of the following Program s: GCNS or GDNS or MENS or PGCN or GCAE or MEPR	
URP4001 Movement Network Planning		2				2	Pre-requisite: URP1001 or SVY4203 or Students must be enrolled in one of the fol lowing Programs: BENH or MEPR	
Schedule C: One Practice Course Students must complete one of the following practice courses:								
CIV3907 Civil Systems Practice				3			Pre-requisite: CIV2503 or S tudents must be enrolled in one of the following Program s: MENS or MEPR	
ENV3904 Environmental Engineering Practice				3			Pre-requisite: ENV4203 or Students must be enrolled in one of the following Program s: GDNS or MENS or MEPR or GEPR	

Structural Engineering specialisation recommended enrolment pattern

Specialisation: Structural Engineering (Specialisation Study Code: 15213)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete all of the courses in this schedule. Students must study ENG8300 Self-Assessment Portfolio in their first semester of enrolment in the program.								
ENG8300 Self-Assessment Portfolio						1,2,3		
ENG8311 Workplace Portfolio						1,3	Pre-requisite: ENG8300	2 units

Specialisation: Structural Engineering (Specialisation Study Code: 15213)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG8308 Industry Project						2,3	Pre-requisite: (ENG8300 and ENG8311) or (ENG8001 and Students must be enrolled in the following program: MAEN)	2 units
ENM1600 Engineering Mathematics		1,2				1,2	Enrolment is not permitted in ENM1600 if MAT1102 or MAT1502 has been previously completed	
Select one of the following three courses:								
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6208 Advanced Engineering Project Management		1				1		
ENG6205 Project Management Practice		2				2		
Schedule B: Technical Courses Students must demonstrate achievement of the objectives of each of the courses in this schedule, this can be achieved by course study or addressing the course objectives within the Workplace Portfolio. **Note**: The Academic Affairs Division may allow a student to study a single alternative advanced masters engineering course if: - the student demonstrates prior knowledge and industrial experience in the Self-Assessment Portfolio to cover of all listed courses by Workplace Integrated Learning, - or has support from their employer that such an alternative course is required in the workplace to advance their current career pathway.								
CIV5403 Advanced Geotechnical Engineering		2				2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV4505 Structural Analysis		1				1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
CIV4506 Concrete Structures		1				1	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV4508 Structural Design II		1				1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
MEC2401 Dynamics I		1				1	Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the fol	

Specialisation: Structural Engineering (Specialisation Study Code: 15213)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							lowing Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR	
Select one of the following two courses:								
MAT2100 Algebra and Calculus II		2				2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or S tudents must be enrolled in the following program: MSCN or MEPR or BSED	
ENM2600 Advanced Engineering Mathematics§		1				1	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN	
Select one of the following two courses:								
CIV3603 Construction Methods						2		
CMG3003 Building Services: Methods, Materials and Management						1	Pre-requisite: CMG1001 and CIV2502 or Students must be enrolled in the following Pro gram: MEPR	
Schedule C: One Practice Course Students must complete the practice course.								
CIV4908 Civil Design Practice				1,2			Co-requisite: CIV4508 or Stu dents must be enrolled in the following Program: MEPR or MENS	

Footnotes

§ Unavailable online in S3 2023

Master of Professional Engineering (MENS) - MProfEng

CRICOS code (International applicants): 067689G

	On-campus	External
Start:	Semester 1 (February) Semester 2 (July) Semester 3 (November)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Campus:	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:	2 years full-time or 4 years part-time	
Program articulation:	From: Graduate Certificate of Professional Engineering; Graduate Diploma of Professional Engineering	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

For all modes of study there are mandatory practical components which require either on-campus participation or residential school attendance.

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: studyeng@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 specialisations of Agricultural Engineering, Civil Engineering, Electrical & Electronic Engineering, Environmental Engineering, Mechanical Engineering, Power Engineering and Structural Engineering have been accorded full accreditation at the level of Professional Engineer by Engineers Australia and graduates are eligible for Graduate membership at the Professional Engineer Level.

The new Aerospace Engineering specialisation offered in 2023 will be seeking provisional accreditation from Engineers Australia, noting as this is a recognised field of practice within Engineers Australia, graduate membership is still available upon application on completion.

The specialisation of Engineering Management and Enterprise program content is directly linked to Engineers Australia Executive Engineering Stage 4 accreditation competencies but is not accredited as there is no graduate membership with Engineers Australia in this new professional area of practice (i.e., membership begins at CPEng and then after this stage 3 Executive Engineer). Graduates from this specialisation must submit their own evidence-based industry experience portfolio for membership accreditation review.

Program objectives

On completion of this program graduates should be able to:

(1) Apply specialised and advanced theoretical knowledge that underpins the relevant engineering discipline to enable critical reflection on professional practice.
(2) Synthesise the social purposes of engineering and evaluate the performance and sustainability of engineered products and systems including the costs and benefits to the community.
(3) Apply cognitive, technical and creative skills to generate and evaluate concepts and complex ideas across a range of engineering problems reflecting issues of sustainable practice in diverse social, environmental and technical contexts.
(4) Critically examine and autonomously evaluate evidence when justifying actions for technical, economic, environmental, ethical and cross-cultural issues, including those relevant to indigenous peoples.
(5) Apply project management skills and competencies in team leadership, communication and technical research to enable delivery of engineering projects within given project constraints.
(6) Communicate effectively in English, using a range of high-level oral, written and technology-based approaches, to justify theoretical propositions, methodologies, conclusions and professional decisions to specialist and non-specialist audiences.
(7) Engage in further learning through research, scholarship and critical reflection, including defence of professional and ethical decision-making and apply a high level of personal autonomy and accountability to manage engagement with professional practice that is integrated and captured in their postgraduate program ePortfolio.

Program Rules

Students are required to:

- Satisfactorily complete 16 credit points as listed in the standard progression to graduate from the program.
- Satisfactorily complete all courses within 6 years.
- Maintain satisfactory academic achievement throughout the duration of the program, consistent with the UniSQ Student Academic Progress Procedure.
- Meet all mandatory course requirements including attendance of mandatory residential school requirements where this is present in courses.
- Mandatory compliance to program needs for the graduate engineering ePortfolio associated with the program.
- ENG5001 Professional Skills in Engineering for domestic program intake students) or ENG5002 Professional Skills for Australian Engineering Workplace (for international program intake students) are the program professional practice entry courses and shall be undertaken at the start of the program.
- Immunisations and vaccinations according to national standards requirements for on-campus mode studies.
- Meet the Inherent Requirements for the Master of Professional Engineering.

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 three or four year Bachelor degree in the area of engineering in the relevant cognate specialisation (major), or equivalent.
  Or

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

To be eligible for advanced standing entry, applicants must satisfy the following requirement:

- Completion of an Australian university four year embedded honours degree in engineering in the same or closely related cognate specialisation (major).

The standing of degrees awarded by an overseas institution will be determined by reference to the Sydney Accord, of which Engineers Australia (EA) is a signatory, and the federal government agency, International Education group, an agency of the Department of Education and Training.

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.

Inherent requirements

There are inherent requirements for this program that must be met in order to complete the program and graduate. Make sure you read and understand the requirements for this program online.

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Professional Engineering comprises 16 units (16 single-unit academic courses). The structure is shown below:

Schedule A: Six core courses (six units)

Schedule B: A six-course specialisation (six units)

Schedule C: Four selective courses (four units)

Required time limits

Students have a maximum of 6 years to complete this program.

Specialisation

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

- Aerospace Engineering
- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Engineering Management and Enterprise
- Environmental Engineering
- Mechanical Engineering
- Power Engineering
- Structural Engineering

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Residential schools

The attendance requirement of residential schools within this degree is indicated by the following letters: R = Recommended; HR = Highly Recommended; M = Mandatory. To find out more about residential schools, visit the Residential School Schedule to view specific dates for your degree, or visit the Policy and Procedure Library.

Students are required to undertake practical and professional activities relevant to their program, and also as embedded in their discipline cognate major and other core program courses.

All students must attend residential schools during their program to obtain experience in practical and professional activities appropriate to the program. The dates for each residential school Practice course are shown in the Residential School schedule in this Handbook and 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, students should confirm the requirements before attending residential schools for Practice courses.

Students from all discipline majors shall enrol during their final year of study in the core program single study load unit practical EBE6002 Advanced System Design and Innovation (noting pre-requisite requirements), which includes one or more mandatory embedded residential school depending on the cognate major of enrolment.

International students shall undertake ENG5002 Professional Skills for Australian Engineering Workplace as their first enrolment on entry into the program as an intensive mandatory on-campus residential school for orientation into this master's degree program, the UniSQ educational framework for post-graduate students and orientation to the Australian Culture and engineering workplace. During 2023 this course will be offered at the beginning of Semester 1 and 2, and thereafter in the new academic calendar from mid-January in 2024 in Block 2, Block 4 or Block 6.

Articulation

Students who have completed the Master of Professional Engineering are able to apply for entry to the Master of Research or Doctor of Philosophy . The Master of Professional Engineering core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) for articulation into Higher Degree Research (HDR) programs.

Exit points

Students who have completed four courses in the program may satisfy the requirements for the Graduate Certificate of Professional Engineering and therefore may apply to exit the program with a Graduate Certificate of Professional Engineering .

Students who have completed eight courses in the program may satisfy the requirements for the Graduate Diploma of Professional Engineering and therefore may apply to exit the program with a Graduate Diploma of Professional Engineering.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Students should note that some of the courses specify enrolment requirements (prerequisites). Students should therefore refer to the Course Specification section to determine the enrolment requirements for the courses they intend enrolling in. Students should avoid enrolling in courses for which they do not have sufficient pre-requisite knowledge. Students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary, by the examiners of the relevant courses. Entrants may need to undertake approved courses to address foundation knowledge in the non-cognate specialisation, in lieu of course credit in the standard recommended enrolment structure. Students should contact UniSQ Support via usq.support@usq.edu.au if they encounter problems while enrolling in courses with requisites.
Potential applicants who do not have the requisite engineering qualifications for direct entry into the Master of Professional Engineering, but come from science degree backgrounds, can request potential special enrolment consideration to undertake the Graduate Certificate of Professional Engineering or Graduate Certificate of Professional Practice for successful transitional studies completion to then be considered for articulation into the Master of Professional Engineering Program.

The following enrolment patterns are for Master of Professional Engineering students only and apply to successful entry applicants into this program.

International students are permitted to undertake one unit load of study per semester by online studies, or from 2024 academic year start, one unit load of study per trimester by online studies.

International students shall undertake the mandatory ENG5002 intensive residential courses as their first unit of study after acceptance into the program.

Aerospace Engineering specialisation recommended enrolment pattern

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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	
							lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Aerospace Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
All students to complete							
ENG5500 Advanced Aerospace Systems	1	2			1	2	Pre-requisite: Students must be enrolled in the following Program: MENS (Aerospace Engineering specialisation)
ENG6208 Advanced Engineering Project Management	1	1			1	1	
For students from undergraduate mechanical discipline strand for Aerodynamics and Propulsion Sub-specialisation (4 units)							
International Entry Students only							
MEC5107 Thermofluids	1,2	2			1,2	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS
Domestic Entry Students only							
MEC4108 Advanced Thermofluids	1,2	1			1,2	1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Stu dents cannot enrol in MEC4108 if they have successfully completed, or are currently en rolled in, MEC4103
All Aerodynamic & Propulsion Sub-specialisation Students to complete							
MEC5100 Computational Fluid Dynamics					1	1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5109 Aerospace Propulsion Systems	2	2			2	2	Pre-requisite: MEC3107 or MEC4108 or MEC5107
MEC6109 Advanced Gas Dynamics*	2						
For undergraduates from mechanical/structural discipline strands entering Aerospace Transport Structures Sub-specialisation (4 units)							
MEC4302 Computational Mechanics in Design	1,2	1			1,2	1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC5203 Fibre Reinforced Composites	1,2	2			1,2	2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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	
MEC6203 Advanced Materials Technology*	2						
MEC6306 Advanced Aerospace Transport Structures*					2		
For students from undergraduate Electrical and Electronic Strands entering Aerospace Electrical Engineering Sub-specialisation (4 units)							
MEC6203 Advanced Materials Technology*	2						
ELE5605 Electro-Magnetic Modelling	2	2			2	2,3	Pre-requisite: ELE4605 or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS
ELE6005 Electronic Systems Integration*	2						
ELE6006 Aerospace Communications, Data and Navigation*	2						
Schedule C: Aerospace Engineering Specialisation Selective Courses (4 unit load required)							
Choose one from the following							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Mechanical Engineering Aerospace Sub-disciplines - choose three from the following (3 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
MEC5203 Fibre Reinforced Composites	1,2	2			1,2	2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS
MEC4108 Advanced Thermofluids	1,2	1			1,2	1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Stu dents cannot enrol in MEC4108 if they have successfully completed, or are currently en rolled in, MEC4103
MEC6203 Advanced Materials Technology*	2						
MEC4406 Robotics and Machine Vision	1,2	2			1,2	2	Pre-requisite: MEC2401 or ELE2103 or Stu dents must be enrolled in one of the follow ing Programs: MENS or GCEN
MEC4104 Renewable Energy Technology	2	2			2	2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or

Specialisation: Aerospace Engineering (Specialisation Study Code: TBA)							
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	
							GCNS or GDNS or METC or MENS or MEPR
MEC4403 Advanced Dynamics	1	2			1	2	Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR
MEC5100 Computational Fluid Dynamics					1	1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5105 Combustion$					1	2	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
MEC5109 Aerospace Propulsion Systems	2	2			2	2	Pre-requisite: MEC3107 or MEC4108 or MEC5107
MEC6109 Advanced Gas Dynamics*	2						
MEC6306 Advanced Aerospace Transport Structures*					2		
Electrical Engineering Aerospace Sub-discipline - choose three from the following (3 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
ELE4605 Fields and Waves	1,2	1			1,2	1	Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE4606 Communication Systems	1,2	2			1,2	2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
MEC4104 Renewable Energy Technology	2	2			2	2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
ELE4307 Real Time Systems	1	2			1	2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4109 Measurement Science and Instrument Engineering$					1,2	1	
MEC4406 Robotics and Machine Vision	1,2	2			1,2	2	Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023
$ This course is only offered in odd years

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Agricultural Engineering specialisation recommended enrolment pattern

Specialisation: Agricultural Engineering (Specialisation Study Code: 16215)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Agricultural Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
ENV4106 Irrigation Science	1	2			1	2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4107 Water Resources Engineering	1	2			1	2	Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
AGR4305 Agricultural Soil Mechanics	1	1			1	1	
ENV5104 Advanced Hydraulic Systems	1,2	1				1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
AGR6002 Emerging Technologies in Agriculture*	2						
AGR6305 Applications of Advanced Technology in Agriculture*	2						
Schedule C: Agricultural Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	

Specialisation: Agricultural Engineering (Specialisation Study Code: 16215)							
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	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	2	1			2	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
CLI8003 Climate, Food, Water and Energy Security					2	2	
MEC4108 Advanced Thermofluids	1,2	1			1,2	1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Students cannot enrol in MEC4108 if they have successfully completed, or are currently enrolled in, MEC4103
ENV4203 Public Health Engineering	1,2	2			1,2	2	Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology	1,2	1			1,2	1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC4406 Robotics and Machine Vision	1,2	2			1,2	2	Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
MEC5100 Computational Fluid Dynamics					2	1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Civil Engineering specialisation recommended enrolment pattern

Specialisation: Civil Engineering (Specialisation Study Code: 16216)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Civil Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
CIV4505 Structural Analysis	1	1			1	1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4508 Structural Design II	1	1			1	1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering	1	2			1	2	Pre-requisite: ENV1101 or ENV2103 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5403 Advanced Geotechnical Engineering	1,2	2			1,2	2	Pre-requisite: CIV2401 or CIV2403 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5104 Advanced Hydraulic Systems	1,2	1			1,2	1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
CIV5704 Road and Street Engineering					2	2	

Specialisation: Civil Engineering (Specialisation Study Code: 16216)							
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 C: Civil Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CIV6802 Advanced Prestressed Concrete$					2	2	
ENV4205 Water and Wastewater Treatment					1	1	Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the fol lowing Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4506 Concrete Structures	1,2	1			1,2	1	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV5705 Pavement Design and Analysis					1,2	1	Pre-requisite: CIV3703 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or G CAE or MEPR

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023
$ This course is only offered in odd years

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Electrical and Electronic Engineering specialisation recommended enrolment pattern

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16217)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Electrical and Electronic Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
ELE4605 Fields and Waves	1	1			1	1	Pre-requisite: {(MAT1502 or ENM1600) and ELE2103 and ELE2601} or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS
ELE4606 Communication Systems	1	2			1	2	Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
ELE4807 Power Systems Analysis	1	1			1	1	
ELE5001 Industrial Communications Protocols	1,2	1			1,2	1	Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR
ELE5605 Electro-Magnetic Modelling	1,2	2			1,2	2,3	Pre-requisite: ELE4605 or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS
ELE6005 Electronic Systems Integration*	2						
Schedule C: Electrical and Electronic Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16217)							
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	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
ELE4607 Advanced Digital Communications	1,2	1			1,2	1	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
MEC4406 Robotics and Machine Vision	1,2	2			1,2	2	Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
ELE4109 Measurement Science and Instrument Engineering$					1,2	1	

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023
$ This course is only offered in odd years

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Engineering Management and Enterprise specialisation recommended enrolment pattern

Specialisation: Engineering Management and Enterprise (Specialisation Study Code: 16289)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					

Specialisation: Engineering Management and Enterprise (Specialisation Study Code: 16289)							
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	
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Engineering Management and Enterprise Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
ENG6205 Project Management Practice	1,2	2			1,2	2	
ENG6207 Innovation Management and New Product Development£					1,2	3	
FIN8201 Corporate Finance	1,2	1			1,2	1	
GIS2407 Web Based Geographic Information System	1,2	2			1,2	2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
MGT8049 Building an Engaged Workforce					1,2	1	
Schedule C: Engineering Management and Enterprise Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose 4 units							
Choose 2 of the following 3							
MGT8034 Strategic Management of Human Resources and Innovation					1,2	3	
OR							
MGT8074 Project Team Leadership^^	1,2	2			1,2	2	Enrolment is not permitted in MGT8074 if MGT8027 has been previously completed.
OR							
MGT8040 Entrepreneurship, Innovation and Creativity					1,2	2	
Choose 2 from any other single discipline strand offered in the MENS program, choose two technical engineering Schedule B courses from other discipline majors.							

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Environmental Engineering specialisation recommended enrolment pattern

Specialisation: Environmental Engineering (Specialisation Study Code: 16218)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Environmental Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
ENV4107 Water Resources Engineering	1	2			1	2	Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering	1	2			1	2	Pre-requisite: ENV1101 or ENV2103 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology	1	1			1	1	Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4205 Water and Wastewater Treatment					1,2	1	Pre-requisite: ENV4203 and ENV2105 or Students must be enrolled in one of the fol lowing Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5104 Advanced Hydraulic Systems	1,2	1			1,2	1	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ENV6103 Advanced Environmental Modelling*	2						

Specialisation: Environmental Engineering (Specialisation Study Code: 16218)							
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 C: Environmental Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CLI8204 Global Environmental Systems					2	1	
ENV4106 Irrigation Science	1	2			1	2	Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
AGR4305 Agricultural Soil Mechanics	1,2	1			1,2	1	
MEC5100 Computational Fluid Dynamics					2	1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
REN8101 Environment, Society and Sustainability					1,2	1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Mechanical Engineering specialisation recommended enrolment pattern

Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Mechanical Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
MEC5107 Thermofluids	1,2	2			1,2	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS
Domestic Entry Students Only							
MEC4108 Advanced Thermofluids	1,2	1			1,2	1	Pre-requisite: (MEC3107 & ENM2600 & ENG3104) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR Stu dents cannot enrol in MEC4108 if they have successfully completed, or are currently en rolled in, MEC4103
All Students to complete							
MEC4104 Renewable Energy Technology	1	2			1	2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC4403 Advanced Dynamics	1	2			1	2	Pre-requisite: (MEC2401 and (MAT2500 or ENM2600)) or Students must be enrolled in one of the following Programs: MENS or MEPR or GCNS or GDNS or GEPR
MEC4302 Computational Mechanics in Design	1	1			1	1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Programs: GCEN or

Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)							
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	
							METC or MEPR or GCNS or GDNS or MENS
MEC5203 Fibre Reinforced Composites	1,2	2			1,2	2	Pre-requisite: (MEC1201 and (ENM2600 or MAT2100) and MEC2402) or Students must be enrolled in one of the following Programs: GCNS or GDNS or MEPR or MENS
MEC6203 Advanced Materials Technology*	2						
Schedule C: Mechanical Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
MEC4406 Robotics and Machine Vision	1,2	2			1,2	2	Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the following Programs: MENS or GCEN
MEC5100 Computational Fluid Dynamics					2	1	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or ENV3104 or ENV5104 or Students must be enrolled in the following Program: MEPR
MEC5105 Combustion$					2	2	Pre-requisite: MEC3107 or MEC3102 or MEC4108 or MEC5107 or Students must be enrolled in the following Program: MEPR
MEC5109 Aerospace Propulsion Systems	2	2			2	2	Pre-requisite: MEC3107 or MEC4108 or MEC5107
MEC6109 Advanced Gas Dynamics*	2						
MEC6306 Advanced Aerospace Transport Structures*					2		

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

§ Unavailable online in S3 2023
$ This course is only offered in odd years

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Power Engineering specialisation recommended enrolment pattern

Specialisation: Power Engineering (Specialisation Study Code: 16221)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Power Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
ELE4804 Power Systems Protection					1	1	Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE4807 Power Systems Analysis	1	1			1	1	
ELE4307 Real Time Systems	1	2			1	2	Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE4708 Electricity Supply Systems and Operations	2	2			2	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
ELE5805 Power Electronics and Drive Systems	2	2			2	2	Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE6804 Advances in Power Engineering*							

Specialisation: Power Engineering (Specialisation Study Code: 16221)							
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 C: Power Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
GIS2407 Web Based Geographic Information System	1,2	2			1,2	2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
ELE4506 Industrial Process Automation					1,2	1	Pre-requisite: (ELE2101 or ELE2103) and ELE3105 and MEC2501 or Students must be enrolled in the following program: GCNS or GDNS or MENS or MEPR
MEC4104 Renewable Energy Technology	2	2			2	2	Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
ELE5001 Industrial Communications Protocols	2	1			2	1	Pre-requisite: ELE2601 or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Structural Engineering specialisation recommended enrolment pattern

Specialisation: Structural Engineering (Specialisation Study Code: 16222)							
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: Program Core Courses *Students must complete all six courses listed in this schedule*							
International Entry Students Only							
ENG5002 Professional Skills for Australian Engineering Workplace^^	1	1,2					
Domestic Entry Students Only							
ENG5001 Professional Skills in Engineering†	1	1,2,3			1	1,2,3	
All students to complete							
EBE5003 Research Training	1	1,2			1	1,2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the fol lowing Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105
ENG5105 Advanced Numerical Modelling	1	2			1	2	Pre-requisite: Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or MEPR
EBE6002 Advanced System Design and Innovation^*	2						
EBE6411 Masters Research Project Part 1*	2						
EBE6412 Masters Research Project Part 2*	2						
Schedule B: Structural Engineering Specialisation Core Courses *Students must complete all six courses listed in this schedule*							
CIV4505 Structural Analysis	1	1			1	1	Pre-requisite: MEC2402 and (MAT1502 or ENM1600 or MAT1102) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
CIV4506 Concrete Structures	1	1			1	1	Pre-requisite: CIV2503 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV4508 Structural Design II	1	1			1	1	Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV8801 Code-Based Structural Design						1	
CIV6802 Advanced Prestressed Concrete$					2	2	
CIV6803 Advanced Mechanics and Technology of Fibre Composites					2	1	Pre-requisite: CIV3506 or MEC3203 or Stu dents must be enrolled in one of the follow ing Programs: PGCN or MEPR or GCNS or GDNS or MENS
Schedule C: Structural Engineering Specialisation Selective Courses (4 unit load required)							
Advanced Management Courses – mandatory to choose one of each paired option listed (2 units)							
Course A = Mandatory Choose 1							
ENG6208 Advanced Engineering Project Management	1,2	1			1,2	1	

Specialisation: Structural Engineering (Specialisation Study Code: 16222)							
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	
OR							
ENG6205 Project Management Practice	1,2	2			1,2	2	
Course B = Mandatory Choose 1							
ENG6104 Asset Management in an Engineering Environment	1,2	1			1,2	1	
OR							
ENG6207 Innovation Management and New Product Development£					1,2	3	
Choose two from the following selectives (2 units)							
ENM2600 Advanced Engineering Mathematics§	1,2	1			1,2	3	Pre-requisite: ENM1600 or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
STA6200 Statistics for Quantitative Researchers	1,2	1			1,2	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
GIS2407 Web Based Geographic Information System	1,2	2			1,2	2	Pre-requisite: GIS1402 or Students must be enrolled in one of the following Programs: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS
CIV5403 Advanced Geotechnical Engineering	1	2			1	2	Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
MEC4302 Computational Mechanics in Design	1,2	1			1,2	1	Pre-requisite: (MEC2304 and MEC2401 and MEC2402) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS

Footnotes

^^ Mandatory on-campus residential school
† Unavailable in S3 2023
^ Mandatory group capstone practical
* First Offer in 2024 academic year
$ This course is only offered in odd years
£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024
§ Unavailable online in S3 2023

Notes:

Consult the School of Engineering Program Director via usq.support@usq.edu.au to seek any non-standard enrolment approval.

Level 6 and/or level 8 courses from other areas of study may be chosen as approved courses with the approval of the School of Engineering.

Core program courses EBE5003, ENG5105, EBE6002, EBE6411 and EBE6412 constitute 5 mandatory units of masters level research (and innovation) content in this MENS program, for possible articulation into Higher Degree Research PhD programs after graduation.

Master of Engineering Technology (METC) - MEngTech

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this area of study should contact us.

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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:	3 semesters full-time or 6 semesters part-time or by distance education	
Program articulation:	From: Graduate Certificate of Engineering Technology;	

Contact us

Current students
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 Engineering Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

Students who successfully complete the program will be able to demonstrate:

- a knowledge of a general discipline area of engineering at an advanced level
- a good standard of written and verbal English language communication skill
- a knowledge of the professional journals and other information sources relevant to the specialised area of engineering
- an ability to evaluate research reports and to plan a research project; and either
- a capacity for investigation, evaluation and synthesis within an engineering context, or
- a knowledge of fundamental technology management issues.

Admission requirements

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

Possess a three-year degree in engineering, science or technology in the same field of study as their proposed major study, or a four-year degree in engineering, from a college or university recognised by the National Office of Overseas Skills Recognition (NOOSR) as awarding degrees that are comparable to the education level of an Australian bachelor degree. Candidates for admission must have demonstrated a high level of academic performance.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Engineering Technology consists of 12 units of study as indicated in the following recommended enrolment patterns for each major study area. For their first time, students studying full-time on-campus will enrol in four courses from Schedule A and Schedule B of the Recommended Enrolment Pattern of their chosen major. The four courses should include ENG8001 .

On successful completion of four courses including ENG8001, students may choose either the Engineering Technology Studies Path or the Project and Dissertation Path. The Project and Dissertation Path will normally be available only to students that achieve a GPA of at least 5.0 across their previous courses. Full-time on-campus students taking the Project and Dissertation will normally enrol to do their project in their third term of study. In exceptional circumstances, the Program Co-ordinator may grant permission to take the project in the second term.

Students studying part-time externally will follow an equivalent program extended over six terms. Students must complete the part-time external program within a maximum period of 12 terms.

Required time limits

Full-time students have a maximum of 3 years to complete this program. Part-time students have a maximum of 6 years to complete this program. A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

Major studies objectives

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

- Agricultural Engineering
- Civil Engineering
- Computer Systems and Telecommunications Engineering
- Environmental Engineering
- Mechanical Engineering
- Mechatronic Engineering
- Power Systems Engineering
- Structural Engineering
- Technology Management

A Transdisciplinary Engineering option is also available for students wishing to enhance their knowledge across a range of engineering disciplines

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.

Articulation

The Faculty of Health, Engineering and Sciences offers an articulated program of studies leading to the awards of Graduate Certificate of Engineering Technology and Master of Engineering Technology. These programs of study are suitable for graduates of three-year engineering, technology and science programs who wish to further their studies in engineering, and for graduates of four-year professional engineering programs who wish to continue their studies in a different discipline area.

The Graduate Certificate of Engineering Technology consists of four units of study. The Master of Engineering Technology is composed of 12 units of study with the option for either all coursework (via an Engineering Technology Studies Path), or eight units of coursework and a four-unit Project and Dissertation.

The fully articulated program is intended to allow students to enhance and extend their knowledge of a particular engineering discipline area. .

Exit points

Students who, for whatever reason, are unable to complete the Master of Engineering Technology and who satisfy all of the requirements of the Graduate Certificate of Engineering Technology may be permitted to exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Graduates of engineering degree programs who are eligible for professional membership of Engineers Australia will not be permitted to undertake a major study in the same discipline area as their undergraduate degree.

Candidates for admission to this program should note that some of the courses specify enrolment requirements. This may mean that successful applicants will be enrolling in courses for which they do not have sufficient pre-requisite knowledge. Applicants should refer to the course specification to determine the enrolment requirements for the courses they intend enrolling in. Graduate students will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the

relevant courses. Alternatively, they should enrol in the pre-requisite course(s). These courses will not contribute to the requirements for program completion.

See Enrolment Flowchart for further details.

The Master of Engineering Technology consists of 12 units of study as indicated in the following recommended enrolment patterns for each major study area. For their first term, students studying full-time on-campus will enrol in four courses from Schedule A and should include ENG8001 .

On successful completion of four courses including ENG8001, students may choose either the Engineering Technology Studies Path or the Project and Dissertation Path. The Project and Dissertation Path will normally be available only to students who achieve a GPA of at least 5.0 across their previous courses. Full-time on-campus students taking the Project and Dissertation Path will normally enrol to do their project in their third term of study. In exceptional circumstances, the Program Co-ordinator may grant permission to take the project in the second term.

Permission to enrol in ENG8002 , must be obtained from the Program Co-ordinator.

Students should note that the choice of courses for full-time, on-campus study may be limited due to timetabling constraints and that not all courses will necessarily be offered each year.

Agricultural Engineering Major recommended enrolment pattern

Major study: Agricultural Engineering (Major Study Code: 12931)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete the course listed in this schedule:								
ENG8001		1,2				1,2		
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:								
AGR3303 Agricultural Materials and Post-Harvest Technologies		1		1				
AGR3304 Soil Science		1		1				
AGR3305 Precision and Smart Technologies in Agriculture				1				
AGR4305 Agricultural Soil Mechanics		1						
ENV3104 Hydraulics II		1		1			Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV3105 Hydrology		2		2				
ENV4106 Irrigation Science		2		2			Pre-requisite: AGR3304 or Students must be enrolled in one of the following Program s: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.	
ENV4107 Water Resources Engineering		2		2			Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
MEC3303 Mechanical and Mechatronic System Design		2		2			Pre-requisite: MEC2301 or Students must be enrolled in one of the following Program	

Major study: Agricultural Engineering (Major Study Code: 12931)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							s: GCEN or METC or GCNS or GDNS or MEPR or MENS	
MEC3302		1		1				
MEC4406 Robotics and Machine Vision		2		2			Pre-requisite: MEC2401 or ELE2103 or Students must be enrolled in one of the fol lowing Programs: MENS or GCEN	
Schedule C: Engineering Technology Studies Path								
ENG8101		1		1				
ENG8104		1		1				
ENG8103		2		2				
ENG8205		2		2				
Schedule D: Project and Dissertation Path								
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411	Four units

Footnotes

** Permission to enrol in this course must be obtained from the Program Co-ordinator.

Civil Engineering Major recommended enrolment pattern

Major study: CivilEngineering (Major Study Code: 15398)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Core Courses Students must complete the course listed in this schedule:								
ENG8001		1,2				1,2		
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:								
CIV3403 Geotechnical Engineering		2		2			Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV3505		1		1				
CIV3506		1		1				
CIV4508 Structural Design II		1		1			Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
CIV5704 Road and Street Engineering				2				
ENV3105 Hydrology		2		2				
ENV3104 Hydraulics II		1		1			Pre-requisite: ENV1101 or ENV2103 or Students must be enrolled in one of the fol lowing Programs: GCEN or	

Major study: CivilEngineering (Major Study Code: 15398)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							METC or MEPR or GCNS or GDNS or MENS	
ENV4107 Water Resources Engineering		2		2			Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
ENV5205 Solid and Liquid Waste Treatment		1		1				
Schedule C: Engineering Technology Studies Path								
ENG8101		1		1				
ENG8104		1		1				
ENG8103		2		2				
ENG8205		2		2				
Schedule D: Project and Dissertation Path								
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411	Four units

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Computer Systems and Telecommunications Engineering Major recommended enrolment pattern

Major study: Computer Systems and Telecommunications Engineering (Major Study Code: 15645)							
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 course listed in this schedule							
ENG8001		1,2		1,2			
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
ELE2601 Telecommunications Principles		1		1			Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or GEPR
ELE2303 Embedded Systems Design		1		1			Pre-requisite: ELE1301
ELE3305 Computer Systems and Communications Protocols		1		1			
ELE4607 Advanced Digital Communications		1		1			Pre-requisite: ELE1301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
CSC8415 Computer Network Programming		2		2			
CSC8407		1		1			
ELE3107 Signal Processing		2		2			
ELE3307		2		2			
ELE3506 Electronic Measurement		2		2			Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the fol

Major study: Computer Systems and Telecommunications Engineering (Major Study Code: 15645)							
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	
							lowing Programs: GCEN or METC or MEPR or MENS
ELE4606 Communication Systems		2		2			Pre-requisite: (ELE2504 and ELE2601) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Environmental Engineering Major recommended enrolment pattern

Major study: Environmental Engineering (Major Study Code: 12932)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
AGR3304 Soil Science		1		1			
CIV3403 Geotechnical Engineering		2		2			Pre-requisite: CIV2401 or CIV2403 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3104 Hydraulics II		1		1			Pre-requisite: ENV1101 or ENV2103 or Stu dents must be enrolled in one of the follow ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4204 Environmental Technology		1		1			Pre-requisite: ENV2105 or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV3105 Hydrology		2		2			
ENV4106 Irrigation Science		2		2			Pre-requisite: AGR3304 or Students must be enrolled in one of the following Programs: GCEN or GCSC or GDSI or METC or MEPR or GCNS or GDNS or MENS or MSCN.
ENV4107 Water Resources Engineering		2		2			Pre-requisite: (ENV3104 and ENV3105) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV4203 Public Health Engineering		2		2			Pre-requisite: ENV1101 or ENV2103 or Stu dents must be enrolled in one of the follow

Major study: Environmental Engineering (Major Study Code: 12932)							
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	
							ing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENV5205 Solid and Liquid Waste Treatment		1		1			
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Mechanical Engineering Major recommended enrolment pattern

Major study: Mechanical Engineering (Major Study Code: 12928)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
MEC3102		1		1			
MEC3302		1		1			
MEC4103		1		1			
MEC3203 Materials Technology		1		1			Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC4104 Renewable Energy Technology		1		1			Pre-requisite: ((MEC2101 and MEC3102) or MEC2106) or Students must be enrolled in one of the following Programs: GCEN or GCNS or GDNS or METC or MENS or MEPR
MEC2401 Dynamics I		2		2			Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
MEC3204 Production Engineering		2		2			
MEC3303 Mechanical and Mechatronic System Design		2		2			Pre-requisite: MEC2301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
ELE2103 Linear Systems and Control		2		2			
MEC3403		2		2			
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			

Major study: Mechanical Engineering (Major Study Code: 12928)							
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	
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Mechatronic Engineering Major recommended enrolment pattern

Major study: Mechatronic Engineering (Major Study Code: 12937)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
ELE2303 Embedded Systems Design		1		1			Pre-requisite: ELE1301
ELE3105 Computer Controlled Systems		1		1			Pre-requisite: ELE2103 or Students must be enrolled in one of the following Programs: GCNS or GCEN or GDNS or MEPR or MENS or METC or GEPR
ELE3305 Computer Systems and Communications Protocols		1		1			
MEC3203 Materials Technology		1		1			Pre-requisite: MEC1201 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
MEC3302		1		1			
ELE3506 Electronic Measurement		2		2			Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS
MEC3204 Production Engineering		2		2			
MEC3303 Mechanical and Mechatronic System Design		2		2			Pre-requisite: MEC2301 or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
ELE2103 Linear Systems and Control		2		2			
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Power Systems Engineering Major recommended enrolment pattern

Major study: Power Systems Engineering (Major Study Code: 15646)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
ELE3803 Electrical Plant		1		1			Pre-requisite: ELE1801 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR
ENG3003 Engineering Management†		1		1,3			
ELE3807		1		1			
ENV2201 Land Studies		1		1			
ECO8010 Corporations and Sustainable Development		1		1			
MGT8015 Corporate Occupational Health and Safety				1		1	
ELE3805 Power Electronics Principles and Applications		2		2			Pre-requisite: (ELE1502 and ELE1801) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ELE3804 Power Systems Protection		1		1			
ENG4004 Engineering Project and Operations Management‡				2,3			
ELE3506 Electronic Measurement		2		2			Pre-requisite: (ELE1502 and (ELE2101 or ELE2103) and (ELE2503 or ELE2504)) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or MENS
ELE3107 Signal Processing		2		2			
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

† The semester 3 offering of this course is offered in odd numbered years only.

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

** Permission to enrol in this course must be obtained from the Program Coordinator.

Structural Engineering Major recommended enrolment pattern

Major study: Structural Engineering (Major Study Code: 13108)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
CIV3403 Geotechnical Engineering		2		2			Pre-requisite: CIV2401 or CIV2403 or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
CIV3505		1		1			
CIV3506		1		1			
CIV3603 Construction Methods				2			
CIV4508 Structural Design II		1		1			Pre-requisite: (CIV3505 or CIV4505) and (CIV3506 or CIV4506) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
ENG3103		2		2			
CIV8802 Advanced Prestressed Concrete						2	
CIV8803						1	
MEC2401 Dynamics I		2		2			Pre-requisite: ((MAT1502 or MAT1102 or ENM1600) and CIV1501) or Students must be enrolled in one of the following Programs: GCEN or GCNS or METC or MEPR or MENS or GEPR
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

** Permission to enrol in this course must be obtained from the Program Coordinator.

Technology Management Major recommended enrolment pattern

Major study: Technology Management (Major Study Code: 15808)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
ENG8011				1			
ENG8101		1		1			

Major study: Technology Management (Major Study Code: 15808)							
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	
ENG8104		1		1			
CIS8000 Global Information Systems Strategy		1,2				1,2	
ENG8103		2		2			
ENG8205		2		2			
ENG8207 £				2			
Schedule C: Engineering Technology Studies Path							
Elective+							
Elective+							
Elective+							
Elective+							
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

+ Electives will be approved by the Faculty of Health, Engineering and Sciences and will normally be Engineering, Science or Technology courses not lower than Level 3

** Permission to enrol in this course must be obtained from the Program Coordinator.

Transdisciplinary Engineering Major recommended enrolment pattern

Major study: Transdisciplinary Engineering (Major Study Code: 15648)							
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 course listed in this schedule:							
ENG8001		1,2				1,2	
Schedule B: Major Courses Students must complete at least seven of the courses listed in this schedule:							
Elective+	1	1		1			
Elective+	1	1		1			
Elective+	1	1		1			
Elective+	1	2		2			
Elective+	1	2		2			
Elective+	1	2		2			
Elective+	1	2		2			
Elective+	1	2		2			
Elective+	1	2		2			
Elective+	1	2		2			
Schedule C: Engineering Technology Studies Path							
ENG8101		1		1			
ENG8104		1		1			
ENG8103		2		2			

Major study: Transdisciplinary Engineering (Major Study Code: 15648)							
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	
ENG8205		2		2			
Schedule D: Project and Dissertation Path							
ENG8414 Masters Engineering Research Project D**		1,2				1,2	Pre-requisite: ENG8411

Footnotes

+ Electives will be approved by the Faculty of Health, Engineering and Sciences and will normally be Engineering, Science or Technology courses not lower than Level 3.

** Permission to enrol in this course must be obtained from the Program Coordinator.

Master of Spatial Science Technology (MSST) - MSpScTech

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 Master of Spatial Science Technology**.**

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	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:	1.5 years full-time, 3 years part-time. International students should complete this program within the CRICOS duration which is 1.5 years.	
Program articulation:	From: Graduate Diploma of Spatial Science Technology; Graduate Certificate of Spatial Science Technology;	

Contact us

Current students
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 Spatial Science Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program objectives

The Master of Spatial Science Technology is a graduate level program in the fields of geographic information systems (GIS) and surveying. A coursework component (8 units) is augmented by a research project component (4 units). This allows students to enhance and extend their knowledge of a particular GIS or surveying discipline area. Since spatial science is inherently a confluence of knowledge from various disciplines, a candidate from a non-spatial science background, such as biological and physical sciences, engineering, information technology, agriculture and forestry, arts, and business, can apply to this program.

Students who successfully complete the Master of Spatial Science Technology will be able to demonstrate an ability to:

- critically evaluate knowledge from the literature and other information sources relevant to spatial science fields;
- analyse technological trends, and current and advanced technologies in the spatial science area and related disciplines, such as sustainable development, information systems, and technology management;
- apply knowledge and skills in spatial science;
- undertake research into spatial science issues and applications.

Admission requirements

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

posses a three or four-year undergraduate degree, or equivalent, in an approved discipline. Overseas candidates must possess a degree in an approved discipline recognised by the National Office of Overseas Skills Recognition (NOOSR) as awarding degrees that are comparable to the education level of an Australian bachelor degree. Candidates for admission must have demonstrated a high level of academic performance.

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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Spatial Science Technology is comprised of 12 units of study as indicated in the following tables. It involves a minimum of either three (3) terms of full-time study or six (6) terms of part-time study.

A student can choose from one of the two major fields of study: GIS or surveying. The program is flexible, and depending on their previous undergraduate degree and current interests, allows a student to choose courses from a) GIS and surveying courses, and b) related disciplines and application areas, such as sustainable development, information systems, and technology management. All students must complete a four unit research project and a pre-requisite course on research methods.

Major studies objectives

The major study provides students with knowledge and skills in a specific discipline. The two major study areas in the Master of Spatial Science Technology are:

- Geographic Information Systems
- Surveying.

A Transdisciplinary Engineering option is also available for students wishing to enhance their knowledge across a range of engineering disciplines.

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.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

The Master of Spatial Science Technology consists of 12 units of study as indicated in the following recommended enrolment patterns for each major study area. Each candidate must follow a specific schedule based on the candidate's major study (i.e. GIS or surveying).

The recommended enrolment pattern below is designed to cover a four-semester period for on-campus students. However, the program may be completed within three semesters.

Each student must complete the following:

- Four (4) courses from Schedule A (GIS and Surveying courses)
- Three (3) courses from Schedule B (related disciplines and application areas)
- all courses in Schedule C (research methods and project dissertation).

A student with previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required and thus will need to complete more courses from Group B, with the approval of the Faculty of Health, Engineering and Sciences. All students in this program must select or formulate a research dissertation topic that focuses on spatial sciences (i.e. GIS, remote sensing, surveying, GPS, spatial science education, etc.) and/or their applications.

Geographic Information Systems Major recommended enrolment pattern

Major study: Geographic Information Systems (Major study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete four courses**								
SVY3202 Photogrammetry and Remote Sensing		1		1				
GIS3407 GIS Programming and Visualisation		1		1			Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT	
GIS1402 Geographic Information Systems		1		1,3				
GIS2405 Spatial Analysis and Modelling		2		2				
GIS3406 Remote Sensing and Image Processing		2		2				

Major study: Geographic Information Systems (Major study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
GIS2407 Web Based Geographic Information System		2		2			Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS	
SVY1110 Introduction to Global Positioning System		2		2				
Schedule B: Students must complete three courses								
ENG8104		1		1				
ENG8101		1		1				
ENV4204 Environmental Technology		1		1			Pre-requisite: ENV2105 or Students must be enrolled in one of the following Program s: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS	
SVY4309 Practice Management for Spatial Scientists		1		1				
SVY3200 Land Administration		2		2				
URP3201 Sustainable Urban Design and Development		2		2				
CIS8010		2		2				
LAW2107 Environmental Law^		1				1	Pre-requisite: LAW1501 or LAW1101 or LAW1500 or ENG2002 or REN1201 or (Students enrolled in BEDU (Legal Studies) or BLAW or LLBP or BALW or BCLW or BZLW - Pre-requisite: LAW1111)	
CIS8000 Global Information Systems Strategy		1		1				
ENG8103		2		2				
Schedule C: Students must complete both courses								
ENG8001 *	1	1, 2		1, 2		1, 2		
ENG8414 Masters Engineering Research Project D^^	1	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with previous undergraduate degree in the spatial sciences may to opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

^ Springfield campus only

* Best enrolled in Semester 1 of first year to satisfy ENG8002 Project and Dissertation pre-requisite.

^^ Permission to enrol in this course must be obtained from the Program Coordinator.

Surveying Major recommended enrolment pattern

Major study: Surveying (Major Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete four courses**								
SVY3304 Cadastral Surveying (Queensland)		2		2			Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3202 Photogrammetry and Remote Sensing		1		1				
SVY1104 Survey Computations A		2		2		2	Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT	
SVY1110 Introduction to Global Positioning System		2		2				
SVY2106 Geodetic Surveying A		1		1			Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY2105 Survey Computations B		1				1	Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3107 Geodetic Surveying B		2		2			Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT	
Schedule B: Students must complete three courses								
SVY3200 Land Administration		2		2				
SVY4304 Land and Cadastral Law		2		2				
ENG8104		1		1				
ENG8101		1		1				
URP3201 Sustainable Urban Design and Development		2		2				
SVY4309 Practice Management for Spatial Scientists		1		1				
ENG8103		2		2				
ECO8012				2		2		
Schedule C: Students must complete both courses								
ENG8001 *	1	1, 2		1, 2		1, 2		
ENG8414 Masters Engineering Research Project D^^	1	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with previous undergraduate degree in the spatial sciences may to opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

* Best enrolled in Semester 1 of first year to satisfy ENG8002 pre-requisite.

^^ Permission to enrol in this course must be obtained from the Program Coordinator.

Master of Spatial Science Technology (MSPT) - MSpScTech

CRICOS code (International applicants): 093265E

	On-campus	Online
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	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:	2 years full-time, 4 years part-time. International students should complete this program within the CRICOS duration which is 2 years.	
Program articulation:	From: Graduate Certificate of Spatial Science Technology; Graduate Diploma of Spatial Science Technology	

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Contact us

Future 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 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 Spatial Science Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The Master of Spatial Science Technology program aims to produce graduates who are skilled in spatial science investigations, evaluation and synthesis. The program allows students to enhance their knowledge of a particular surveying or spatial science information discipline area for theoretical application, research and professional practice.

Program objectives

The Master of Spatial Science Technology is a graduate level program in the fields of geographic information systems (GIS) and surveying. A coursework component (10 units) is augmented by a research project component (6 units). This allows students to enhance and extend their knowledge of a particular GIS or surveying specialisation. Since spatial science is inherently a confluence of knowledge from various disciplines, a candidate from a non-spatial science background, such as biological and physical sciences, engineering, mathematics and statistics, information technology, agriculture and forestry, arts, and business, can apply to this program.

Students who successfully complete the Master of Spatial Science Technology should be able to:

- critically evaluate knowledge from the literature and other information sources relevant to spatial science fields;
- systematically apply advanced, specialised knowledge within spatial science;
- employ a range of cognitive skills to review, analyse and synthesise knowledge to identify innovative solutions to complex discipline specific problems in spatial science;
- independently plan, implement, interpret, analyse and evaluate research outcomes by ethical means and application of evidence based practices.

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 three or four year Bachelor degree in a discipline approved by the Faculty of Health, Engineering and Sciences, 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

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 Schedules.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Program structure

The Master of Spatial Science Technology consists of 16 units of study comprising of one 8-unit specialisation, 2 units of approved courses and 6 units of Research.

Required time limits

Students have a maximum of 6 years to complete this program

Specialisation

The specialisation study provides students with knowledge and skills in a specific discipline. The two specialisation study areas in the Master of Spatial Science Technology are:

- Geographic Information Systems
- Surveying.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Articulation

Students who have completed the Master of Spatial Science Technology are able to apply for entry to the Doctor of Philosophy.

Exit points

Students who have completed four courses in the program may satisfy the requirements for the Graduate Certificate of Spatial Science Technology and therefore may apply to exit this program with a Graduate Certificate of Spatial Science Technology.

Students who have completed eight courses in the program may satisfy the requirements for the Graduate Diploma of Spatial Science Technology and therefore may apply to exit this program with a Graduate Diploma of Spatial Science Technology.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

The Master of Spatial Science Technology consists of 16 units of study as indicated in the following recommended enrolment patterns for each specialisation study area. Each candidate must follow a specific schedule based on the candidate's specialisation study (i.e. GIS or Surveying).
The recommended enrolment pattern below is designed to cover a four-semester period for on-campus students. Each student must complete the following:

- eight (8) courses from Schedule A (GIS or Surveying specialisation courses)
- two (2) courses from Schedule B (related discipline and further application areas)
- all courses in Schedule C (research methods and project).

A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required and thus will need to complete more courses from Group B, with the approval of the Program Director. All students in this program must select or formulate a research dissertation topic that

focuses on spatial sciences (i.e. GIS, remote sensing, surveying, GPS, spatial science education, etc.) and/or their applications.

Geographic Information Systems specialisation recommended enrolment pattern

Specialisation: Geographic Information Systems (Specialisation study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete all eight courses**								
ENG6104 Asset Management in an Engineering Environment	2	1				1		
CIS5310 IS/ICT Project Management£						2	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.	
SVY3202 Photogrammetry and Remote Sensing	1	1				1		
GIS3407 GIS Programming and Visualisation	2	1				1	Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT	
GIS1402 Geographic Information Systems£	1	1				1,3		
GIS2405 Spatial Analysis and Modelling	1	2				2		
GIS3406 Remote Sensing and Image Processing	1	2				2		
GIS3008 Applications of GIS and Remote Sensing	1	2				2	Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT	
Schedule B: Students must complete two courses from the following list								
CSC1401 Foundation Programming£		1,2				1,2,3		
SVY1110 Introduction to Global Positioning System		2				2		
GIS2407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS	
SVY4309 Practice Management for Spatial Scientists		1				1		
URP4002 Urban and Regional Planning Theory		1				1	Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM	
SVY3302 Property Valuation and Development		2				2		
URP3201 Sustainable Urban Design and Development		2				2		

Specialisation: Geographic Information Systems (Specialisation study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
CIS8025 Big Data Visualisation		1,2				1,2	Enrolment is not permitted in CIS8025 if CIS8701 has been previously completed.	
CSC6001 Introduction to Data Science and Visualisation		2				2		
Schedule C: Students must complete all courses in Schedule C								
EBE5003 Research Training	1	1, 2				1, 2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the following Programs: MENS or GDNS or GCNS Pre-requisite or Co-requisite: ENG5105	
ENG8411 Masters Engineering Research Project A	2	1,2				1	Pre-requisite: ENG8001 and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
ENG8414 Masters Engineering Research Project D^	2	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ Part-time students wishing to undertake ENG8414 Masters Research Project D over two semesters should contact the examiner before enrolling in the course

Surveying specialisation recommended enrolment pattern

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete all eight courses**								
ENG6104 Asset Management in an Engineering Environment	2	1				1		
MGT5000 Managing Organisational Behaviour	2	1				1,3		
SVY3304 Cadastral Surveying (Queensland)	1	2				2	Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3202 Photogrammetry and Remote Sensing	1	1				1		
SVY1104 Survey Computations A	1	2				2	Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT	
SVY1110 Introduction to Global Positioning System	1	2				2		

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
SVY2106 Geodetic Surveying A	1	1				1	Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3107 Geodetic Surveying B	1	2				2	Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT	
Schedule B: Students must complete two courses from the following list								
SVY2105 Survey Computations B		1				1	Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3302 Property Valuation and Development		2				2		
SVY4304 Land and Cadastral Law^*		2				2		
SVY2302 Mine Surveying		1				1	Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSPT	
URP3201 Sustainable Urban Design and Development		2				2		
SVY3400 Advanced Surveying		2				2	Pre-requisite: (SVY2106 and SVY2105) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSPT or MENS	
SVY4309 Practice Management for Spatial Scientists		1				1		
URP4002 Urban and Regional Planning Theory		1				1	Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM	
SVY2301 Automated Surveying Systems		1				1	Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSPT	
SVY2303 Construction Surveying		2				2	Pre-requisite: SVY1104	
Schedule C: Students must complete all courses in Schedule C								
EBE5003 Research Training	1	1, 2				1, 2	Pre-requisite: (ENG5001 or ENG5002) and Students must be enrolled in one of the following Programs: MENS or GDNS or GCNS Pre-requi	

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
							site or Co-requisite: ENG5105	
ENG8411 Masters Engineering Research Project A	2	1,2				1	Pre-requisite: ENG8001 and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
ENG8414 Masters Engineering Research Project D^	2	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

^* Unavailable Semester 2, 2023 Springfield On-campus and Toowoomba On-campus

^ Part-time students wishing to undertake ENG8414 Masters Research Project D over two semesters should contact the examiner before enrolling in the course

Research programs

Master of Engineering Research (MENR) - MEngR

CRICOS code (International applicants): 066076A

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area, please contact us .

	On-campus	External
Start:	No new admissions	No new admissions
Campus:	Toowoomba	-
Fees:	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme
Standard duration:	3 semesters full-time, 6 semesters part-time or 6 semesters by distance education.	
Program articulation:	To: Doctor of Philosophy; Doctor of Professional 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

Program aims

The aim of this program is to provide Engineers with research opportunities that are relevant to the field of study. The program will provide opportunity to undertake real-world problems through a supervised research project.

Program objectives

The principal aim of the program is to produce graduates who are highly competent in research and development work in engineering. Specifically, graduates of the program will be able to demonstrate:

- a broad knowledge of selected engineering practice from agricultural, civil, computer systems, construction, electrical, electronic, engineering management, environmental, mechanical, computational, mechatronic or structural engineering
- an extensive and detailed knowledge of one significant aspect of engineering at a level that allows for the proposal and evaluation of innovative solutions to complex technical problems in that area
- an exhaustive knowledge of, and ability to access, sources of information about Australian and overseas engineering practice in the relevant area of engineering
- an ability to utilise sound research methodology and experimental design in an investigative study

- an awareness of the practical applications and the implications for the industry of the research work that has been undertaken
- a high standard of written communication on technical matters.
- production of their own original professional contributions in an appropriate engineering field.

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 a four year Australian university Honours degree in the related field of study, with a GPA of 5 or above; or a GPA of 5.5 for the last 2 full years of the degree, 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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Research Training Program (RTP) - Fees Offset scheme

All Australian citizens, Australian permanent residents and New Zealand citizens commencing a Higher Degree by Research (HDR) program will have their tuition fees paid by the Australian Commonwealth Government under the Research Training Program (RTP) Fees Offset scheme. The RTP Fees Offset scheme covers program fees for an HDR student up to a maximum period of four years for full-time study or up to eight years part-time study for a Doctoral program, and up to a maximum period of two years for full-time or four years part-time for a Masters by Research program.

As part of the enrolment process, students are required to submit proof of citizenship or permanent residency status and transcripts of all previous academic study. This documentation enables the University of Southern Queensland to determine eligibility for an RTP Fees Offset place.

If a student's RTP Fees Offset entitlement expires before completion of the program, the student will be required to pay full tuition fees.

Students eligible for an RTP Fees Offset place are those who:

- have not used RTP Fees Offset funding in the previous three years; or
- have already used RTP Fees Offset funding and have successfully completed an HDR program. Once a student completes an HDR program, full entitlements of RTP Fees Offset are restored.

The Australian Commonwealth Government's contribution to program fees must be acknowledged on all published material relating to a research project via a statement identifying the support received through the RTP Fees Offset scheme.

Program structure

The program is a 12-unit program made up of one unit of research training, one postgraduate elective (coursework or research training as approved by the Program Director) and 10 units of independent research. Research topics are selected from areas of agricultural, civil, computer systems, construction, electrical, electronic, environmental, environmental management, mechanical, biomedical, computational, mechatronic or structural engineering.

Award of the Master of Engineering (Research) requires the successful examination of the student's thesis or research outcomes, work based research project/s and professional learning.

Required time limits

The Master of Engineering Research normally involves either one and half years (three semesters) of full-time research or three years (six semesters) of part-time research during which a candidate prepares a thesis on the research undertaken and submits it for examination. Students have a maximum of five years to complete this program. International oncampus students should complete this program within the CRICOS duration which is two years.
A pro-rata adjustment of the maximum time period will apply for those students who transfer from one mode of study to another. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

IT requirements

For information technology requirements please refer to the minimum standards as advised by the University. Students who have laboratory based research should confirm with their supervisor that they have access to appropriately equipped laboratories either at UniSQ or externally.

Other program requirements

Students must maintain good standing in this program. Please refer to the Academic Standing, Progression and Exclusion Procedure.

Students must have candidature for the Master of Engineering (Research) confirmed after the end of the equivalent of six months full-time enrolment (4 units); thus requiring successful completion of:

- the courses ENG8001 and approved elective (or another research course if required by the supervisory team); and
- a thesis proposal presented in accordance with Higher Degree by Research procedures with a minimum of a nominal grade of C from the Confirmation of Candidature panel.

Articulation

A student enrolled in the Master of Engineering Research who wishes to articulate without completing the program, may on the basis of outstanding performance, seek to transfer to the DPHD Doctor of Philosophy or DPEN Doctor of Professional Engineering program. To be considered for acceptance into the either of the above programs, students must have achieved all of the following:

- completed at least 8 units within the Master of Engineering Research
- a nominal GPA of 6 achieved from:
  - a minimum grade of A for the course ENG8001, and where applicable a minimum grade of A for another elective course if required by the supervisory team
  - a minimum grade of A for their research proposal from the Confirmation of Candidature panel
  - achieved subsequent confirmation of Master's candidature by the Office of Research Graduate Studies.

Following satisfactory completion of the above and subject to support from their supervisory team, eligible students may apply for transfer to the DPHD program or DPEN. As such a transfer will involve an extension of the scope of the existing approved MENR research project, any such transfer will require the evaluation of a full confirmation proposal at doctoral program level. The material will be assessed via a Faculty confirmation panel. Students wishing to articulate as above must discuss the procedures with the Office of Research Graduate Studies.

Full-time enrolment pattern - Semester 1 entry

The Master of Engineering Research is a 12 unit research program, one unit of research training, one postgraduate elective (coursework or research training as approved by the Program Director) and 10 units of independent research. Students are to successfully complete the following courses:

Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG8001	1	1,2				1,2,3		One unit
Approved Postgraduate Elective (coursework or research training as approved by the Program Director)	1	1,2			1	1,2		One unit
ENG9021 Engineering Research Project B	1	1			1	1		Two units
ENG9041 Engineering Research Project D	1	2			1	2		Four units
Year 2								
ENG9041 Engineering Research Project D	2	1			2	1		Four units

Full-time enrolment pattern - Semester 2 entry

Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Year 1								
ENG8001	1	1,2				1,2,3		One unit

Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Approved Postgraduate Elective (coursework or research training as approved by the Program Director)	1	1,2			1	1,2		One unit
ENG9021 Engineering Research Project B	1	2			1	2		Two units
Year 2								
ENG9041 Engineering Research Project D	2	1			2	1		Four units
ENG9041 Engineering Research Project D	2	2			2	2		Four units

Notes:

Students must complete ENG8001 , one postgraduate elective (coursework or research training as approved by the Program Director) and a total of 10 units of Independent Research in Engineering and Surveying courses.ENG8001 and the approved elective must be satisfactorily completed during the first term of study.

Programs may be varied to suit the needs of individual students. Enrolment in the above courses is used to monitor student progress and to levy program fees where appropriate, so it is important to consult with the Associate Dean (Graduate Research School) when finalising enrolment for this program. All of the above courses (except ENG8001) are un-graded courses, i.e. successful completion will be indicated by a Satisfactory Progress grade.

Part-time enrolment pattern

Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
First semester of study								
ENG8001		1,2				1,2		One unit
Approved Postgraduate Elective (coursework or research training as approved by the Program Director)		1,2			1	1,2		One unit
Second semester of study								
ENG9021 Engineering Research Project B		1,2				1,2		Two units
Third and fourth semester of study								
ENG9021 Engineering Research Project B^		1,2				1,2		Two units
Fifth and sixth semester of study								
ENG9021 Engineering Research Project B^		1,2				1,2		Two units

Footnotes

^ students must reenrol into this course

Notes:

Students must complete ENG8001 , one postgraduate elective (coursework or research training as approved by the Program Director) and a total of 10 units of Independent Research in Engineering and Surveying courses.ENG8001 and the approved elective must be satisfactorily completed during the first term of study.

Programs may be varied to suit the needs of individual students. Enrolment in the above courses is used to monitor student progress and to levy program fees where appropriate, so it is important to consult with the Associate Dean (Graduate Research School) when finalising enrolment for this program. All of the above courses (except ENG8001) are ungraded courses, i.e. successful completion will be indicated by a Satisfactory Progress grade.

Doctor of Professional Engineering (DPEN) -

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area, please contact us .

	External
Start:	No new admissions
Fees:	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme
Standard duration:	Part-time candidates normally complete in 6 years. Students have a maximum of 8 years part-time to complete this program.

Notes:

In 2023 the program follows the Semester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Semester calendar.

Contact us

Current students
Ask a question Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Program aims

The aim of the Doctor of Professional Engineering program is to enhance the skills of already high performing professional engineers in the areas of detailed technical investigation, applied research and development, innovative design and analysis. The program allows candidates to develop and demonstrate these essential skills by communicating their significant original professional technical achievements as a substantial body of work in a formal academic format. In addition, candidates are likely to acquire some additional key management knowledge and/or broad technological knowledge. The specific set of knowledge will depend on the candidate's choice of courses.

Program objectives

Students who successfully complete the Doctor of Professional Engineering will be able to demonstrate the ability to:

- critically evaluate knowledge from the professional journals and other information sources relevant to the professional engineering field;
- analyse trends in technology;
- use research skills in the field of professional engineering;
- apply skills in detailed technical investigation of complex and unique engineering problems;
- develop innovative solutions, designs and analyses; and
- present a clear and accurate written account of an extensive and complicated body of work

Depending on the choice of Elective courses, students will also be able to demonstrate the ability to:

- apply selected fundamental management theories and practices;
- apply skills in engineering and technology business;
- evaluate the importance of technological innovation and risk in engineering business; and
- apply knowledge and skills associated with technology management in areas such as sustainable development, technical risk assessment and engineering asset management.

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 10. Graduates at this level will have systematic and critical understanding of a complex field of learning and specialised research skills for the advancement of learning and/or for professional practice.

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 a relevant Australian university four year Bachelor degree in the area of Engineering with a GPA of at least 5.0 or above, or equivalent.
- be able to demonstrate, or be in a position to produce their own substantial, original professional contributions in an appropriate Engineering field.
- 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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Research Training Program (RTP) - Fees Offset scheme

All Australian citizens, Australian permanent residents and New Zealand citizens commencing a Higher Degree by Research (HDR) program will have their tuition fees paid by the Australian Commonwealth Government under the Research Training Program (RTP) Fees Offset scheme. The RTP Fees Offset scheme covers program fees for an HDR student up to a maximum period of four years for full-time study or up to eight years part-time study for a Doctoral program, and up to a maximum period of two years for full-time or four years part-time for a Masters by Research program.
As part of the enrolment process, students are required to submit proof of citizenship or permanent residency status and transcripts of all previous academic study. This documentation enables the University of Southern Queensland to determine eligibility for an RTP Fees Offset place.

If a student's RTP Fees Offset entitlement expires before completion of the program, the student will be required to pay full tuition fees.

Students eligible for an RTP Fees Offset place are those who:

- have not used RTP Fees Offset funding in the previous three years; or
- have already used RTP Fees Offset funding and have successfully completed an HDR program. Once a student completes an HDR program, full entitlements of RTP Fees Offset are restored.

The Australian Commonwealth Government's contribution to program fees must be acknowledged on all published material relating to a research project via a statement identifying the support received through the RTP Fees Offset scheme.

Program structure

This program is a 24-unit program made up of eight single-unit academic courses and 16 units of independent research.

Program completion requirements

Award of a Doctor of Professional Engineering requires the successful external examination of the student's dissertation of research outcomes, work based research project/s and professional learning.

Required time limits

Candidates will normally complete the program within six years of part-time study. Students have a maximum of eight years (part-time) to complete this program. A pro-rata reduction in the maximum time period will apply to students who are admitted to a program with advanced standing.

IT requirements

For information technology requirements, please refer to the minimum computing standards.

Exit points

Candidates who complete four of the listed courses from Schedule A may satisfy the requirements for the Graduate Certificate of Advanced Engineering, in which case they could exit with that award.

Candidates who complete seven of the listed courses from Schedule A plus ENG8001 from Schedule B may satisfy the requirements for the Master of Advanced Engineering, in which case they could exit with that award.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Enrolment

Candidates for admission to the program should note that some of the courses specify enrolment requirements. This will mean that successful applicants may be enrolling in courses for which they do not have sufficient pre-requisite knowledge. Applicants should refer to the course specification section of this publication to determine the enrolment requirements for the courses they intend enrolling in. Candidates will be expected to rectify any deficiencies in their pre-requisite knowledge by private study, guided if necessary by the examiners of the relevant courses.

Recommended enrolment pattern

Candidates must complete:

- seven units of approved courses from Schedule A
- ENG8001 plus 16 Independent Research in Engineering and Surveying courses in Schedule B.

Within Schedule A, up to seven postgraduate courses may be approved by the Program Director as part of the Doctor of Professional Engineering program. Approval for the inclusion of prior studies must be sought at the time of application for this program.

Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A — Approved Courses - choose seven courses from either the list below or any postgraduate elective course approved by the Program Director.								
ENG8101		1				1		
ENG8103		2				2		
ENG6104 Asset Management in an Engineering Environment		1				1		
ENG6205 Project Management Practice		2				2		
ENG6207 Innovation Management and New Product Development£						3		
ENG6208 Advanced Engineering Project Management		1				1		
ENG8180 Advanced Engineering Studies		1,2				1,2	Pre-requisite: Students must be enrolled in one of the fol lowing Programs: DPHD, D PEN or MENR	
Schedule B — Compulsory Studies								
Candidates must complete the following course:								
ENG8001	1	1,2			1	1,2		
Plus 16 units of independent research from:								
ENG9011 Engineering Research Project A^		1,2				1,2		One unit
ENG9021 Engineering Research Project B		1,2				1,2		Two units
ENG9041 Engineering Research Project D		1,2				1,2		Four units

Footnotes

£ In Semester 3, 2023 this course will be delivered as a Transition (9 week) semester, commencing on 13 November 2023 and concluding on 12 January 2024

^ Students may re-enrol

Notes:

Before enrolling in any courses, candidates should read the sections entitled Enrolment and Program Structure.

At least five courses from Schedule A must normally be completed prior to enrolling in the independent research courses.

Master of Research (MRES) - MRes

CRICOS code (International applicants): 108591H

	On-campus	Online
Start:	Interim Trimester 1 (February) Interim Trimester 2 (June) Interim Trimester 3 (September)	Interim Trimester 1 (February) Interim Trimester 2 (June) Interim Trimester 3 (September)
Campus:	Ipswich, Springfield, Toowoomba	-
Fees:	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme
Standard duration:	2 Years Full Time; 4 Years Part Time. This reflects the length of time that the program is RTP funded for domestic students.	

Notes:

In 2023 the programs follows the Interim Trimester calendar. The Academic Calendar and Important Dates webpage will allow you to view and download a copy of the important dates for the Blocks calendar.

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

Program aims

The Master of Research provides opportunities for motivated and highly qualified students to undertake advanced study and to produce a research-based thesis. Students will develop appropriate research skills and specialist area knowledge that will enhance their career prospects or allow them to proceed to further appropriate higher degree studies.

Program objectives

On successful completion of this program a graduate should be able to:

- identify, interpret and evaluate major issues of contemporary theory and practice in their discipline area
- comprehend and evaluate developments in a chosen discipline area and critically examine the relationships between such developments and contemporary theory
- apply a knowledge of the principles and ethics of research within their chosen discipline area
- identify research topics and undertake research using appropriate research methods and principles
- report and disseminate research outcomes.

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:

(1) completion of a three-year degree at an Australian university or equivalent, with a GPA of 5.0/7.0 or above, or equivalent, in a relevant discipline
or
(2) completed a three-year degree at an Australian university or equivalent and have a successfully completed a coursework masters, with a GPA of 5.0/7.0 or above, or equivalent score, in a relevant discipline.
plus
(3) acceptance will be subject to the availability of, and endorsement by, a UniSQ supervisor.

In addition to the above, students in the Psychology Research Specialisation will need to have completed an https://psychologycouncil.org.au/APAC accredited there-year sequence undergraduate program in psychology and to be current in the area of psychology. This means students need to have commenced their studies in an APAC accredited program no earlier than 8 years previous to the year of application and have satisfied requirements for the award of the degree no more than 3 years previously. The rationale for this is to ensure students can still demonstrate a breadth/depth of knowledge, skills, and application in psychology and meet APAC competencies.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Research Training Program (RTP) - Fees Offset scheme

All Australian citizens, Australian permanent residents and New Zealand citizens commencing a Higher Degree by Research (HDR) program will have their tuition fees paid by the Australian Commonwealth Government under the Research Training Program (RTP) Fees Offset scheme. The RTP Fees Offset scheme covers program fees for an HDR student up to a maximum period of four years for full-time study or up to

eight years part-time study for a Doctoral program, and up to a maximum period of two years for full-time or four years part-time for a Masters by Research program.
As part of the enrolment process, students are required to submit proof of citizenship or permanent residency status and transcripts of all previous academic study. This documentation enables the University of Southern Queensland to determine eligibility for an RTP Fees Offset place.

If a student's RTP Fees Offset entitlement expires before completion of the program, the student will be required to pay full tuition fees.

Students eligible for an RTP Fees Offset place are those who:

- have not used RTP Fees Offset funding in the previous three years; or
- have already used RTP Fees Offset funding and have successfully completed an HDR program. Once a student completes an HDR program, full entitlements of RTP Fees Offset are restored.

The Australian Commonwealth Government’s contribution to program fees must be acknowledged on all published material relating to a research project via a statement identifying the support received through the RTP Fees Offset scheme.

Program structure

The Master of Research is a 16-unit research program. Students may graduate from the program at completion of 12 units, if all requirements of the program are met. There are up to four coursework units which will include two research training courses. Elective courses are normally at level 4 or above and are selected in consultation with the supervisor to reflect additional training complementary to the area of research to be undertaken. The research training courses will consist of RES9004 Research Design and Methodologies and RES9005 Qualitative Research Techniques or STA6200 Statistics for Quantitative Researchers. The psychology specialisation will have a variation to this standard enrolment pattern. The remaining units will be confirmation of candidature and a research project and will be undertaken in consultation with an approved supervisor. The student will prepare a thesis based on independently conducted research. To successfully complete the thesis, students will be required to select a research topic, carry out supervised research on the chosen topic using an appropriate research method and present and defend the results. The Masters level thesis will be examined as per the Higher Degree by Research Thesis Examination Schedule.

Required time limits

Students have a maximum of 2 years (full-time) or 4 years (part-time) to complete this program with RTP funding. This reflects the length of time that the program is RTP funded for domestic students.

IT requirements

For information technology requirements please refer to the minimum computing standards.

Other program requirements

Students must maintain good standing in this program. Please refer to the Academic Standing, Progression and Exclusion Procedure.

Exit points

A student enrolled in the Master of Research must successfully complete the program prior to application for entry into the Doctor of Philosophy (PhD).

Doctorate Transfer

Students may enrol in an alternative pattern if they meet the requirements to articulate from the Master of Research to the Doctor of Philosophy. In order to meet these requirements students must:

- Meet the entry requirements for the Doctor of Philosophy in having an Honours or Master's degree with significant research but not have this at the required level. For example, a 2B Honours degree.

Such students would be an exception within the program and would be required to present a Confirmation of Candidature to scope out doctoral program work prior to being transferred to the Doctor of Philosophy program as a confirmed candidate.

Credit

Application for exemptions/credit will be assessed on individual merit in line with the UniSQ Policy.

Recommended Enrolment Pattern

Course	Year of program and trimester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Tri	Year	Tri	Year	Tri	
All student must complete the following course.							
RES9004 Research Design and Methodologies*					1	1	Pre-requisite: Students must be enrolled in one of the following Programs: MRES or D PHD
Enrol in 1 of the following 2 courses.							
RES9515 Masters Research Project 2 (H)	1	1			1	1	Pre-requisite: Students must be enrolled in the following Program: MRES
OR							
RES9516 Masters Research Project 2 (L)	1	1			1	1	Pre-requisite: Students must be enrolled in the following Program: MRES
Discipline elective or 1 unit of Research Project	1	2					
Enrol in 1 of the following 2 courses.							
RES9005 Qualitative Research Techniques					1	2	Pre-requisite: Students must be enrolled in one of the following Programs: MRES or D PHD
OR							
STA6200 Statistics for Quantitative Researchers**					1	2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
Enrol in 1 of the following 2 courses.							
RES9055 Masters Research Project 1 (H)	1	2			1	2	Pre-requisite: Students must be enrolled in the following Program: MRES
OR							
RES9056 Masters Research Project 1 (L)	1	2			1	2	Pre-requisite: Students must be enrolled in the following Program: MRES
Enrol in 1 of the following 2 courses.							
RES9515 Masters Research Project 2 (H)	1	2			1	2	Pre-requisite: Students must be enrolled in the following Program: MRES
OR							
RES9516 Masters Research Project 2 (L)	1	1			1	2	Pre-requisite: Students must be enrolled in the following Program: MRES
Enrol in 1 of the following 2 courses.							
RES9517 Masters Research Project 4 (H)	2	2			2	1	Pre-requisite: Students must be enrolled in the following Program: MRES
OR							
RES9518 Masters Research Project 4 (L)	2	1			2	1	Pre-requisite: Students must be enrolled in the following Program: MRES

Course	Year of program and trimester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Tri	Year	Tri	Year	Tri	
Enrol in 1 of the following 2 courses.							
RES9517 Masters Research Project 4 (H)	2	2			2	2	Pre-requisite: Students must be enrolled in the following Program: MRES
OR							
RES9518 Masters Research Project 4 (L)	2	2			2	2	Pre-requisite: Students must be enrolled in the following Program: MRES

Footnotes

* Students should enrol in RES9004 in the first trimester of enrolment.

** If you have completed and passed STA2300 or STA1003 Fundamental Statistics you do not need to complete STA6200 Statistics for Quantitative Researchers.

Psychology Research Recommended Enrolment Pattern

An APAC accredited Psychology Research specialisation will be an enrolment exception. Applicants to the Psychology Research Specialisation must have a 3 year APAC accredited undergraduate degree and suitability for entry to the program specialisation will be assessed and recommended by the Psychology Honours Program Director. The Psychology Research specialisation may be studied externally, with some courses having workshop delivery. Students enrolled on the Psychology Research specialisation must undertake the compulsory courses in order to meet APAC accreditation and therefore an enrolment variation will be necessary. The suggested enrolment pattern for these students will be as follows:

Course	Year of program and trimester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Tri	Year	Tri	Year	Tri	
PSY4020 Ethical and Professional Practice					1	1	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (Psychology major 12302) or BSHP or MSCR (Psychology Research)
PSY4111 Advanced Research Approaches					1	1	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (12302 Psychology) or BSHP or MRES (19112 Psychology). BPSH students need to apply for manual enrolment in this course.
RES9515 Masters Research Project 2 (H)	1	1			1	1	Pre-requisite: Students must be enrolled in the following Program: MRES
PSY4070 Assessment and Interview Skills					1	2	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (12302 Psychology) or BSHP or MRES (19112 Psychology). BPSH students need to apply for manual enrolment in this course.
PSY4040 Psychological Interventions					1	2	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (12302 Psychology) or BSHP or MRES (19112 Psychology). BPSH students need to apply for manual enrolment in this course.
RES9515 Masters Research Project 2 (H)					1	2	Pre-requisite: Students must be enrolled in the following Program: MRES
RES9517 Masters Research Project 4 (H)					2	1	Pre-requisite: Students must be enrolled in the following Program: MRES
RES9517 Masters Research Project 4 (H)					2	2	Pre-requisite: Students must be enrolled in the following Program: MRES

Doctor of Philosophy (DPHD) - PhD

CRICOS code (International applicants): 088073M

	On-campus	External
Start:	Research 1 (January) Research 2 (February) Research 3 (April) Research 4 (May) Research 5 (July) Research 6 (August) Research 7 (September) Research 8 (November)	Research 1 (January) Research 2 (February) Research 3 (April) Research 4 (May) Research 5 (July) Research 6 (August) Research 7 (September) Research 8 (November)
Campus:	Ipswich, Springfield, Toowoomba	-
Fees:	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme
Standard duration:	Can be studied full-time or part-time (full-time students normally complete in 3 to 4 years).	

Notes:

International students pay full fees unless allocated an UniSQ fees scholarship.

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

Program aims

The Doctor of Philosophy (PhD) degree is awarded for research which demonstrates that the student has the capacity to conduct research and make a significant contribution to new knowledge.

Cotutelle

The University of Southern Queensland offers a Cotutelle PhD program as an alternative pathway to achieving the PhD, which enables the student to conduct research across two universities.

The Cotutelle PhD program is subject to the terms specified in the Cotutelle agreement.

Program objectives

Graduates of this program should be able to:

(1) Investigate a substantial, complex and relevant area of research with specialised research skills that enable them to advance their discipline.
(2) Critically evaluate relevant research literature, theoretical propositions, methodologies and findings to design and conduct original research.

(3) Cogently present, verbally and in writing research findings which include propositions, creative works, insights and conclusions to their peers and professional community.
(4) Independently and systematically apply specialised technical and research skills to plan and execute a research project, undertake research ethically according to the discipline standards and generate new knowledge and original insights that make a contribution to their discipline.
(5) Apply principles of integrity, research ethics, judgement, adaptability and responsibility in ways appropriate to an expert in their discipline.

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 10. Graduates at this level will have systematic and critical understanding of a complex field of learning and specialised research skills for the advancement of learning and/or for professional practice.

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 a relevant Australian university bachelor honours degree with First Class Honours or Second Class Honours (Division A) or equivalent (with a thesis comprising at least two units),
  or
- completion of an Australian university Masters degree (with a thesis comprising at least two units) or equivalent,
  or
- other qualifications equivalent to First Class or 2A Honours.

English Language Proficiency requirements for Category 3.

The PhD is based on supervision by a Principal and one or more Associate Supervisors, therefore it is essential that applicants clarify their topic for research and seek an academic staff member able to provide supervision. Application forms, procedures for enrolment, and the application process can be found on the Research website. Applicants are advised to allow several months for discussion with potential supervisors and for consideration of the application prior to the commencement of the program.

Applicants for the Cotutelle PhD program are required to meet the admission requirements at both UniSQ and the partner university.

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 Schedule

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, external or online. Students are able to calculate the fees for a particular course via the Course Fee Schedules.

Research Training Program (RTP) - Fees Offset scheme

All Australian citizens, Australian permanent residents and New Zealand citizens commencing a Higher Degree by Research (HDR) program will have their tuition fees paid by the Australian Commonwealth Government under the Research Training Program (RTP) Fees Offset scheme. The RTP Fees Offset scheme covers program fees for an HDR student up to a maximum period of four years for full-time study or up to eight years part-time study for a Doctoral program, and up to a maximum period of two years for full-time or four years part-time for a Masters by Research program.
As part of the enrolment process, students are required to submit proof of citizenship or permanent residency status and transcripts of all previous academic study. This documentation enables the University of Southern Queensland to determine eligibility for an RTP Fees Offset place.

If a student's RTP Fees Offset entitlement expires before completion of the program, the student will be required to pay full tuition fees.

Students eligible for an RTP Fees Offset place are those who:

- have not used RTP Fees Offset funding in the previous three years; or
- have already used RTP Fees Offset funding and have successfully completed an HDR program. Once a student completes an HDR program, full entitlements of RTP Fees Offset are restored.

The Australian Commonwealth Government’s contribution to program fees must be acknowledged on all published material relating to a research project via a statement identifying the support received through the RTP Fees Offset scheme.

Program structure

The Doctor of Philosophy is a 24-unit program. Candidates will be enrolled either part-time or full-time annually.

The award of the Doctor of Philosophy requires the successful examination of the student’s thesis or research outcomes, work based research project/s and professional learning.

The Doctor of Philosophy comprises a minimum of 16 units, although students would normally complete 24 units, with the option to extend to 32 units if needed.

Students will be enrolled in either part-time or full-time courses from date of admission through to the date that they submit their thesis for examination, or alternatively be on approved leave. Failure to enrol or not be on approved leave may result in the student’s enrolment being cancelled. The proposed enrolment pattern for individual students will be checked by the Associate Dean (Graduate Research School).

· The Cotutelle agreement will specify the enrolment pattern for students who elect to complete their PhD through Cotutelle pathway.

Assessment

A student is admitted to this program as a provisional candidate until successful completion of the Confirmation of Candidature process.

The Confirmation of Candidature consists of two components:

- a written document; and
- an oral presentation to a review panel leading to a recommendation on Confirmation of Candidature.

The Graduate Research School will notify students by email when the Confirmation of Candidature is due.

Student progress will be monitored by compulsory Progress Reports. Students who are deemed to be making adequate progress will be awarded an ongoing grade. Those students who fail to submit a report, or who have been deemed to be making little or no progress may be awarded a Fail grade. When the progress is not satisfactory, the student would normally be placed on conditional academic standing and performance management processes will be implemented as per the Academic Standing, Progression and Exclusion Procedure. The Graduate Research School will notify students by email when Progress Reports are due.

The final assessment in the PhD program is the submission of PhD thesis that will be examined as per the Higher Degree Research (HDR) examination schedule outlined below.

The Cotutelle agreement will specify the assessment requirements for students who elect to complete their PhD through Cotutelle pathway.

Program completion requirements

All PhD students must successfully complete appropriate courses, and complete the Confirmation of Candidature process. Finally, a PhD thesis must be submitted for examination.

All PhD students are required to submit a thesis for examination which will be examined by suitably qualified examiners as per the Higher Degree Research (HDR) examination schedule. A PhD degree will only be awarded on the basis of the student successfully completing the thesis examination process.

There is no prescribed minimum length for a doctoral thesis as this will vary with the research topic and the form of presentation, however, there is normally a maximum prescribed length of 100 000 words for doctoral theses. A PhD thesis may be presented in the form of a:

- Standard Thesis
- Thesis by Publication, or
- Thesis with Creative Works.

Examination Criteria for the Standard PhD Thesis and PhD Thesis by Publication

The thesis will be examined according to the following criteria:

(1) The extent to which the student has demonstrated:
  (a) Originality;
  (b) Critical insight; and
  (c) Capacity to carry out independent research; and

(2) The extent of the contribution to knowledge made by the thesis and, in particular, its contribution to the understanding of the subject with which it deals; and
(3) The suitability of the thesis for publication.

Examination Criteria for a PhD with Creative Works

The PhD with Creative Work Component examination criteria includes the student’s demonstrated capacity to produce original creative work. The student’s production of original creative work should be evidenced in the creative work itself together with an exegesis.

Required time limits

Students have a maximum of 4 years (Full-time) or 8 years (Part-time) to complete this program.

The Cotutelle agreement will specify the times limits for students who elect to complete their PhD through Cotutelle pathway.

IT requirements

Students should visit the UniSQ minimum computing standards to check that their computers are capable of running the appropriate software and versions of Internet web browsers and to check the minimum and recommended standards for software.

Credit

Exemptions/credit will be assessed based on the UniSQ Credit and Exemption Procedure.

Recommended enrolment pattern - Full-time students

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

Full-time candidates undertaking Low cost research will be enrolled in RES9300 Doctoral Research Project (L) Full-time (1 unit) 8 times per year.

Full-time candidates undertaking High cost research will be enrolled in RES9400 Doctoral Research Project (H) Full-time (1 unit) 8 times per year.

or

The Cotutelle agreement will specify the enrolment pattern for students who elect to complete their PhD through Cotutelle pathway.

Recommended enrolment pattern - Part-time students

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

Part-time candidates undertaking Low cost based research will enrolled in RES9100 Doctoral Research Project (L) Part-time (0.5 unit) 8 times per year.

Part-time candidates undertaking High cost research will be enrolled in RES9200 Doctoral Research Project (H)(0.5 units) 8 times per year.

or

The Cotutelle agreement will specify the enrolment pattern for students who elect to complete their PhD through Cotutelle pathway.