

## Master of Engineering Science (MENS) - MEngSci

CRICOS code (International applicants): 067689G

	On-campus	External
<b>Semester intake:</b>	Semester 1 (February) Semester 2 (July) Semester 3 (November)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
<b>Campus:</b>	Toowoomba	-
<b>Fees:</b>	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
<b>Standard duration:</b>	2 years full-time or 4 years part-time	
<b>Program articulation:</b>	From : <a href="#">Graduate Certificate of Engineering Science</a> ; <a href="#">Graduate Diploma of Engineering Science</a>	

### Notes:

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
<a href="#">Ask a question</a> Freecall (within Australia): 1800 269 500 Phone (from outside Australia): +61 7 4631 5315 Email: <a href="mailto:studyeng@usq.edu.au">studyeng@usq.edu.au</a>	<a href="#">Ask a question</a> Phone: +61 7 4631 5543 Email: <a href="mailto:international@usq.edu.au">international@usq.edu.au</a>	<a href="#">Ask a question</a> Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email <a href="mailto:usq.support@usq.edu.au">usq.support@usq.edu.au</a>

### 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 specialisation in Engineering Management and Enterprise is not accredited by any professional bodies.

### Program objectives

On completion of this program graduates should be able to:

- demonstrate and interpret an advanced and integrated understanding of a complex body of knowledge in one or more disciplines or areas of practice.
- apply specialised cognitive and technical skills in a complex body of knowledge or practice in one or more disciplines or areas of practice.
- critically analyse, reflect and synthesize information to interpret and transmit knowledge, skills and ideas to specialist and non-specialist audiences.

### 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](http://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.

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 Finder](#).

Commonwealth Supported students may be eligible to defer their fees through a Government loan called [HECS-HELP](#).

### Domestic full fee paying place

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

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

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

### International full fee paying place

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

## Program structure

The Master of Engineering Science comprises 16 units (14 single-unit academic courses and one two-unit academic course) and five zero-unit practice courses. The structure is shown below:

**Schedule A:** Seven core courses (eight units)

**Schedule B:** A six-course specialisation (six units)

**Schedule C:** Two approved courses (two units)

**Schedule D:** From two to five Practice Courses (zero units), depending upon specialisations.

## 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 Engineering Science are:

- Agricultural Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Mechanical Engineering
- Power Engineering
- Structural Engineering
- Engineering Management and Enterprise

## 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: V = Voluntary; O = Optional; C = Compulsory; 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.

### **Agricultural Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)
- [AGR3903 Soil and Water Engineering Practice 2](#)
- [AGR3905 Agricultural Engineering Practice](#)

### **Civil Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)
- [CIV3907 Civil Systems Practice](#)
- [CIV4908 Civil Design Practice](#)

### **Electrical and Electronic Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)

Any two of the following:

- [ELE2912 Electrical and Electronic Practice B](#)
- [ELE2913 Electrical and Electronic Practice C](#)
- [ELE3914 Electrical and Electronic Practice D](#)
- [ELE3915 Electrical and Electronic Practice E](#)

### **Environment Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)
- [ENV3904 Environmental Engineering Practice](#)
- [AGR3903 Soil and Water Engineering Practice 2](#)

### **Mechanical Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)

Any two of the following:

- [MEC3903 Mechanical Practice 3](#)
- [MEC3904 Mechanical Practice 4](#)
- [MEC3905 Mechatronic Practice](#)

### **Power Engineering**

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)

Any two of the following:

- [ELE2912 Electrical and Electronic Practice B](#)
- [ELE2913 Electrical and Electronic Practice C](#)
- [ELE3914 Electrical and Electronic Practice D](#)
- [ELE3915 Electrical and Electronic Practice E](#)

## Structural Engineering

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)
- [CIV3907 Civil Systems Practice](#)
- [CIV4908 Civil Design Practice](#)

## Engineering Management and Enterprise

- [ENG3902 Professional Practice 1](#)
- [ENG4903 Professional Practice 2](#)

## Articulation

Students who have completed the Master of Engineering Science are able to apply for entry to the [Master of Engineering Research](#), [Doctor of Philosophy](#) or [Doctor of Professional Engineering](#).

## Exit points

Students who have completed four courses in the program may satisfy the requirements for the [Graduate Certificate of Engineering Science](#) and therefore may apply to exit the program with a [Graduate Certificate of Engineering Science](#) or [Graduate Certificate of Engineering Technology](#).

Students who have completed eight courses in the program may satisfy the requirements for the [Graduate Diploma of Engineering Science](#) and therefore may apply to exit the program with a [Graduate Diploma of Engineering Science](#).

## Credit

Exemptions/credit will be assessed based on the [USQ 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 Faculty Administration if they encounter problems while enrolling in courses with requisites.

[ENG3902 Professional Practice 1](#) is to be studied in the student's penultimate year. Upon completion of [ENG3902 Professional Practice 1](#), students must study [ENG8411 Masters Engineering Research Project A](#) and [ENG8412 Masters Engineering Research Project B](#) and [ENG4903 Professional Practice 2](#) in the same academic year.

Students wishing to undertake a six credit point research project need to obtain the approval of the Faculty of Health, Engineering and Sciences prior to enrolling in either [ENG8412](#) or [ENG8414](#).

## Agricultural Engineering specialisation recommended enrolment pattern

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

Specialisation: Agricultural Engineering (Specialisation Study Code: 16215)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3	Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN	
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			1	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2	Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS	
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1	Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2	Pre-requisite: <a href="#">ENG8411</a>	
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">AGR8002 Emerging Technologies in Agriculture</a>	2	2			2	2		
<a href="#">ENV4106 Irrigation Science</a>	1	2			2	2	Pre-requisite: <a href="#">AGR3304</a> 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.	
<a href="#">ENV4107 Water Resources Engineering</a>	1	2			3	2	Pre-requisite: ( <a href="#">ENV3104</a> and <a href="#">ENV3105</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">ENV3104 Hydraulics II</a>	2	1			2	1	Pre-requisite: <a href="#">ENV1101</a> or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">AGR3303 Agricultural Materials and Post-Harvest Technologies</a>	2	1			3	1		
<a href="#">AGR4305 Agricultural Soil Mechanics</a>	2	1			4	1		
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">AGR8001 Food Security in the 21st Century</a>		1				1		
<a href="#">AGR3305 Precision and Smart Technologies in Agriculture</a>		2				2		

Specialisation: Agricultural Engineering (Specialisation Study Code: 16215)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">AGR3304 Soil Science</a>		1				1		
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">ENV3105 Hydrology</a>		2				2		
<a href="#">ENV4203 Public Health Engineering</a>		2				2		Pre-requisite: ENV1101 or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ENV4204 Environmental Technology</a>		1				1		Pre-requisite: <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ENV4205 Water and Wastewater Treatment</a>						1		Pre-requisite: <a href="#">ENV4203</a> and <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">MEC3303 Mechanical and Mechatronic System Design</a>		2				2		Pre-requisite: <a href="#">MEC2301</a> or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
<a href="#">MEC4406 Robotics and Machine Vision</a>		2				2		Pre-requisite: <a href="#">MEC2401</a> or <a href="#">ELE2103</a> or Students must be enrolled in one of the following Programs: MENS or GCEN
<a href="#">MEC5100 Computational Fluid Dynamics</a>						1		Pre-requisite: <a href="#">MEC3107</a> or <a href="#">MEC3102</a> or <a href="#">ENV3104</a> or Students must be enrolled in the following Program: MEPR
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
<a href="#">AGR3905 Agricultural Engineering Practice</a>			2	3			M	
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol



Specialisation: Agricultural Engineering (Specialisation Study Code: 16215)								
Course	Year of program and 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 <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.	
<a href="#">ENG4909 Work Experience - Professional</a>					4	1,2,3		
<a href="#">AGR3903 Soil and Water Engineering Practice 2</a>			3	2			M	

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.

### Civil Engineering specialisation recommended enrolment pattern

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

Specialisation: Civil Engineering (Specialisation Study Code: 16216)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3	Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Program s: GCEN or METC or MENS or GDNS or MEPR or MSCN	
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			1	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2	Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or S tudents must be enrolled in one of the following Program s: GDET or METC or GDNS or MENS	
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1	Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2	Pre-requisite: <a href="#">ENG8411</a>	
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">CIV3505 Structural Analysis</a>	1	1			2	1	Pre-requisite: <a href="#">MEC2402</a> and ( <a href="#">MAT1502</a> or <a href="#">ENM1600</a> or <a href="#">MAT1102</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
<a href="#">CIV3403 Geotechnical Engineering</a>	1	2			2	2	Pre-requisite: <a href="#">CIV2401</a> or <a href="#">CIV2403</a> or Students must be enrolled in one of the following Programs: GCEN or	



Specialisation: Civil Engineering (Specialisation Study Code: 16216)								
Course	Year of program and 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	
<a href="#">ENV4203 Public Health Engineering</a>	1	2			3	2	Pre-requisite: ENV1101 or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV5704 Road and Street Engineering</a>					2	2		
<a href="#">ENV3104 Hydraulics II</a>	2	1			3	1	Pre-requisite: ENV1101 or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV4508 Structural Design II</a>	2	1			3	1	Pre-requisite: <a href="#">CIV3505</a> and <a href="#">CIV3506</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">CIV3506 Concrete Structures</a>		1				1	Pre-requisite: <a href="#">CIV2503</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV3703 Transport Engineering</a>		2				2		
<a href="#">CIV5705 Pavement Design and Analysis</a>						1	Pre-requisite: <a href="#">CIV3703</a> or Students must be enrolled in one of the following Programs: GCNS or GDNS or MENS or PGCN or GCAE or MEPR	
<a href="#">CIV8802 Advanced Prestressed Concrete<sup>1</sup></a>						2		
<a href="#">CIV8803 Advanced Mechanics and Technology of Fibre Composites</a>						1	Pre-requisite: <a href="#">CIV3506</a> or <a href="#">MEC3203</a> or Students must be enrolled in one of the following Programs: GCEN or PGCN or METC or MEPR or GCNS or GDNS or MENS or MENC or MAEN	
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENV3105 Hydrology</a>		2				2		
<a href="#">ENV4107 Water Resources Engineering</a>		2				2	Pre-requisite: ( <a href="#">ENV3104</a> and <a href="#">ENV3105</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">ENV4204 Environmental Technology</a>		1				1	Pre-requisite: <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC	

Specialisation: Civil Engineering (Specialisation Study Code: 16216)									
Course	Year of program and 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 GCNS or GDNS or MENS	
<a href="#">ENV4205 Water and Wastewater Treatment</a>							1	Pre-requisite: <a href="#">ENV4203</a> and <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">MEC5100 Computational Fluid Dynamics</a>							1	Pre-requisite: <a href="#">MEC3107</a> or <a href="#">MEC3102</a> or <a href="#">ENV3104</a> or Students must be enrolled in the following Program: MEPR	
<a href="#">URP4002 Urban and Regional Planning Theory</a>		1					1	Pre-requisite: <a href="#">URP1001</a> or <a href="#">URP3201</a> or Students must be enrolled in one of the following Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM	
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.									
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2				M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.
<a href="#">ENG4909 Work Experience - Professional</a>						4	1,2,3		
<a href="#">CIV3907 Civil Systems Practice</a>			1	3				M	Pre-requisite: <a href="#">CIV2503</a> or Students must be enrolled in one of the following Programs: MENS or MEPR
<a href="#">CIV4908 Civil Design Practice</a>			2	1,2				M	Co-requisite: <a href="#">CIV4508</a> or Students must be enrolled in the following Program: MEPR or MENS

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.
- ] This course is only offered in odd years

## Electrical and Electronic Engineering specialisation recommended enrolment pattern

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

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16217)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3	Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN	
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			1	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2	Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS	
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1	Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2	Pre-requisite: <a href="#">ENG8411</a>	
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">ELE3305 Computer Systems and Communications Protocols</a>	1	1			2	1		
<a href="#">ELE2504 Electronic Design and Analysis</a>	1	2			2	2	Pre-requisite: <a href="#">ELE1502</a> or Students must be enrolled in one of the following Programs: MEPR or GDNS or MENS or GCNS or GCEN or GEPR	
<a href="#">ELE3107 Signal Processing</a>	1	2			2	2		
<a href="#">ELE4605 Fields and Waves</a>	2	1			3	1	Pre-requisite: {( <a href="#">MAT1502</a> or <a href="#">ENM1600</a> ) and <a href="#">ELE2103</a> and <a href="#">ELE2601</a> } or Students must be enrolled in one of the following Programs: MEPR or MENS or GCNS or GDNS	
<a href="#">ELE5001 Industrial Communications Protocols</a>	2	1			2	1	Pre-requisite: <a href="#">ELE2601</a> or Students must be enrolled in the following Program: GCNS, GDNS, MENS or MEPR	
<a href="#">ELE4606 Communication Systems</a>	2	2			3	2	Pre-requisite: ( <a href="#">ELE2504</a> and <a href="#">ELE2601</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or MENS or GCNS or GDNS	
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">ELE3105 Computer Controlled Systems</a>		1				1	Pre-requisite: <a href="#">ELE2103</a> or Students must be enrolled in	

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16217)								
Course	Year of program and 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 GCEN or GDNS or MEPR or MENS or METC or GEPR
<a href="#">ELE3307 Real Time Systems</a>		2				2		Pre-requisite: <a href="#">ELE1301</a> or S tudents must be enrolled in one of the following Programs: GCEN or GCNS or METC or MENS or MEPR
<a href="#">ELE3807 Power Systems Analysis</a>		1				1		
<a href="#">ELE4109 Measurement Science and Instrument Engineering *</a>						1		
<a href="#">ELE4506 Industrial Process Automation</a>						1		Pre-requisite: ( <a href="#">ELE2101</a> or <a href="#">ELE2103</a> ) and <a href="#">ELE3105</a> and <a href="#">MEC2501</a> or Students must be enrolled in the following program: MENS or MEPR
<a href="#">ELE4607 Advanced Digital Communications</a>		1				1		Pre-requisite: <a href="#">ELE1301</a> or S tudents must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MENS or MEPR
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>	2	1				2	1	
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">MEC4406 Robotics and Machine Vision</a>		2				2		Pre-requisite: <a href="#">MEC2401</a> or <a href="#">ELE2103</a> or Students must be enrolled in one of the following Programs: MENS or GCEN
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
The following three:								
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2				M Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.
<a href="#">ENG4909 Work Experience - Professional</a>						4	1,2,3	
And two from the list below:								
<a href="#">ELE2912 Electrical and Electronic Practice B</a>	1	1	2	3				M Pre-requisite: ( <a href="#">ELE1301</a> and <a href="#">ELE1502</a> and <a href="#">ELE1801</a> ) or

Specialisation: Electrical and Electronic Engineering (Specialisation Study Code: 16217)								
Course	Year of program and 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: GDNS or MENS
<a href="#">ELE2913 Electrical and Electronic Practice C</a>	1	2	2	2			M	Pre-requisite: ( <a href="#">ELE1301</a> and <a href="#">ELE1502</a> and <a href="#">ELE1801</a> ) or Students must be enrolled in one of the following Programs: GDNS or MENS
<a href="#">ELE3914 Electrical and Electronic Practice D</a>	2	1	3	3			M	Pre-requisite: ( <a href="#">ELE1801</a> and <a href="#">ELE1301</a> and <a href="#">ELE1502</a> ) or Students must be enrolled in one of the following Programs: MENS or MEPR
<a href="#">ELE3915 Electrical and Electronic Practice E</a>	2	2	3	2			M	Pre-requisite: <a href="#">ELE1801</a> and <a href="#">ELE1301</a> and <a href="#">ELE1502</a> or Students must be enrolled in one of the following Programs: MENS or MEPR

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.
- \* ELE4109 is offered in odd years only.

### Environmental Engineering specialisation recommended enrolment pattern

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

Specialisation: Environmental Engineering (Specialisation Study Code: 16218)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3		Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			1	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2		Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1		Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program

Specialisation: Environmental Engineering (Specialisation Study Code: 16218)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2		Pre-requisite: <a href="#">ENG8411</a>
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">ENV3104 Hydraulics II</a>	1	1			2	1		Pre-requisite: ENV1101 or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ECO8012 Methods for Sustainable Development</a>						2		
<a href="#">ENV4107 Water Resources Engineering</a>	1	2			3	2		Pre-requisite: ( <a href="#">ENV3104</a> and <a href="#">ENV3105</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ENV4204 Environmental Technology</a>	2	1			3	1		Pre-requisite: <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ENV4205 Water and Wastewater Treatment</a>					3	1		Pre-requisite: <a href="#">ENV4203</a> and <a href="#">ENV2105</a> or Students must be enrolled in one of the following Programs: PDEV or GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ENV4203 Public Health Engineering</a>	2	2			4	2		Pre-requisite: ENV1101 or <a href="#">ENV2103</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">AGR3304 Soil Science</a>		1				1		
<a href="#">CLI8204 Global Environmental Systems</a>						1		
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">ENV3105 Hydrology</a>		2				2		
<a href="#">ENV4106 Irrigation Science</a>		2				2		Pre-requisite: <a href="#">AGR3304</a> 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.
<a href="#">MEC5100 Computational Fluid Dynamics</a>						1		Pre-requisite: <a href="#">MEC3107</a> or <a href="#">MEC3102</a> or <a href="#">ENV3104</a> or Students must be enrolled in the following Program: MEPR

Specialisation: Environmental Engineering (Specialisation Study Code: 16218)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">URP4002 Urban and Regional Planning Theory</a>		1				1		Pre-requisite: <a href="#">URP1001</a> or <a href="#">URP3201</a> or Students must be enrolled in one of the following Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.
<a href="#">ENG4909 Work Experience - Professional</a>					4	1,2,3		
<a href="#">ENV3904 Environmental Engineering Practice</a>			3	3			M	Pre-requisite: <a href="#">ENV4203</a> or Students must be enrolled in one of the following Programs: GDNS or MENS or MEPR or GEPR
<a href="#">AGR3903 Soil and Water Engineering Practice 2</a>			2	2			M	

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.

## Mechanical Engineering specialisation recommended enrolment pattern

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

Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3		Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
<a href="#">ENG8208 Advanced Engineering Project Management</a>	2	1			3	1		

### Schedule A: Core Courses

Students must complete all seven courses listed in this schedule.



Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2		Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or S students must be enrolled in one of the following Programs: <a href="#">GDET</a> or <a href="#">METC</a> or <a href="#">GDNS</a> or <a href="#">MENS</a>
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1		Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2		Pre-requisite: <a href="#">ENG8411</a>
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">MEC2401 Dynamics I</a>	1	1			2	1		Pre-requisite: (( <a href="#">MAT1502</a> or <a href="#">MAT1102</a> or <a href="#">ENM1600</a> ) and <a href="#">CIV1501</a> ) or Students must be enrolled in one of the following Programs: <a href="#">GCEN</a> or <a href="#">GCNS</a> or <a href="#">METC</a> or <a href="#">MEPR</a> or <a href="#">MENS</a> or <a href="#">GEPR</a>
<a href="#">MEC3107 Thermofluids</a>	1	1			2	1		Pre-requisite: ( <a href="#">MEC2106</a> and <a href="#">ENM1600</a> ) or Students must be enrolled in one of the following Programs: <a href="#">GCNS</a> or <a href="#">GDNS</a> or <a href="#">MENS</a> Students cannot enrol in <a href="#">MEC3107</a> if they have successfully completed, or are currently enrolled in, <a href="#">MEC2101</a> or <a href="#">MEC3102</a>
<a href="#">MEC3303 Mechanical and Mechatronic System Design</a>	1	2			1	2		Pre-requisite: <a href="#">MEC2301</a> or Students must be enrolled in one of the following Programs: <a href="#">GCEN</a> or <a href="#">METC</a> or <a href="#">GCNS</a> or <a href="#">GDNS</a> or <a href="#">MEPR</a> or <a href="#">MENS</a>
<a href="#">MEC4104 Renewable Energy Technology</a>	1	2			2	2		Pre-requisite: (( <a href="#">MEC2101</a> and <a href="#">MEC3102</a> ) or <a href="#">MEC2106</a> ) or Students must be enrolled in one of the following Programs: <a href="#">GCEN</a> or <a href="#">GCNS</a> or <a href="#">GDNS</a> or <a href="#">METC</a> or <a href="#">MENS</a> or <a href="#">MEPR</a>
<a href="#">MEC3302 Computational Mechanics in Design</a>	2	1			3	1		Pre-requisite: ( <a href="#">MEC2304</a> and <a href="#">MEC2401</a> and <a href="#">MEC2402</a> ) or Students must be enrolled in one of the following Programs: <a href="#">GCEN</a> or <a href="#">METC</a> or <a href="#">MEPR</a> or <a href="#">GCNS</a> or <a href="#">GDNS</a> or <a href="#">MENS</a>
<a href="#">MEC3403 Dynamics II</a>	2	2			3	2		Pre-requisite: ( <a href="#">MEC2401</a> and ( <a href="#">MAT2500</a> or <a href="#">ENM2600</a> )) or Students must be enrolled in one of the following Programs: <a href="#">GCEN</a> or <a href="#">MEPR</a> or <a href="#">GCNS</a> or <a href="#">GDNS</a>

Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">CIV8803 Advanced Mechanics and Technology of Fibre Composites</a>						1		Pre-requisite: <a href="#">CIV3506</a> or <a href="#">MEC3203</a> or Students must be enrolled in one of the following Programs: GCEN or PGCN or METC or MEPR or GCNS or GDNS or MENS or MENC or MAEN
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">MEC3203 Materials Technology</a>		1				1		Pre-requisite: <a href="#">MEC1201</a> or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
<a href="#">MEC3204 Production Engineering</a>		2				2		
<a href="#">MEC4108 Advanced Thermofluids</a> **		1				1		Pre-requisite: ( <a href="#">MEC3107</a> and <a href="#">ENM2600</a> and <a href="#">ENG3104</a> ) or Students must be enrolled in the following Program: MEPR Students cannot enrol in <a href="#">MEC4108</a> if they have successfully completed, or are currently enrolled in, <a href="#">MEC3102</a> or <a href="#">MEC4103</a>
<a href="#">MEC5100 Computational Fluid Dynamics</a>						1		Pre-requisite: <a href="#">MEC3107</a> or <a href="#">MEC3102</a> or <a href="#">ENV3104</a> or Students must be enrolled in the following Program: MEPR
<a href="#">MEC5105 Combustion</a> ^						2		Pre-requisite: <a href="#">MEC3107</a> or <a href="#">MEC3102</a> or Students must be enrolled in the following Program: MEPR
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
The following three:								
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.

Specialisation: Mechanical Engineering (Specialisation Study Code: 16220)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ENG4909 Work Experience - Professional</a>					4	1,2,3		
And two from the list below:								
<a href="#">MEC3903 Mechanical Practice 3</a>	1	2	3	3			M	
<a href="#">MEC3904 Mechanical Practice 4</a>	2	2	4	2			M	Pre-requisite: <a href="#">MEC3102</a> or <a href="#">MEC2106</a> or Students must be enrolled in one of the following Programs: GDNS or MENS or MEPR
<a href="#">MEC3905 Mechatronic Practice</a>			4	2			M	

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.
- \*\* [MEC4108 Advanced Thermofluids](#) will be offered for the first time in 2021. Students can enrol in [MEC4103 Heat Transfer](#) instead of [MEC4108 Advanced Thermofluids](#) only if they also complete [MEC3102 Fluid Mechanics](#) instead of [MEC3107 Thermofluids](#).
- ^ Offered odd years only.

### Power Engineering specialisation recommended enrolment pattern

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

Specialisation: Power Engineering (Specialisation Study Code: 16221)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3		Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			2	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2		Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1		Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2		Pre-requisite: <a href="#">ENG8411</a>
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">ELE3305 Computer Systems and Communications Protocols</a>	1	1			2	1		
<a href="#">ELE3107 Signal Processing</a>	1	2			1	2		

Specialisation: Power Engineering (Specialisation Study Code: 16221)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ELE3307 Real Time Systems</a>	1	2			2	2		Pre-requisite: <a href="#">ELE1301</a> or S tudents must be enrolled in one of the following Program s: GCEN or GCNS or METC or MENS or MEPR
<a href="#">ELE3805 Power Electronics Principles and Applications</a>	2	2			2	2		Pre-requisite: ( <a href="#">ELE1502</a> and <a href="#">ELE1801</a> ) or Students must be enrolled in one of the fol lowing Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS
<a href="#">ELE3807 Power Systems Analysis</a>	2	1			3	1		
<a href="#">MEC4104 Renewable Energy Technology</a>	2	2			3	2		Pre-requisite: (( <a href="#">MEC2101</a> and <a href="#">MEC3102</a> ) or <a href="#">MEC2106</a> ) or Students must be enrolled in one of the following Pro grams: GCEN or GCNS or GDNS or METC or MENS or MEPR
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">CIV2605 Construction Engineering</a>		1				1		
<a href="#">ELE5001 Industrial Communications Protocols</a>		1				1		Pre-requisite: <a href="#">ELE2601</a> or S tudents must be enrolled in the following Program: GCN S, GDNS, MENS or MEPR
<a href="#">ELE3803 Electrical Plant</a>		1				1		Pre-requisite: <a href="#">ELE1801</a> 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
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">ELE4506 Industrial Process Automation</a>						1		Pre-requisite: ( <a href="#">ELE2101</a> or <a href="#">ELE2103</a> ) and <a href="#">ELE3105</a> and <a href="#">MEC2501</a> or Students must be enrolled in the following program: MENS or MEPR
<a href="#">GIS1401 Geographic Data Presentation</a>		2				2		
<a href="#">GIS1402 Geographic Information Systems</a>		1				1,3		
<a href="#">MEC2106 Introduction to Thermofluids</a>		2				2		Pre-requisite: <a href="#">CIV1500</a> or <a href="#">CIV1501</a> or Students must be enrolled in one of the follow ing Programs: BENH or BE BC or BEHS or GCEN or MENS or GEPR
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
The following three:								
<a href="#">ENG3902 Professional Practice 1</a>			3	2			M	Pre-requisite: Students must be enrolled in one of the fol

Specialisation: Power Engineering (Specialisation Study Code: 16221)								
Course	Year of program and 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 or MENS
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.
<a href="#">ENG4909 Work Experience - Professional</a>						4	1,2,3	
And two from the list below:								
<a href="#">ELE2912 Electrical and Electronic Practice B</a>	1	1	2	3			M	Pre-requisite: ( <a href="#">ELE1301</a> and <a href="#">ELE1502</a> and <a href="#">ELE1801</a> ) or Students must be enrolled in one of the following Programs: GDNS or MENS
<a href="#">ELE2913 Electrical and Electronic Practice C</a>	1	2	2	2			M	Pre-requisite: ( <a href="#">ELE1301</a> and <a href="#">ELE1502</a> and <a href="#">ELE1801</a> ) or Students must be enrolled in one of the following Programs: GDNS or MENS
<a href="#">ELE3914 Electrical and Electronic Practice D</a>	2	1	3	3			M	Pre-requisite: ( <a href="#">ELE1801</a> and <a href="#">ELE1301</a> and <a href="#">ELE1502</a> ) or Students must be enrolled in one of the following Programs: MENS or MEPR
<a href="#">ELE3915 Electrical and Electronic Practice E</a>	2	2	3	2			M	Pre-requisite: <a href="#">ELE1801</a> and <a href="#">ELE1301</a> and <a href="#">ELE1502</a> or Students must be enrolled in one of the following Programs: MENS or MEPR

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414 Masters Engineering Research Project D](#) in lieu of [ENG8412 Masters Engineering Research Project B](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414 Masters Engineering Research Project D](#).
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.

## Structural Engineering specialisation recommended enrolment pattern

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

Specialisation: Structural Engineering (Specialisation Study Code: 16222)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.								
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3				1	1,2,3	

Specialisation: Structural Engineering (Specialisation Study Code: 16222)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3	Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN	
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			1	1		
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2	Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS	
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2		
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1	Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2	Pre-requisite: <a href="#">ENG8411</a>	
<b>Schedule B: Specialisation Courses</b> Students must complete all six courses listed in this schedule.								
<a href="#">CIV3505 Structural Analysis</a>	1	1			2	1	Pre-requisite: <a href="#">MEC2402</a> and ( <a href="#">MAT1502</a> or <a href="#">ENM1600</a> or <a href="#">MAT1102</a> ) or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS or GEPR	
<a href="#">CIV3403 Geotechnical Engineering</a>	1	2			2	2	Pre-requisite: <a href="#">CIV2401</a> or <a href="#">CIV2403</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV3506 Concrete Structures</a>	2	1			2	1	Pre-requisite: <a href="#">CIV2503</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV4508 Structural Design II</a>	2	1			3	1	Pre-requisite: <a href="#">CIV3505</a> and <a href="#">CIV3506</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MEPR or GCNS or GDNS or MENS	
<a href="#">CIV8802 Advanced Prestressed Concrete<sup>l</sup></a>					3	2		
<a href="#">CIV8803 Advanced Mechanics and Technology of Fibre Composites</a>					4	1	Pre-requisite: <a href="#">CIV3506</a> or <a href="#">MEC3203</a> or Students must be enrolled in one of the following Programs: GCEN or PGCN or METC or MEPR or GCNS or GDNS or MENS or MENC or MAEN	
<b>Schedule C: Approved Courses</b> Students must complete two of the courses listed in this schedule.~								
<a href="#">CIV8801 Code-Based Structural Design</a>						1		

Specialisation: Structural Engineering (Specialisation Study Code: 16222)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">CIV8804 Advanced Design Practice using Finite Element Analysis</a>						2		
<a href="#">ENG8101 Technological Impact and its Management</a>		1				1		
<a href="#">ENG8103 Management of Technological Risk</a>		2				2		
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1		
<a href="#">ENG8205 Project Management Practice</a>		2				2		
<a href="#">MEC3203 Materials Technology</a>		1				1		Pre-requisite: <a href="#">MEC1201</a> or Students must be enrolled in one of the following Programs: GCEN or METC or GCNS or GDNS or MEPR or MENS
<b>Schedule D: Practice Courses</b> Students must complete the following five practice courses.								
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.
<a href="#">ENG4909 Work Experience - Professional</a>					4	1,2,3		
<a href="#">CIV3907 Civil Systems Practice</a>			1	3			M	Pre-requisite: <a href="#">CIV2503</a> or Students must be enrolled in one of the following Programs: MENS or MEPR
<a href="#">CIV4908 Civil Design Practice</a>			2	1,2			M	Co-requisite: <a href="#">CIV4508</a> or Students must be enrolled in the following Program: MEPR or MENS

#### Footnotes

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414](#).
- ] Offered odd years only
- ~ Level 8 courses from other areas of study may be chosen as approved courses with the approval of the Faculty of Health, Engineering and Sciences.



## Engineering Management and Enterprise specialisation recommended enrolment pattern

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

Specialisation: Engineering Management and Enterprise Engineering (Specialisation Study Code: 18289)									
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements	
	On-campus (ONC)		External (EXT)		Online (ONL)				
	Year	Sem	Year	Sem	Year	Sem			
<b>Schedule A: Core Courses</b> Students must complete all seven courses listed in this schedule.									
<a href="#">ENG5001 Professional Skills in Engineering</a>	1	1,3			1	1,2,3			
<a href="#">ENM2600 Advanced Engineering Mathematics</a>	1	1			1	1,3		Pre-requisite: <a href="#">ENM1600</a> or Students must be enrolled in one of the following Programs: GCEN or METC or MENS or GDNS or MEPR or MSCN	
<a href="#">ENG8208 Advanced Engineering Project Management</a>	1	1			2	1			
<a href="#">ENG3104 Engineering Simulations and Computations</a>	1	2			1	2		Pre-requisite: ( <a href="#">ENM2600</a> or <a href="#">MAT2100</a> or <a href="#">MAT2500</a> ) or Students must be enrolled in one of the following Programs: GDET or METC or GDNS or MENS	
<a href="#">ENG8001 Engineering Research Methods</a>	1	2,3			3	1,2			
<a href="#">ENG8411 Masters Engineering Research Project A</a>	2	1			4	1		Pre-requisite: <a href="#">ENG8001</a> and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
<a href="#">ENG8412 Masters Engineering Research Project B<sup>#</sup></a>	2	2			4	2		Pre-requisite: <a href="#">ENG8411</a>	
<b>Schedule B: Specialisation Courses</b> Students must complete six courses listed in this schedule including the following three courses.									
<a href="#">MGT5000 Managing Organisational Behaviour<sup>^</sup></a>	2	1			1	3			
<a href="#">MGT3004 Creativity, Innovation and Entrepreneurship</a>						2			
<a href="#">FIN8201 Corporate Finance</a>	1	1			1	3			
<b>Choose three of the following Schedule B courses:</b>									
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1				1			
<a href="#">ENG8205 Project Management Practice</a>		2				2			
<a href="#">ENG8207 Technological Innovation and Development</a>						2			
<a href="#">ENG8103 Management of Technological Risk</a>		2				2			
<a href="#">ENG8111 Project Requirements Management<sup>+</sup></a>						2			
<a href="#">ACC5502 Accounting and Financial Management</a>		1				1,3		Pre-requisite: Students enrolled in one of the following Programs: Master of Professional Accounting (MPAC) or Master of Business Administration & Master of Professional Accounting (MBAC) are not eligible for enrolment	
<a href="#">CIS8000 Global Information Systems Strategy</a>		1,2				1,2			
<a href="#">MGT8002 Strategic Management</a>						1,2,3			
<a href="#">MGT8034 Strategic Management of Human Resources and Innovation</a>						3			

Specialisation: Engineering Management and Enterprise Engineering (Specialisation Study Code: 18289)								
Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
<a href="#">MGT8074 Project Team Leadership</a> <sup>^</sup>		2				2		Enrolment is not permitted in <a href="#">MGT8074</a> if <a href="#">MGT8027</a> has been previously completed.
<b>Schedule C: Approved Courses</b> Students must complete the two (2) courses listed in this schedule.								
Choose a Schedule B course from the other specialisations <sup>*</sup>								
Choose a Schedule B course from the other specialisations <sup>*</sup>								
<b>Schedule D: Practice Courses</b> Students must complete the following two (2) practice courses.								
<a href="#">ENG3902 Professional Practice 1</a>			3	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
<a href="#">ENG4903 Professional Practice 2</a>	2	1	4	2			M	Pre-requisite: <a href="#">ENG3902</a> 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 or MENS. Students cannot enrol in <a href="#">ENG3902</a> and <a href="#">ENG4903</a> in the same semester.

**Footnotes**

- # Students wishing to undertake a research project with a total of six units may enrol in [ENG8414](#) in lieu of [ENG8412](#) in Schedule A and two approved courses from Schedule C. Approval from the Faculty of Health, Engineering and Sciences is required to undertake a six unit research project prior to enrolling in [ENG8414 Masters Engineering Research Project D](#).
- <sup>^</sup> This course is offered on-campus at Springfield campus only.
- <sup>+</sup> This course will not be offered in S2, 2020.
- <sup>\*</sup> Courses will normally be technical Engineering, Science or Technology courses not lower than Level 3. Consult the Program Coordinator via [usq.support@usq.edu.au](mailto:usq.support@usq.edu.au) to seek approval.