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Handbook 2023

Sciences



The
University of
Southern
Queensland

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The information contained in this Handbook is valid as at the date mentioned below. The University of Southern Queensland reserves the right not to offer any program or course and to decline the enrolment of students in a program or course, in the light of student demand and resource constraints. Program structures, course objectives and content are subject to amendment as circumstances dictate.

The most up-to-date version of the UniSQ Handbook is the electronic version at <https://www.unisq.edu.au/handbook/current/>. Any printed version or other saved electronic version will be up to date at the time of printing or saving but may not contain the most recent information. Please always refer to the Internet address provided.

This version produced 20 Jul 2023.

Programs

Undergraduate programs

Diploma of Science (DPSC) - DipSci

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 906271; External: 906275

Programs at UniSQ are regularly reviewed to ensure they remain professionally relevant, in order to enhance the graduate outcomes of our students. This program is currently being re-accredited and is, as a consequence, likely to undergo some changes. Full details will be available when it is approved. If you have any questions, please [contact us](#) directly.

	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
Standard duration:	1 year full-time, 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.

Footnotes

- * The Biology and Computing/IT majors cannot be completed full-time with a Semester 2 entry.
- ^ Please refer to the Program Structure for further information on mode of offer for each major.
- # The Wildlife Management major is available on campus in Toowoomba and externally, with highly recommended and mandatory residential schools held at UniSQ Toowoomba or off-site.
- + The Biology major is available on-campus and online with highly recommended on-campus residential schools.

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 is a generalist program providing students with the necessary skills that are essential for successful study in a Bachelor's degree and the knowledge of fundamental concepts in a chosen science major. The program aims to provide an articulation pathway for students into the [BSClorBSCP Bachelor of Science or Bachelor of Science \(Psychology\)](#).

Program objectives

On completion of this program, students should be able to:

- Display broad technical and theoretical knowledge with some depth of understanding associated with the underlying principles and concepts within a scientific context;
- Identify, analyse, synthesise and evaluate information gathered from a range of scientific sources to enable the development of problem solving skills;
- Display and apply a limited range of specialist cognitive, technical and practical skills relevant for paraprofessional work and further study in a field of science;

- Proficiently communicate knowledge within a scientific context to a diverse range of audiences, including professionals, paraprofessionals, clients and the wider community;
- Work autonomously displaying accountability, responsibility, cultural competency and ethical capacity for their own performance and actions within defined parameters.

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 **61.5**, or equivalent qualification.[^]
- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- [Assumed knowledge](#) expectations: English and 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](#).

Program structure

The Diploma of Science consists of 8 units comprising 2 core units of Foundation Studies with either 4 units chosen from a specified major, with two additional elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Faculty approval, or 6 units if undertaking the Wildlife Management major.

Major	Offering		
	On-campus	Online	External
Biology	Toowoomba		Highly recommended residential schools
Computing/IT	Toowoomba	Online	
Environment and Sustainability	Toowoomba	Online	
Mathematics	Toowoomba	Online	
Physical Sciences		Online	
Wildlife Management	Toowoomba		Mandatory and Highly Recommended residential schools
General Science	Depends on the 6 Approved courses		

Required time limits

Students have a maximum of 3 years to complete this program.

Core courses

Foundation Studies

The Foundation knowledge courses for every major in the program are listed in the table below. Students wishing to vary foundation studies courses must obtain Faculty approval.

Course	Semester(s) Offered	Mode
CMS1100 Communicating in the Sciences	1,2	ONC, ONL (Semester 2 ONL only)
SCI1001 Succeeding in Science	1,2	ONC, ONL

Biology major

Courses	Semester(s) Offered	Mode
BIO1101 Biology 1 *	1	ONC, EXT
BIO2107 Cell and Molecular Biology 1 #	1	ONC, EXT
BIO2103 Biology 2 #	2	ONC, EXT
BIO2219 Genetics	2	ONC, ONL

Footnotes

- * This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- # This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Biology major - recommended electives (Complete either the two recommended electives below or two (2) elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Program Director approval):

Courses	Semester(s) Offered	Mode
CHE1110 Chemistry 1 *	1	ONC, EXT
CHE2120 Chemistry 2 *	2	ONC, EXT

Footnotes

- * This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Computing/IT major

Courses	Semester(s) Offered	Mode
MAT1101 Discrete Mathematics for Computing	1	ONC, ONL
CSC1401 Foundation Programming £	1,2,3	ONC, ONL
CSC2406 Web Technology 1	2	ONC, ONL
CIS1000 Digital Disruption £	1,2	ONC, ONL

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

Computing/IT major - recommended electives (Complete either the two recommended electives below or two (2) elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Program Director approval):

Courses	Semester(s) Offered	Mode
ELE1301 Computer Engineering	1	ONC, ONL
STA2100 Evaluating Information	2	ONC, ONL

Environment and Sustainability major

Courses	Semester(s) Offered	Mode
REN1201 Environmental Studies	1	ONC, ONL
CLI1110 Weather and Climate	1	ONC, ONL
REN2200 Ecology for Sustainability	1	ONC, ONL
CLI2201 Climate Change and Variability	2	ONL

Environment and Sustainability major - recommended electives (Complete either the two recommended electives below or two (2) elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Program Director approval):

Courses	Semester(s) Offered	Mode
STA2100 Evaluating Information	2	ONC, ONL
BIO1101 Biology 1 *	1	ONC, EXT

Footnotes

* This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

General Science major

Any four (4) level 1 or 2 approved courses included in the [Bachelor of Science or Bachelor of Science \(Psychology\)](#) or Diploma of Science, plus any two (2) approved elective courses chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to pre-requisite requirements and Program Director approval.

Mathematics major

Courses	Semester(s) Offered	Mode
CSC1401 Foundation Programming £	1,2,3	ONC, ONL
MAT1000 Mathematics Fundamentals * ORMAT1102 Algebra and Calculus 1 *	1	ONC, ONL
STA2100 Evaluating Information	2	ONC, ONL
MAT1100 Foundation Mathematics	2	ONC, ONL

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 who have completed Mathematics B (4, SA) or equivalent should include [MAT1102](#) in their program. All other students should include [MAT1000](#).

Mathematics major - recommended electives (Complete either the two recommended electives below or two (2) elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Program Director approval):

Courses	Semester(s) Offered	Mode
MAT1101 Discrete Mathematics for Computing	1	ONC, ONL
CSC2410 Computational Thinking with Python	2	ONC, ONL

Physical Sciences major

Choose four courses from the following five approved courses:

Courses	Semester(s) Offered	Mode
PHY1101 Astronomy 1	1	ONC, ONL
PHY1104 Physics 1 ^	1	ONC, ONL
PHY1107 Astronomy 2	2	ONC, ONL
PHY1911 Physics 2 ^	2	ONC, ONL
PHY2206 Medical Physics	2	ONL

Footnotes

[^] [PHY1104](#) and [PHY1911](#) can only be completed by students who have completed Mathematics B (4, SA) or equivalent. Students who have not completed Mathematics B (4, SA) or equivalent must complete [MAT1100](#) as one of the electives prior to enrolling in [PHY1104](#) and [PHY1911](#).
[PHY1104](#) and [PHY1911](#) have required mathematics co-requisites. Please refer to the course specification for further detail.

Physical Sciences major - recommended electives (Complete either the two recommended electives below or two (2) elective units chosen from any level 1 or 2 course offered by the University of Southern Queensland, subject to Program Director approval):

Courses	Semester(s) Offered	Mode
MAT1100 Foundation Mathematics [^] OR	2	ONC, ONL
MAT1102 Algebra and Calculus I	1	ONC, ONL
STA2100 Evaluating Information	2	ONC, ONL

Footnotes

[^] [PHY1104](#) and [PHY1911](#) can only be completed by students who have completed Mathematics B (4, SA) or equivalent. Students who have not completed Mathematics B (4, SA) or equivalent must complete [MAT1100](#) as one of the electives prior to enrolling in [PHY1104](#) and [PHY1911](#).

Wildlife Management major

Courses	Semester(s) Offered	Mode
WLF1201 Field Skills for Wildlife, Game and Pest Management	2	EXT [#]
WLF2101 Management of Wildlife	1	ONC, EXT [^]
WLF2201 Vertebrate Pests and Biosecurity	2	ONC, EXT [^]
AGR1101 Animal Health, Welfare and Behaviour	1	ONC, EXT [^]
BIO2103 Biology 2	2	ONC, EXT [^]
MAT1000 Mathematics Fundamentals	1	ONC, ONL

Footnotes

[#] Mandatory residential school

[^] Highly recommended residential school for on-campus and external students

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](#).

Highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Biology major:

- [BIO1101 Biology 1](#)
- [BIO2103 Biology 2](#)
- [BIO2107 Cell and Molecular Biology 1](#)

Wildlife Management major:

- [AGR1101 Animal Health, Welfare and Behaviour](#)
- [BIO2103 Biology 2](#)

- [WLF1201 Field Skills for Wildlife, Game and Pest Management](#)
- [WLF2101 Management of Wildlife](#)
- [WLF2201 Vertebrate Pests and Biosecurity](#)

Articulation

Upon successful completion of the Diploma of Science students have the opportunity to articulate directly into the [Bachelor of Science or Bachelor of Science \(Psychology\)](#).

Students articulating into the [BSCI or BSCP](#) may be given exemptions for eight courses completed in the Diploma of Science.

Credit

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

Recommended Enrolment Pattern - Biology - Full-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								
BIO1101 Biology 1	1	1	1	1			HR	
BIO2107 Cell and Molecular Biology 1	1	1	1	1			HR	Pre-requisite: CHE2120
SCI1001 Succeeding in Science	1	1			1	1		
Elective 1	1	1			1	1		
BIO2103 Biology 2 *	1	2	1	2			HR	
BIO2219 Genetics	1	2			1	2		Pre-requisite: BIO1100 or BIO1101 or BIO1204 or AGR1101
CMS1100 Communicating in the Sciences					1	2		
Elective 2	1	2			1	2		

Footnotes

* Highly recommended residential school for on-campus and external students

Recommended Enrolment Pattern - Biology - 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		
BIO1101 Biology 1	1	1	1	1			HR	
SCI1001 Succeeding in Science	1	1			1	1		
BIO2103 Biology 2 *	1	2	1	2			HR	
CMS1100 Communicating in the Sciences					1	2		
BIO2107 Cell and Molecular Biology 1	2	1	2	1			HR	Pre-requisite: CHE2120
Elective 1	2	1			2	1		
BIO2219 Genetics	2	2			2	2		Pre-requisite: BIO1100 or BIO1101 or BIO1204 or AGR1101
Elective 2	2	2			2	2		

Footnotes

* Highly recommended residential school for on-campus and external students

Recommended Enrolment Pattern - Computing/IT - Full-time

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	
CSC1401 Foundation Programming £	1	1			1	1	
MAT1101 Discrete Mathematics for Computing	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
Elective 1	1	1			1	1	
CSC2406 Web Technology 1	1	2			1	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 B SED
CMS1100 Communicating in the Sciences					1	2	
CIS1000 Digital Disruption £	1	2			1	2	
Elective 2	1	2			1	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

Recommended Enrolment Pattern - Computing/IT - Part-time

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	
CSC1401 Foundation Programming £	1	1			1	1	
MAT1101 Discrete Mathematics for Computing	1	1			1	1	
CIS1000 Digital Disruption £	1	2			1	2	
CMS1100 Communicating in the Sciences					1	2	
SCI1001 Succeeding in Science	2	1			2	1	
Elective 1	2	1			2	1	
CSC2406 Web Technology 1	2	2			2	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 B SED
Elective 2	2	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

Recommended Enrolment Pattern - Environment and Sustainability - Full-time

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	
Year 1							
REN1201 Environmental Studies	1	1			1	1	Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	

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	
REN2200 Ecology for Sustainability	1	1			1	1	Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
CLI2201 Climate Change and Variability					1	2	
CMS1100 Communicating in the Sciences					1	2	
Elective 1	1	2			1	2	
Elective 2	1	2			1	2	

Recommended Enrolment Pattern - Environment and Sustainability - Part-time

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	
REN1201 Environmental Studies	1	1			1	1	Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SCI1001 Succeeding in Science	1	1			1	1	
CLI2201 Climate Change and Variability					1	2	
CMS1100 Communicating in the Sciences					1	2	
CLI1110 Weather and Climate	2	1			2	1	
REN2200 Ecology for Sustainability	2	1			2	1	Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
Elective 1	2	2			2	2	
Elective 2	2	2			2	2	

Recommended Enrolment Pattern - Mathematics - Full-time

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:							
MAT1000 Mathematics Fundamentals *	1	1			1	1	
or							
MAT1102 Algebra and Calculus I *	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
CSC1401 Foundation Programming £	1	1			1	1	
Elective 1	1	1			1	1	
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
CMS1100 Communicating in the Sciences					1	2	
STA2100 Evaluating Information	1	2			1	2	Enrolment is not permitted in STA2100 if S TA3100 has been previously completed.
Elective 2	1	2			1	2	

Footnotes

* Students who have completed Mathematics B (4, SA) or equivalent should include [MAT1102](#) in their program. All other students should include [MAT1000](#).

£ 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

Recommended Enrolment Pattern - Mathematics - Part-time

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:							
MAT1000 Mathematics Fundamentals *	1	1			1	1	
or							
MAT1102 Algebra and Calculus I *	1	1			1	1	
CSC1401 Foundation Programming £	1	1			1	1	
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
CMS1100 Communicating in the Sciences					1	2	
SCI1001 Succeeding in Science	2	1			2	1	
Elective 1	2	1			2	1	
STA2100 Evaluating Information	2	2			2	2	Enrolment is not permitted in STA2100 if STA3100 has been previously completed.
Elective 2	2	2			2	2	

Footnotes

* Students who have completed Mathematics B (4, SA) or equivalent should include [MAT1102](#) in their program. All other students should include [MAT1000](#).

£ 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

Recommended Enrolment Pattern - Physical Sciences - Full-time

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	
Year 1							
SCI1001 Succeeding in Science	1	1			1	1	
CMS1100 Communicating in the Sciences	1	1			1	1,2	
Recommended Elective							
MAT1102 Algebra and Calculus I	1	1			1	1	
Choose four courses from the following five approved courses:							
PHY1101 Astronomy 1	1	1			1	1	
PHY1104 Physics 1 ^	1	1			1	1	Co-requisite: (MAT1102 or ENM2600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
PHY1107 Astronomy 2	1	2			1	2	
PHY1911 Physics 2 ^	1	2			1	2	Co-requisite: (MAT2100 or ENM1600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
PHY2206 Medical Physics					1	2	
Elective	1	2			1	2	

Footnotes

^ [PHY1104](#) and [PHY1911](#) can only be completed by students who have completed Mathematics B (4, SA) or equivalent. Students who have not completed Mathematics B (4, SA) or equivalent must complete [MAT1000](#) as one of the electives prior to enrolling in [PHY1104](#) and [PHY1911](#). [PHY1104](#) and [PHY1911](#) have required mathematics co-requisites. Please refer to the course specification for further detail.

Recommended Enrolment Pattern - Physical Sciences - Part-time

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	
Year 1							
SCI1001 Succeeding in Science	1	1			1	1	
CMS1100 Communicating in the Sciences					2	2	
Recommended Elective							
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Choose four courses from the following five approved courses:							
PHY1101 Astronomy 1	1	1			1	1	
PHY1104 Physics 1 ^	2	1			2	1	Co-requisite: (MAT1102 or ENM2600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
PHY1107 Astronomy 2	1	2			1	2	
PHY1911 Physics 2 ^	2	2			2	2	Co-requisite: (MAT2100 or ENM1600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
PHY2206 Medical Physics					2	2	
Elective	2	1,2			2	1,2	

Footnotes

^ [PHY1104](#) and [PHY1911](#) can only be completed by students who have completed Mathematics B (4, SA) or equivalent. Students who have not completed Mathematics B (4, SA) or equivalent must complete [MAT1000](#) as one of the electives prior to enrolling in [PHY1104](#) and [PHY1911](#).
[PHY1104](#) and [PHY1911](#) have required mathematics co-requisites. Please refer to the course specification for further detail.

Recommended Enrolment Pattern - Wildlife Management - Full-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		
MAT1000 Mathematics Fundamentals	1	1			1	1		
WLF2101 Management of Wildlife *	1	1	1	1			HR	
SCI1001 Succeeding in Science	1	1			1	1		
AGR1101 Animal Health, Welfare and Behaviour *	1	1	1	1			HR	
WLF1201 Field Skills for Wildlife, Game and Pest Management			1	2			M	
WLF2201 Vertebrate Pests and Biosecurity *	1	2	1	2			HR	
CMS1100 Communicating in the Sciences					1	1,2		
BIO2103 Biology 2 *	1	2	1	2			HR	

Footnotes

* Highly recommended residential school for on-campus and external students

Recommended Enrolment Pattern - Wildlife Management - 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		
WLF2101 Management of Wildlife *	1	1	1	1			HR	
SCI1001 Succeeding in Science	1	1			1	1		
MAT1000 Mathematics Fundamentals	1	1			1	1		
WLF1201 Field Skills for Wildlife, Game and Pest Management			1	2			M	
AGR1101 Animal Health, Welfare and Behaviour *	2	1	2	1			HR	
CMS1100 Communicating in the Sciences					2	1,2		
WLF2201 Vertebrate Pests and Biosecurity *	2	2	2	2			HR	
BIO2103 Biology 2 *	2	2	2	2			HR	

Footnotes

* Highly recommended residential school for on-campus and external students

Diploma of Science Foundations (DOSF) - DipSF

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
Residential school:	Some Science courses have compulsory residential schools
Standard duration:	1 year full-time, 3 years part-time
Program articulation:	To: To:

Notes:

The Science courses are available on-campus and by distance education. Details on these faculty-specific offerings can be found from the [undergraduate Science programs](#).

The number of units credited towards the ; will depend on the courses studied and the major selected in the ; .

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

This is a generalist and collaborative program offered by the Open Access College and the Faculty of Health, Engineering and Sciences. The first four courses provide students with the necessary skills and knowledge that are essential for success at the university level of study. The remaining courses from the Faculty of Health, Engineering and Sciences provide foundation science knowledge and skills in the series of four science courses studied.

Program objectives

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

- demonstrated an ability to successfully study foundation science courses
- acquired sufficient knowledge about foundation science and science programs of study to make an informed choice about further undergraduate study in the Faculty of Health, Engineering and Sciences
- developed an awareness of the nature of the study of foundation courses in the Faculty of Health, Engineering and Sciences
- developed foundation science knowledge, skills and competencies in a series of first year science 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 foundation studies in science. Students must successfully complete the four compulsory core courses before they will be enrolled in the four science courses of foundation studies.

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 Science courses

After completing the four compulsory courses students can select four courses from the following selection of foundation courses^{*}:

- [PSY1010 Foundation Psychology A](#)
- [PSY1020 Foundation Psychology B](#)
- [CSC1402](#)
- [CSC1401 Foundation Programming](#)
- [STA2300](#)
- [MAT1000 Mathematics Fundamentals](#)
- [BIO1101 Biology 1](#)^{^ §}
- [CHE1110 Chemistry 1](#)^{^ §}
- [PHY1104 Physics 1](#)
- [REN1201 Environmental Studies](#)
- [PHY1101 Astronomy 1](#)
- [BIO2103 Biology 2](#)[^]
- [CHE2120 Chemistry 2](#)[^]
- [PHY1911 Physics 2](#)
- [PHY1107 Astronomy 2](#)
- [CLI1110 Weather and Climate](#)
- [MAT1100 Foundation Mathematics](#)

[^] These courses have a compulsory residential school.

[§] [BIO1101](#) and [CHE1110](#) are prerequisites of [BIO2103](#) and [CHE2120](#); they must be studied first.

^{*} The number of units of credited towards the will depend on the courses studied and the major chosen in the .

Program completion requirements

To successfully complete the Diploma of Science Foundations students must successfully complete the four compulsory core courses, and also the four science foundation courses.

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 Science Foundations must complete the four compulsory courses first. [DIP1000](#) and [DIP1002](#) are co-requisites and must be taken first, and at the same time.

The recommended enrolment pattern for the four compulsory core courses 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	

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	
DIP1003 Essential Mathematics					1	1,2,3	
Plus the four Science courses referred to in the Program Structure.							

Diploma of Wine (DWIN) - DipWin

QTAC code (Australian and New Zealand applicants): External: 906445

	External
Start:	Semester 1 (February)
Fees:	Commonwealth supported place Domestic full fee paying place
Residential school:	Queensland College of Wine Tourism, Stanthorpe, Queensland
Standard duration:	1 year full-time or equivalent 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	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 will prepare students for careers in the grape growing, wine making or wine business sectors. This is a program providing students with the necessary skills and the knowledge of fundamental concepts in the wine science major.

Program objectives

On completion of this program graduates should be able to:

- display theoretical and technical knowledge of viticulture, wine production or wine business fundamentals;
- effectively apply relevant cognitive and technical skills associated with grape or wine production or wine business enterprise;
- communicate effectively using digital, verbal and written forums with industry and peers in order to transfer knowledge to a range of audiences;
- evaluate and apply a range of possible solutions to a variety of industry based scenarios;
- take responsibility for their own learning and make appropriate decisions in matters pertaining to their own safety and wellbeing;
- function effectively as a team member, including taking directions from others.

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:

- Have achieved a minimum Australian Tertiary Admission Rank (ATAR) of **61.5**, or equivalent qualification.[^]
- English Language Proficiency requirements for Category 2.

Applicants are advised to also note the following:

- [Assumed knowledge](#) expectations: English and General Mathematics 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](#).

Program structure

The Diploma of Wine consists of three core courses (one of 2-unit value delivered over semesters 1 and 2), and four of which are chosen from approved courses, depending on the minor being studied.

Required time limits

Students have a maximum of 3 years to complete this program.

Core courses

Core Course	Semester(s) Offered	Mode of Offer
WIN1101 Grape and Wine Production	S1	ONL
WIN2200 Viticultural and Winemaking Practice *	S1	EXT
WIN1102 Wine Production Skills * #	S1	EXT

Footnotes

- * Mandatory Residential School
Two unit course

Minor Studies

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:

- Grape Growing
- Wine Making
- Wine Business Management

Grape Growing minor: Approved course list

[WIN2210 Viticultural Principles and Production](#) and the choice of three (3) of the following approved courses (or as approved by the Program Director):

Courses	Semester(s) Offered	Mode of Offer
WIN2225 Wine Production Placement	S1, S2, S3	EXT
AGR2301 Agricultural Science	S2	ONC/ONL
BIO1810 Introduction to Food Science	S1	ONC/ONL
CHE1110 Chemistry 1 ^	S1	EXT/ONC
CHE2120 Chemistry 2 ^	S2	EXT/ONC
CLI1110 Weather and Climate	S1	ONC/ONL
REN1201 Environmental Studies	S1	ONC/ONL
REN2200 Ecology for Sustainability	S1	ONC/ONL

Footnotes

- ^ Highly Recommended Residential School

Wine Making minor: Approved course list

[WIN2220 Wine Production](#) and the choice of three (3) of the following approved courses (or as approved by the Program Director):

Courses	Semester(s) Offered	Mode of Offer
WIN2210 Viticultural Principles and Production	S2	ONL
WIN2225 Wine Production Placement	S1, S2, S3	EXT
BIO1810 Introduction to Food Science	S1	ONC/ONL
CHE1110 Chemistry 1 ^	S1	EXT/ONC
CHE2120 Chemistry 2 ^	S2	EXT/ONC

Footnotes

^ Highly Recommended Residential School

Wine Business Management minor: Approved course list

Choose four of the following approved courses (or as approved by the Program Director):

Courses	Semester(s) Offered	Mode of Offer
ACC1201 Data Insights and Financial Performance £	S1, S2 S1, S2	ONC ONL
ECO1002 Market Behaviour	S2 S2	ONC ONL
MKT1001 Marketing Fundamentals	S1 S1, S2	ONC ONL
WIN2210 Viticultural Principles and Production	S2	ONL
WIN2220 Wine Production	S2	ONL
WIN2225 Wine Production Placement	S1, S2, S3	EXT

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

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](#).

Highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Mandatory residential school (compulsory and has an associated pass/fail linked to the residential school attendance).

Core courses:

- [WIN1102 Wine Production Skills](#) (2 units)
- [WIN2200 Viticultural and Winemaking Practice](#)

Approved courses:

- [CHE1110 Chemistry 1](#)
- [CHE2120 Chemistry 2](#)

Articulation

Upon successful completion of the Diploma of Wine students have the opportunity to articulate directly into the [BSCI or BSCP Bachelor of Science or Bachelor of Science \(Psychology\)](#).

Students articulating into the UniSQ [BSCI or BSCP Bachelor of Science or Bachelor of Science \(Psychology\)](#) may be given exemptions for up to eight courses completed in the Diploma of Wine.

Credit

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

Recommended Enrolment Pattern - Full-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		
WIN1101 Grape and Wine Production					1	1		
WIN2200 Viticultural and Winemaking Practice			1	1			M	Co-requisite: WIN1101
WIN1102 Wine Production Skills [#]			1	1			M	
Course from Minor Approved List	1	2			1	2		
Course from Minor Approved List	1	2			1	2		
Course from Minor Approved List	1	2			1	2		
Course from Minor Approved List	1	2			1	2		

Footnotes

Two unit course

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								
WIN1101 Grape and Wine Production					1	1		
WIN2200 Viticultural and Winemaking Practice			1	1			M	Co-requisite: WIN1101
Course from Minor Approved List	1	2			1	2		
Course from Minor Approved List	1	2			1	2		
Year 2								
WIN1102 Wine Production Skills #			2	1			M	
Course from Minor Approved List	2	2			2	2		
Course from Minor Approved List	2	2			2	2		

Footnotes

Two unit course

Bachelor of Science or Bachelor of Science (Psychology) (BSClorBSCP) - BSc or BSci(Psychology)

QTAC code (Australian and New Zealand applicants): Mathematics & Statistics (Toowoomba campus: 906351; External: 906355); Wine Science (Toowoomba campus: 906115); Plant Agricultural Science (Toowoomba campus: 906991; External: 906995); Food Science (Toowoomba campus: 906981; External: 906985); Wildlife Management (Toowoomba campus: 907431; External: 907435); Information Technology (Toowoomba campus: 906791; External: 906795); Mathematics (Toowoomba campus: 906881; Online: 906885); Statistics (Toowoomba campus: 906201; External: 906205; Ipswich campus: 936201); Biology (Toowoomba campus: 906831; External: 906835); Environment & Sustainability (Toowoomba campus: 906261; External: 906265); Computing (Toowoomba campus: 906761; External: 906765); Physical Sciences (External: 906125); Astronomical & Space Sciences (External: 906665); Human Physiology (Toowoomba campus: 906821; External: 906825); Counselling (Toowoomba campus: 906551; External: 906555; Ipswich campus: 936551); Animal Science (Toowoomba campus: 906771; External: 906775)

CRICOS code (International applicants): 042230E

	On-campus**#^~&@^^	External*	Online†
Start:	Semester 1 (February) Semester 2 (July) Semester 3 (November)	Semester 1 (February) Semester 2 (July) Semester 3 (November)	Semester 1 (February) Semester 2 (July) Semester 3 (November)
Campus:	Ipswich, 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	Commonwealth supported place Domestic full fee paying place International full fee paying place
Residential school:		Toowoomba, Ipswich	
Standard duration:	3 years full-time, 6 years part-time, 9 years maximum		

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

- ** Information Technology major is available at UniSQ Toowoomba and Online. This major is available to international students residing off-campus in Australia or for international students studying overseas.
- # The BSCP —Psychology Extended major (16 units) is only available on campus at UniSQ Ipswich for a Semester 1 entry. Students can complete this extended major at other campuses through a mixture of on-campus and online courses. The BSCP Psychology major (12 units) is offered on campus at UniSQ Ipswich and Toowoomba and online.
- ^ Psychology and Psychology Extended are the only majors available at UniSQ Ipswich. Both majors are also offered at UniSQ Toowoomba. Psychology Extended major is also offered externally.
- ~ Mathematics and Statistics Extended, Computing, Geospatial Science, Mathematics and Statistics (8-unit), Environment and Sustainability majors are available at UniSQ Toowoomba and externally. These majors are available to international on-campus students as long as the student meets the on-campus requirement through minor/elective/2nd major courses. All majors are available to international students residing off-campus in Australia. These majors are unsuitable for international students studying overseas.
- & Wildlife Management, Biology, Food Science, Human Physiology, Plant Agricultural Science, Animal Science majors are available at UniSQ Toowoomba and externally, with residential schools held at UniSQ Toowoomba or off-site. These majors are available to international on-campus students as long as the student meets the on-campus requirement through minor/elective/2nd major courses. These majors are available to international students residing off-campus in Australia, however, there are attendance requirements at multiple residential schools held at UniSQ Toowoomba throughout the duration of the program. These majors are unsuitable for international students studying overseas.
- @ Not all majors are available to commence in Semester 3 at UniSQ Toowoomba.
- ^^ Please refer to the Program Structure for further information on the intakes available for each major and their appropriateness for International On-Campus Students.
- * Astronomical and Space Sciences, Physics and Wine Science majors are only offered by external mode. All majors are available to international students residing off-campus in Australia, however, there are attendance requirements at multiple residential schools held at UniSQ Toowoomba

throughout the duration of the programs. The residential schools for the Wine Science majors are held off-site at Stanthorpe. These majors are unsuitable for international students studying overseas.

† Psychology and Information Technology majors are the only majors offered Online.

Contact us

Future Australian and New Zealand students	Future International students	Current students
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Professional accreditation

The Information Technology major of this program is accredited at professional level by the [Australian Computer Society](#) and, through the Seoul Accord, is recognised in other countries.

The Bachelor of Science (Psychology and Psychology Extended) (BSCP) majors are fully accredited by the [Australian Psychology Accreditation Council](#) as providing the first three years of the necessary requirements for full registration as a psychologist.

Program aims

Program Rules

Students are required to:

- Satisfactorily complete 24 credit points (total units) as listed in the program structure in order to graduate from the program. At least four units will be at level 3 and 16 units will be approved Science courses;
- Complete the courses in the program satisfactorily within 9 years of commencement of the program;
- Maintain satisfactory academic achievement throughout the duration of the program, consistent with the UniSQ Student Academic Progress Procedure
- Meet all mandatory residential school requirements where present in a course.
- Meet the [Inherent Requirements](#) for the relevant major.

Program objectives

On completion of this program students should be able to:

- Exhibit a broad and coherent knowledge base, with a level of depth in one or more science disciplines, suitable to undertake professional work and/or further study.
- Apply a range of cognitive and technical skills which reflect the underlying principles of one or more science disciplines.
- Display well developed cognitive, technical and communication skills to select and apply relevant methods and technologies and present information to a range of audiences.
- Critically analyse, consolidate and evaluate information to construct and implement solutions to unpredictable and complex problems.
- Work autonomously and collaboratively to construct and implement problem solving paradigms to address relevant issues.
- Apply well directed judgement and responsibility, in diverse contexts, which are consistent with the social, moral and legal responsibilities of professional scientists.

Admission requirements

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

- The specified minimum entry requirement as determined by Australian Tertiary Admission Rank (ATAR), or equivalent qualification.[^]
- English Language Proficiency requirements for Category 2.

Additional pre-requisites and recommended prior study for individual majors

Animal Science (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.

Astronomical and Space Sciences (12 unit major)

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

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: One of Biology, Chemistry or Physics or equivalent.

Biology (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent.
If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

Computing (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods* or equivalent.

* UniSQ College has courses available via [Tertiary Preparation Program](#) which will allow students to up-skill in Mathematics prior to entry.

Environment and Sustainability (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent.
If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

Food Science (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.

- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent. If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

Geospatial Science (8 unit major)

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

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended: Biology, Chemistry, Physics or Equivalent (3 & 4, C)

Human Physiology (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent. If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

Information Technology (12 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended Prior Study: Mathematical Methods * or equivalent.

* UniSQ College has courses available via [Tertiary Preparation Program](#) which will allow students to up-skill in Mathematics prior to entry.

Mathematics and Statistics (8 unit major)

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

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.

Mathematics and Statistics Extended (12 unit major)

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

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.

Physics (8 unit major)

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

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: One of Biology, Chemistry or Physics or equivalent.

Plant Agricultural Science (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.

- Recommended Prior Study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent. If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

BSCP - Psychology (12 unit major)

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English; General Mathematics or equivalent.

BSCP - Psychology Extended (16 unit major)

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English; General Mathematics or equivalent.

Wildlife Management (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent. If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

Wine Science (8 unit major)

Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- [Assumed knowledge](#) expectations: English.
- Recommended prior study: Mathematical Methods and one of Biology, Chemistry or Physics or equivalent. If students do not have the recommended Mathematical Methods Level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

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.

Requirements for professional experience placements

Practical experience is an integral component of the Wildlife Management major and each student is required to undertake and satisfactorily complete 105 hours of practical experience.

Progression into practical courses is dependent upon a pass grade in theoretical and other practical courses which have been set as prerequisites.

Applicants must be willing to undertake and submit the University of Southern Queensland requirements for practical placement.

Please refer to the applicable Professional Placement Handbook for Wildlife Management students.

Mandatory documents required prior to commencing industry placement:

- Resume
- UniSQ Student Declaration
- UniSQ Placement Request Form
- Vaccinations for Q fever, Tetanus and Hepatitis B

Requirements for Work-Integrated-Learning courses

Practical experience is an integral component of the Bachelor of Science and each student is required to undertake and satisfactorily complete 15-30 days of practical experience (depending on major).

In order to enrol in [SCI3302 Work-Integrated-Learning](#), students must have completed the equivalent of the first two years of study in the program successfully.

Applicants must be willing to undertake and submit the University of Southern Queensland requirements for practical placement.

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

Major	On-campus Toowoomba Intake			On-campus Ipswich Intake			External Intake			Online Intake		
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
BSCP - Psychology Extended (16-unit major)	Yes *	Yes *	Yes *	Yes *	Yes *	Yes *	Yes	Yes	Yes			

Maths and Statistics Extended (12-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Maths and Statistics (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Information Technology (12-unit major)	Yes *	Yes *	Yes *							Yes	Yes	Yes
Computing (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Astronomy and Space Sciences (12-unit major)							Yes	Yes	Yes			
Physics (8-unit major)							Yes	Yes	Yes			
BSCP - Psychology (12-unit major)	Yes *	Yes *	Yes *	Yes *	Yes *	Yes *				Yes	Yes	Yes
Animal Science (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Biology (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Environment and Sustainability (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Food Science (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			

Geospatial Science (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Human Physiology (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Plant Agricultural Science (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Wildlife Management (8-unit major)	Yes *	Yes *	Yes *				Yes	Yes	Yes			
Wine Science (8-unit major)							Yes	Yes	Yes			

Footnotes

* This major and intake is available to International On-Campus Students.

The Bachelor of Science consists of 24 units comprising 4 core unit courses, with a primary major of minimum 8 units, and 12 units of approved student selected courses.

At least four courses in the program will be at level 3. Each major will require a minimum number of level 3 courses (coded 3000) to meet the depth requirements of the major. Where two majors are chosen which have some compulsory courses in common, the overlap will be made up by taking extra major approved courses defined in those majors.

Area of Study	Number of Units
Option 1	
Core Courses	4 units
8–unit primary major:	8 units
<ul style="list-style-type: none"> • Animal Science • Biology • Computing • Environment and Sustainability • Food Science • Geospatial Science • Human Physiology • Mathematics and Statistics • Physics • Plant Agricultural Science • Wine Science • Wildlife Management 	

Plus one of the following options: <ul style="list-style-type: none"> • 8-unit secondary major + 4 electives; or • 2 x 4-unit discipline minors + 4 electives; or • 1 x 4-unit discipline minor and 1 x 4-unit University minor + 4 electives; or • 1 x 4-unit discipline minor and 4 x electives + 4 electives; or • 12 approved electives. 	12 units
OR	
Option 2	
Core Courses	4 units
12-unit extended major <ul style="list-style-type: none"> • Astronomical and Space Sciences • Mathematics and Statistics Extended • Information Technology Or 12-unit standalone major <ul style="list-style-type: none"> • Psychology 	12 units
Plus one of the following options: <ul style="list-style-type: none"> • 8-unit secondary major; or* • 2 x 4-unit discipline minors; or • 1 x 4-unit discipline minor and 1 x 4-unit University minor; or • 1 x 4-unit discipline minor and 4 x electives; or • 8 x electives <p>* Certain double major combinations may not be available. Refer to individual major requirements for further information.</p>	8 units
Or	
Option 3	
Core Courses	4 units
16 unit major <ul style="list-style-type: none"> • Psychology Extended 	16 units
Plus <ul style="list-style-type: none"> • 4 x electives 	4 units

Required time limits

Students have a maximum of 9 years to complete this program.

Core courses

All students must take the following core courses in the following recommended year and semester. Exceptions apply to the following externally accredited majors: Psychology, Psychology Extended and Information Technology.

The recommended enrolment pattern is for full-time students. Part-time students should aim to take the year 1 courses in their first year of enrolment, and should take the final year core course in their last year of study.

Course Name and Code	Semester(s) offered Toowoomba	Semester(s) offered Springfield	Semester(s) offered Ipswich	Semester(s) offered External	Semester(s) offered Online
CMS1100 Communicating in the Sciences	1				1,2
SCI1001 Succeeding in Science	1,2				1,2
STA1003 Fundamental Statistics [§]	1,2	2			1,2,3
SCI3302 Work-Integrated Learning	1,2,3			1,2,3	

Footnotes

§ Unavailable online in S3 2023

Core Course for Accredited Majors

The following accredited majors have the following Core course requirements:

Course Name and Code	Semester(s) offered Toowoomba	Semester(s) offered Springfield	Semester(s) offered Online
Information Technology			
CMS1100 Communicating in the Sciences	1		1,2
CSC1401 Foundation Programming [£]	1,2,3	1,2	1,2,3
STA1003 Fundamental Statistics [§]	1,2	2	1,2,3
MAT1101 Discrete Mathematics for Computing	1	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

§ Unavailable online in S3 2023

Course Name and Code	Semester(s) offered Toowoomba	Semester(s) offered Springfield	Semester(s) offered Ipswich	Semester(s) offered Online
Psychology and Psychology Extended				

CMS1000 Communication and Scholarship (final offer Semester 1 2023) or HAC1000 The Skilful Communicator (first offer Semester 2 2023) [£]	2	2		2
SCI1001 Succeeding in Science	1,2,3	1,2		1,2,3
STA1003 Fundamental Statistics [§]	1,2	2		1,2,3
PSY1030 Cross-Cultural and Indigenous Psychology	1	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

§ Unavailable online in S3 2023

Major studies

The following majors are available in the Bachelor of Science:

16-unit major (contain at least four Level 3 courses)

- BSCP - Psychology Extended

12-unit majors/extended major (contain at least three Level 3 courses - identified by a 3000 code)

- Astronomical and Space Sciences
- Information Technology
- Mathematics & Statistics Extended
- BSCP - Psychology

8-unit majors (contain at least two Level 3 courses - identified by a 3000 code)

- Animal Science
- Biology
- Computing
- Environment and Sustainability
- Food Science
- Geospatial Science
- Human Physiology
- Mathematics and Statistics
- Physics
- Plant Agricultural Science
- Wildlife Management
- Wine Science

BSCP - Psychology Extended (16-unit major)

Psychology Extended major objectives

The Bachelor of Science (Psychology Extended) (BSCP) program aims to produce graduates who have advanced knowledge and skills in psychology. Participation in the capstone experience will provide students with the acquired ability to research independently, apply theory and develop academic expertise in their chosen focus of area in psychology. The Program will extend student's appreciation of the contributions made by psychologists to society.

Many people who study psychology will not go on to become psychologists, but will find their training in psychology to be highly relevant and useful in their lives and work. Those who do become psychologists may work in a variety of settings including hospitals, schools, government bodies, large corporations, or in private practice. The BSCP - Psychology Extended major will provide students with a broader knowledge of psychology-related knowledge and skills, which more than satisfy the minimum requirements for affiliate membership of relevant professional bodies, most notably the Australian Psychological Society.

Graduates who have completed the Extended major in Psychology (BSCP) will be able to:

- apply knowledge of the breadth and depth of the major fields in contemporary Psychology to describe and explain human behaviour in multiple contexts:
- systematically apply this knowledge in specific contexts such as mental health (clinical psychology), the workplace (organisational psychology), legal settings (law and psychology), education or sport psychology.
- conduct research and report the findings to lay persons and the scientific community at large
- prepare and develop a portfolio, which documents learning of identified outcomes and reflections of metacognitive processes
- develop a broad range of skills, which are suited to occupations requiring the study or application of behavioural science in both the public and private sector

BSCP - Psychology Extended Major Courses

This is a 16-unit extended major. Along with the Foundation Studies courses prescribed above, students must take the following 16 units of courses:

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Ipswich	Semester(s) Offered External	Semester(s) Offered Online
PSY1010 Foundation Psychology A	1	1		1,3
PSY1020 Foundation Psychology B	2	2		1,2
PSY2010 Social Processes of Behaviour	1	1		1
PSY2020 Motivation and Emotion	1	1		1
PSY2030 Developmental Psychology	2	2		2
PSY2040 Human Information Processing	2	2		2
PSY2100 Research Methods in Psychology A	1	1		1
PSY3010 Assessment of Behaviour	1	1		1
PSY3030 Abnormal Psychology	1	1		1
PSY3050 Counselling Psychology^{\$}	2	2		2
PSY3060 Learning and Behaviour Change	1	1		1
PSY3111 Research Methods in Psychology B^{^^}	2	2		2
PSY3180 Practicum A			1	
PSY3190 Practicum B			2	

Two third-year level courses from the below list of psychology approved courses				
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Footnotes

\$ Not available ONC Toowoomba in S2 2023

^^ Not available ONC Toowoomba or ONC Ipswich in S2 2023

To complete the award, students taking a 16-unit extended major must additionally undertake one of the following choices:

- 4 units of general elective courses; these can be selected from the list of psychology approved courses, or from any discipline, and may be at any year level, or
- one 4-unit minor.

Minor studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives can be selected from the table of psychology approved courses below or from any courses at Levels 1, 2 and 3 offered by UniSQ subject to satisfaction of pre-requisite requirements, timetabling constraints, quotas, and program requirements. Please note that Diploma of Science Foundation core courses are not permitted as electives.

Unsuitable electives

For various reasons, the following courses will not be approved as electives for students majoring in Psychology in the Bachelor of Science (BSCP) program:

[DIP1002 Strategies for Successful Study](#), [DIP1003 Essential Mathematics](#) and [DIP1004 Mathematical Literacy](#).

Psychology Extended (BSCP) approved elective courses

Courses	Semester(s) Offered Online
PSY3110 Clinical Health Psychology	2
PSY3250 Sport and Exercise Psychology	2
PSY3730 Industrial and Organisational Psychology	1

Note: The psychology approved courses offered can change from year to year. For information about which psychology approved courses are being offered in any particular year, students are directed to the course specification site for that particular year. Students are responsible for ensuring that they do not enrol in, or continue to be enrolled in, courses for which they have not satisfied the enrolment requirements (e.g., the necessary pre-requisites).

The recommended enrolment patterns for students with no exemptions, and the enrolment requirements for courses in the extended major, is given in the table that follows. If students are granted exemptions from specific compulsory courses or from approved elective courses, they may need to modify the recommended enrolment pattern.

Mathematics and Statistics Extended (12-unit major)

Mathematics and Statistics Extended Major Objectives

Graduates who have completed the major in Mathematics and Statistics will be able to:

- understand fundamentals of mathematical analysis at the undergraduate level
- show a sound knowledge of important theories and techniques of applied mathematics, statistics and computing

- apply their knowledge to solve practical problems that they are likely to encounter in science, industry, business or government instrumentalities
- continue to develop their abilities through research, discussion and private study
- use computer packages to solve problems in statistics, mathematics and modelling
- communicate the results of mathematical/statistical analysis to wide variety of audiences
- satisfy the minimum requirements for graduate membership of relevant professional bodies.

Mathematics and Statistics Extended Major Courses

This is a 12-unit extended major. This major extends the Mathematics and Statistics (8 unit) major. Along with the Core courses prescribed above, students must take the 12 units of Mathematics and Statistics major courses. If students do not have Mathematical Methods prior to commencement, students should seek guidance from the Program Director.

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Online
Mathematics and Statistics core major courses		
MAT1102 Algebra and Calculus I	1	1
STA2301 Distribution Theory	1	1
MAT2100 Algebra and Calculus II	2	2
STA2302 Statistical Inference	2	2
MAT2200 Operations Research 1	2	2
MAT2409 High Performance Numerical Computing[†]	1	1
STA3300 Experimental Design	1	1
STA3301 Statistical Models^{>}	2	2
MAT3201 Operations Research 2^{*†}	1	1
MAT3103 Mathematical Modelling and Dynamical Systems^{**}	2	2
MAT3105 Harmony of Partial Differential Equations^{**}	1	1
STA3200 Multivariate Statistical Methods		1

Footnotes

[†] Unavailable on-campus at Toowoomba in S1 2023

[>] Unavailable Semester 2, 2023 Toowoomba On-campus

^{*} The on-campus offering of this course is offered in odd years only.

^{**} The on-campus offering of this course is offered in even years only.

Note: Students who are enrolled in the 12-unit Mathematics and Statistics Extended major cannot also enrol in the 8-unit Mathematics and Statistics major.

Electives

The following courses are recommended electives for this major:

- [CSC1401 Foundation Programming[£]](#)
- [MAT1101 Discrete Mathematics for Computing](#)

[£] 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

Unsuitable electives

Students will require the approval of the Faculty of Health, Engineering and Sciences if they wish to include [MAT1000 Mathematics Fundamentals](#), [MAT1100 Foundation Mathematics](#) and [ENM1500 Introductory Engineering Mathematics](#), as electives towards the Bachelor of Science program majoring in Mathematics and Statistics Extended.

Mathematics and Statistics (8-unit major)

Mathematics and Statistics Major Objectives

Graduates who have completed the major in Mathematics and Statistics will be able to:

- understand fundamentals of mathematical and statistical analysis at the undergraduate level;
- show a sound knowledge of important theories and techniques of applied mathematics and statistics;
- apply their knowledge to solve practical problems that they are likely to encounter in science, industry, business or government instrumentalities;
- continue to develop their abilities through research, discussion and private study;
- use computer packages to solve and analyse mathematical and statistical problems;
- apply mathematical and statistical techniques to model and optimise systems;
- communicate the results of mathematical and statistical analysis to wide variety of audiences;
- satisfy the minimum requirements for graduate membership of relevant professional bodies.

Mathematics and Statistics Major Courses

If students do not have the equivalent of Mathematical Methods experience prior to commencement of this major, students should seek guidance from the Program Director.

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Online
MAT1102 Algebra and Calculus I	1	1
MAT2409 High Performance Numerical Computing [†]	1	1
MAT2200 Operations Research 1	2	2
MAT2100 Algebra and Calculus II	2	2
STA2301 Distribution Theory	1	1
STA3300 Experimental Design	1	1
STA3301 Statistical Models ^{>}	2	2
STA3200 Multivariate Statistical Methods		1

Footnotes

[†] Unavailable on-campus at Toowoomba in S1 2023

[>] Unavailable Semester 2, 2023 Toowoomba On-campus

Note: If enrolled in this 8-unit Mathematics and Statistics major, students cannot also enrol in the 12-unit Mathematics and Statistics Extended major.

Second major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science (except Mathematics and Statistics Extended,) or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

Minor studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

The following courses are recommended electives for this major:

- [CSC1401 Foundation Programming](#)[£]
- [MAT1101 Discrete Mathematics for Computing](#)

[£] 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

General electives are courses chosen from other Level 1, 2 or 3 courses in the University.

Unsuitable electives

Students will require the approval of the Faculty of Health, Engineering and Sciences if they wish to include [MAT1000 Mathematics Fundamentals](#), [MAT1100 Foundation Mathematics](#), [ENM1500 Introductory Engineering Mathematics](#), and [MAC2901 Mathematics for Teachers](#) as electives towards the Bachelor of Science program majoring in Mathematics and Statistics.

Information Technology (12-unit major)

Information Technology Major Objectives

Graduates who have completed the major in Information Technology will be able to:

- work as a professional in the Information Technology industry
- show a sound understanding of the computing and IT-related areas
- have a broad knowledge in computing and digital data analytics
- have basic skills in software development, web design and computer applications systems
- show sound presentation and communication skills required in the computing industry
- satisfy academic admission requirements for membership of relevant professional bodies.

Information Technology Major Courses

This is a 12-unit extended major. This major extends the Computing major. This major is externally accredited by the Australian Computer Society.

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Springfield	Semester(s) Offered Online
ELE1301 Computer Engineering	1	1	1
CSC2401 Algorithms and Data Structures	2		2
CIS1000 Digital Disruption[£]	1, 2	1,2,3	1,2
CSC2402 Object-Oriented Programming in C++	1		1
CSC2408 Software Development Tools	1, 2	1,2	1,2
CSC3412 System and Security Administration	1	1	1
CSC2406 Web Technology 1	2	2	2
CSC3426 Web Technology 2[*]	2		2
CIS2000 Systems Analysis and Design[#]	1	N/A	1,2
OR	Or	Or	Or
CSC1410 Software Engineering Foundations[#]	2	2	2
CIS3002 Agile Methods	1	1	1,2
CSC3600 ICT Professional Project	1,2	1,2	1,2
One (1) of the following courses :			
CSC3420 Mobile Internet Technology	1	1	1
CSC2404 Operating Systems	2	2	2
CSC1410 Software Engineering Foundations	2	2	2
CSC3400 Database Systems[£]	1	1	1,3
CSC3403 Comparative Programming Languages	1		1
CSC3502 Principles of Big Data Management	2	2	2
CSC3413 Network Design and Analysis	2	2	2
CSC3427 Switching, Wireless and WAN Technologies	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 will need to complete [CSC2406](#) prior to enrolling in [CSC3426](#).

Students select from either [CIS2000 Systems Analysis and Design](#) or [CSC1410 Software Engineering Foundations](#), students should not complete both courses.

Note: Students who are enrolled in the 12-unit Information Technology major cannot also enrol in the 8-unit Computing major.

Students should also use the following table to select appropriate extended courses with the appropriate introductory, intermediate and advanced courses to focus on the different streams available in the major.

Computing/IT Streams	Foundational Courses per stream	Computing Major Intermediate Courses	Computing Major Advanced Courses	Extended major (Information Technology)
Software	CSC1401 Foundation Programming [£]	CSC1410 Software Engineering Foundations CSC2408 Software Development Tools	CIS3002 Agile Methods CSC3412 System and Security Administration CSC3403 Comparative Programming Languages	CSC3600 ICT Professional Project CSC3413 Network Design and Analysis
Networking			CSC3502 Principles of Big Data Management	CSC3426 Web Technology 2
Database			CSC3400 Database Systems [£]	CSC3502 Principles of Big Data Management
Web Technology		CSC2406 Web Technology 1	CSC3426 Web Technology 2	
Data Science	CSC1401 Foundation Programming [£] STA1003 Fundamental Statistics		STA3200 Multivariate Statistical Methods CSC3501 Principles of Data Science and Visualisation	

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

Second Major

Second majors can be chosen from any of the eight-unit majors defined below for the Bachelor of Science (except Computing) or, with the approval of the Faculty of Health, Engineering and Sciences, from other approved eight-unit majors from other undergraduate programs in the University. Majors in the [BITC Bachelor of Information Technology](#) are not suitable as a secondary major.

Computing (8-unit major)

Computing Major Objectives

Graduates who have completed the major in Computing will be able to:

- receive a broad-based education in sciences;
- study computing discipline area to Third Level;
- prepare students for teaching in discipline appropriate areas to Grade 12 level in Secondary Schools, subject to further study;

- cater for students who aspire to professional studies that require a general first degree for admission to computing industry;
- form a basis for study at postgraduate diploma level, honours level or higher.

Computing Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Springfield	Semester(s) Offered Online
ELE1301 Computer Engineering	1	1	1
CSC2406 Web Technology 1	2	2	2
CSC1410 Software Engineering Foundations	2	2	2
CSC2408 Software Development Tools	1, 2	1,2	1,2
CIS3002 Agile Methods	1	1	1,2
CSC3400 Database Systems[£]	1	1	1,3
CSC3412 System and Security Administration	1	1	1
CSC3426 Web Technology 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

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

The following courses are recommended electives for this major:

- [CSC1401 Foundation Programming[£]](#)
- [MAT1101 Discrete Mathematics for Computing](#)

£ 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

General electives are courses chosen from other Level 1, 2 or 3 courses in the University.

Unsuitable Electives

For various reasons, the following course will not be approved as an elective for students majoring in Computing in the Bachelor of Science program:

- [CIS2000 Systems Analysis and Design](#).

Astronomical and Space Sciences (12-unit major)

Astronomical and Space Sciences Major Objectives

- demonstrate understanding of key astronomical concepts and solve related key numerical problems;
- use the tools (including mathematics), methodologies, language and conventions of astronomy to test and communicate ideas and explanations;
- execute and analyse the results of observations, including the evaluation of the level of uncertainty of these results, a comparison of these results with expected outcomes, and, hence, an assessment of their significance;

- communicate scientific information, in particular through scientific reports, to both expert and non-expert audiences;
- demonstrate understanding of key concepts relating to humanity's exploration and use of outer space and solve related key numerical problems.

Astronomical and Space Sciences Major Courses

This is a 12-unit extended major. Along with the Core courses prescribed above, students must take the following 12 units of courses:

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
PHY1101 Astronomy 1	1		1
PHY1104 Physics 1	1		1
PHY1107 Astronomy 2	2		2
PHY1911 Physics 2	2		2
PHY2207 Optics			2
PHY3303 Modern Physics*		1	
PHY3304 Photonics*		2	
PHY3305 Quantum Mechanics			1
PHY3306 Solar and Stellar Astronomy			1
PHY3307 Galactic and Extragalactic Astronomy			2
Choose 2 of the following 3 courses:			
PHY2206 Medical Physics			2
PHY2204 Astronomical Techniques			1
PHY2208 Planetary and Exoplanetary Science			2

Footnotes

* This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

Recommended Courses to support the Astronomical and Space Science major to be taken as electives or part of a Minor:

- [CSC1401 Foundation Programming](#)[£]
- [MAT1102 Algebra and Calculus I](#)^{*}
- [MAT2100 Algebra and Calculus II](#)^{*}

£ 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

* These courses are co-requisites for required courses [PHY1104 Physics 1](#) and [PHY1911 Physics 2](#)

For students considering post-graduate study in physics or astronomy, the following courses are highly recommended:

- [CSC1401 Foundation Programming](#)[£]
- [MAT2409 High Performance Numerical Computing](#)
- [SCI3301 Science Project](#)
- [MAT3103 Mathematical Modelling and Dynamical Systems](#)
- [MAT3105 Harmony of Partial Differential Equations](#)

£ 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

Physics (8-unit major)

Physics Major Objectives

- comprehend and demonstrate knowledge of physics laws, concepts and principles;
- apply physics principles to understand the causes of problems, devise strategies to solve them and test the possible solutions;
- use the tools (including mathematics), methodologies, language and conventions of physics to test and communicate ideas and explanations;
- safely execute and analyse the results of experiments, including the evaluation of the level of uncertainty of these results, a comparison of these results with expected outcomes, and, hence, an assessment of their significance;
- communicate scientific information, in particular through scientific reports, to both expert and non-expert audiences.

Physics Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
PHY1104 Physics 1	1		1
PHY1911 Physics 2	2		2
PHY2207 Optics			2
PHY3303 Modern Physics*		1	
PHY3304 Photonics**		2	
PHY3305 Quantum Mechanics			1
Choose two (2) from the following 3 courses:			
PHY2204 Astronomical Techniques			1
PHY2206 Medical Physics			2
PHY2208 Planetary and Exoplanetary Science			2

Footnotes

* This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Students who have completed PHYS313 through UNE are unable to enrol in [PHY3304](#).

Second Major

A second major can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

The following courses are recommended electives for this major:

- [CSC1401 Foundation Programming](#)£

- [MAT1102 Algebra and Calculus I](#)*
- [MAT2100 Algebra and Calculus II](#)*

£ 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

* These courses are co-requisites for required courses [PHY1104 Physics 1](#) and [PHY1911 Physics 2](#)

For students considering post-graduate study in physics or astronomy, the following courses are highly recommended:

- [MAT2409 High Performance Numerical Computing](#)
- [SCI3301 Science Project](#)
- [MAT3103 Mathematical Modelling and Dynamical Systems](#)
- [MAT3105 Harmony of Partial Differential Equations](#)

BSCP - Psychology (12-unit major)

Psychology Major Objectives

Graduates who have completed the major in Psychology will be able to:

- demonstrate a sound understanding of the scope and focus of the major fields in contemporary Psychology
- gain employment in the public and private sectors as behavioural science graduates or as graduates with a broad range of skills
- satisfy the minimum requirements for affiliate membership of relevant professional bodies, most notably the Australian Psychological Society
- conduct research and report the findings to lay persons and the scientific community at large.

BSCP - Psychology Major Courses

This is a 12-unit major. This major is externally accredited by the Australian Psychology Accreditation Council. Along with the Core courses prescribed above, students must take the following 12 units of courses:

Courses	Semester(s) Offered Toowoomb	Semester(s) Offered Ipswich	Semester(s) Offered Online
PSY1010 Foundation Psychology A	1	1	1,3
PSY1020 Foundation Psychology B	2	2	1,2
PSY2010 Social Processes of Behaviour	1	1	1
PSY2020 Motivation and Emotion	1	1	1
PSY2030 Developmental Psychology	2	2	2
PSY2040 Human Information Processing <	2	2	2
PSY2100 Research Methods in Psychology A	1	1	1
PSY3010 Assessment of Behaviour	1	1	1
PSY3030 Abnormal Psychology	1	1	1
PSY3050 Counselling Psychology \$	2	2	2
PSY3060 Learning and Behaviour Change	1	1	1
PSY3111 Research Methods in Psychology B ^^	2	2	2

Footnotes

< Not available ONC Ipswich in S2 2023

\$ Not available ONC Toowoomba in S2 2023

^^ Not available ONC Toowoomba or ONC Ipswich in S2 2023

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science, or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

The double major Psychology (BSCP) and Human Physiology, will provide an appreciation of the connections between psychological and physiological aspects of human health and is highly recommended by the Faculty of Health, Engineering and Sciences.

Other majors in the University which have been taken as a second major with psychology include

- Human Resource Management within the [Bachelor of Business ..](#)
- Management and Leadership within the [Bachelor of Business ..](#)
- Business Administration within the [Bachelor of Business ..](#)
- Anthropology within the [Bachelor of Arts](#)
- History within the [Bachelor of Arts](#)
- English Literature within the [Bachelor of Arts](#)

Students intending to take a second major should begin enrolment in these courses in the first year of full-time enrolment, or the second year of part-time enrolment.

Minor Studies

A minor in Counselling is a recommended complimentary field of study to the Psychology major. Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives can be selected from the table of psychology approved courses below or from any courses at Levels 1, 2 and 3 offered by UniSQ subject to satisfaction of pre-requisite requirements, timetabling constraints, quotas and program requirements. Please note that Diploma of Science Foundation core courses are not permitted as electives.

Unsuitable Electives

For various reasons, the following courses will not be approved as electives for students majoring in Psychology in the Bachelor of Science (BSCP) program:

[DIP1002 Strategies for Successful Study](#), [DIP1003 Essential Mathematics](#) and [DIP1004 Mathematical Literacy](#).

Psychology Approved Courses

Courses	Semester(s) Offered Online	Semester(s) Offered External
PSY3110 Clinical Health Psychology	2	
PSY3250 Sport and Exercise Psychology	2	
PSY3730 Industrial and Organisational Psychology	1	
PSY3180 Practicum A **		1
PSY3190 Practicum B ***		2

Footnotes

** Not available ONC Ipswich S1 2023

*** Not available ONC Ipswich S2 2023

Note: The psychology approved courses offered changes from year to year. For information about what psychology approved courses are being offered in any particular year students are directed to the course specification site for that particular year. Students are responsible for ensuring that they do not enrol in, or continue to be enrolled in, courses for which they have not satisfied the enrolment requirements (e.g., the necessary pre-requisites).

Animal Science (8-unit major)

Animals Sciences Major Objectives

Graduates who have completed the major in Animal Science will be able to:

- demonstrate discipline specific expertise in animal science, suitable to undertake professional work and/or further study now and/or into the future;
- exhibit competence in a range of cognitive and technical skills related to animal science including animal nutrition, animal reproduction, animal health, welfare, behaviour, husbandry, and management across a range of different species including production animals;
- communicate effectively across a diverse range of stakeholders using oral, written and technology-based approaches and work effectively across multidisciplinary teams within the animal and agricultural production sectors;
- work autonomously and collaboratively to critically analyse and evaluate information to construct and implement solutions to unpredictable and complex problems facing animal systems today;
- demonstrate an appreciation for the environmental, demographic, logistical, economic, and global pressures facing animal production systems today and how the use of technology may be applied to ensure economic and environmental sustainability;
- apply well directed ethical conduct in their professional practice as animal scientists, demonstrating knowledge of the regulatory frameworks relevant to their disciplinary area and how these can be applied within diverse cultural contexts, when identifying and responding to ethical and social issues.

Animal Science Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
AGR1101 Animal Health, Welfare and Behaviour *	1	1	
AGR2201 Animal Production Systems *	1	1	
AGR3202 Animal Reproduction *	1	1	
AGR2203 Animal Nutrition *	2	2	
AGR2301 Agricultural Science ^	2		2
AGR3302 Sensors and Technology in Animal Production	2	2	
BIO2103 Biology 2 *	2	2	
BIO2219 Genetics	2		2

Footnotes

* This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

^ Students undertaking a double major with Plant Agricultural Science should take [AGR1104 Farm Safety and Operations 1](#) (0.5 unit course) and [AGR2104 Farm Safety and Operations 2](#) (0.5 unit course) instead of [AGR2301 Agricultural Science](#) to complete this major.

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

A double major in Animal Science and Plant Agricultural Science will provide graduates with a well-rounded degree in agricultural science, equipping them with the skills and knowledge to take on a future career within the agricultural sector. This combination is particularly relevant to students seeking a future career as animal/agricultural scientists, farm managers, nutritionist, or agronomists.

A double major in Animal Science and Environment and Sustainability will provide graduates with the skills and knowledge to combat the present and future challenges of a growing agricultural sector. This combination is particularly relevant to students seeking a future career in any facet of the animal production sector.

A double major in Animal Science and Food Science will provide graduates with the skills and knowledge to combat the present and future challenges facing food security, processing, and production. This combination

is particularly relevant to students seeking a future career in the animal nutrition and food production sectors, such as animal feed product development and quality assurance.

A double major in Animal Science and Wildlife Management will provide graduates with the skills and knowledge to traverse a career within the animal management and conservation domains. This combination is particularly relevant to students seeking a career in animal/vertebrate pest management, biosecurity, or captive wildlife husbandry.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Biology (8-unit major)

Biology Major Objectives

Graduates who have completed the major in Biology will be able to:

- demonstrate more than a basic competence in biological and chemistry laboratory skills;
- exhibit a broad knowledge of the major biological disciplines including microbiology, biochemistry, genetics, environmental science, physiology and cell and molecular biology;
- appreciate the importance of the theory and techniques of cell and molecular biology to the research and diagnostic spheres;
- demonstrate a detailed knowledge of major environmental issues and apply this knowledge towards more sustainable environmental and resource management;

Biology Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
BIO1101 Biology 1 *	1	1	
BIO2103 Biology 2 #	2	2	
BIO2107 Cell and Molecular Biology 1 #	1	1	
BIO3318 Plant Microbe Interactions #	2	2	
BIO3207 Cell and Molecular Biology 2 #	2	2	
CHE1110 Chemistry 1 *	1	1	
BIO2219 Genetics	2		2
CHE2120 Chemistry 2 *	2	2	

Footnotes

* This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Program Director, from other eight-unit majors from other undergraduate programs in the University.

A double major in Animal Science and Biology will provide graduates with a well-rounded degree in animal biology, equipping them with the skills and knowledge to take on a future career as an animal scientist and provide them with a good grounding in laboratory skills to take on further postgraduate study in areas such as molecular biology, biochemistry, genetics, microbiology, and physiology. This combination is particularly relevant to students seeking a future career in the medical/veterinary field as an animal research officer, technical officer or research scientists.

A double major in Plant Agricultural Science and Biology will provide graduates with a well-rounded degree in plant biology, equipping them with the skills and knowledge to take on a future career as a plant scientist and provide them with a good grounding in laboratory skills to take on further postgraduate study in areas such as molecular biology, biochemistry, and genetics. This combination is particularly relevant to students seeking a future career in the field of plant breeding as a laboratory research officer, technical officer, or agricultural scientists.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

Any course not undertaken within the major structure is a recommended elective. General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Environment and Sustainability (8-unit major)

Environment and Sustainability Major Objectives

Graduates who have completed the major in Environment and Sustainability will be able to:

- demonstrate more than a basic competence in climatology, physics, statistics and mathematics, environmental science, ecology and conservation, natural resource management and sustainability
- demonstrate a detailed knowledge of major environmental issues, human impacts and key climate mechanisms and apply this knowledge towards more sustainable environmental and resource management
- have a sound comprehension of the social, political and environmental implications of human impacts and global environmental changes
- apply the principles of sustainability in a wide diversity of professional opportunities

Environment and Sustainability Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Springfield	Semester(s) Offered Online
REN1201 Environmental Studies⁺	1	1	1
REN2200 Ecology for Sustainability	1		1
REN3301 Biodiversity and Conservation	2		2
REN3302 Sustainable Resource Use	2		2
CLI1110 Weather and Climate	1		1
CLI2201 Climate Change and Variability			2

CLI3301 Climate and Environment Risk Assessment			1
CLI3302 Adaptation to Climate Change			2

Footnotes

+ The Springfield on-campus offer is not available in 2023.

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

There are a number of other courses, minors and majors with a focus on sustainability that students may wish to study.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. It is recommended that students choose [SCI3301 Science Project](#) as an elective. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Food Science (8-unit major)

Food Science Major Objectives

Graduates who have completed the major in Food Science will be able to:

- apply knowledge of the breadth and depth of the major scientific and technical fields in contemporary food science to describe and explain the development, production and manufacturing of nutritious, safe, sustainable foods and food products;
- demonstrate more than a basic competence of the different laboratory analyses and manufacturing methods for food product development and assessment;
- develop a broad range of skills, which are suited to occupations requiring the study or application of food science in both the public, private and research sectors;
- have a sound comprehension that food development has regulatory, social and ethical requirements in the contexts of food safety, food sustainability and nourishing of populations;
- conduct product development research and report the findings to lay persons, industry and the scientific community at large;
- prepare and develop a portfolio, which documents learning of technical skills, application of skills in industry and/or research environments and development of graduate attributes.

Food Science Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
BIO1810 Introduction to Food Science	1		1
CHE2810 Food Chemistry	1		1
BIO2810 Nutrition and Health	2		2
CHE2820 Principles of Food Analysis	2		2
BIO3810 Food Processing *	1	1	

BIO3811 Food Product Development *	2	2	
BIO3820 Food Microbiology *	1	1	
BIO3821 Food Quality Assurance *	2	2	

Footnotes

* This offering has a highly recommended residential school for both on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

A double major in Food Science and Plant Agricultural Science will provide opportunities for students to learn how to design future food supply systems from food production to consumer, to help safely and sustainably nourish the world.

A double major in Food Science and Environment and Sustainability will allow students to learn to students will learn to analyse and design sustainable food systems through mathematical analyses around resource use, including raw materials, people/labour and energy. This will be applicable particularly in the food processing and sustainable resource use.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Geospatial Science (8-unit major)

Geospatial Science Major Objectives

Graduates who have completed the major in Geospatial Science will have:

- broad and coherent knowledge in the theories, concepts, methods and technologies in the area of geospatial science;
- skills and knowledge of the analysis and evaluation of appropriate technologies, methods and processes to solve and complete a range of geospatial 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 the domain of spatial information;
- consistent application of academic norms and ethical standards in decision making when working collaboratively in a professional capacity;
- knowledge of spatial information systems to sufficient depth to be eligible for employment and certification, where appropriate, as a GIS Spatial Scientist.

Geospatial Science Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Springfield	Semester(s) Offered Online
GIS1402 Geographic Information Systems £	1	1	1,3
GIS1401 Geographic Data Presentation	2	2	2

GIS2405 Spatial Analysis and Modelling	2		2
GIS2407 Web Based Geographic Information System	2		2
CSC3400 Database Systems [£]	1	1	1,3
GIS3407 GIS Programming and Visualisation	1		1
GIS3406 Remote Sensing and Image Processing	1		1
GIS3008 Applications of GIS and Remote Sensing	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

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

The following courses are recommended electives for this major:

- [CSC1401 Foundation Programming](#)[£]
- [MAT1101 Discrete Mathematics for Computing](#)

£ 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

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Human Physiology (8-unit major)

Human Physiology Major Objectives

Graduates who have completed the major in Human Physiology will be able to:

- describe the biological processes that occur in the human body at the system, organ, tissue and cellular levels in order to maintain homeostasis;
- apply knowledge of human anatomy and physiology to explain the changes that occur across the lifespan and in disease processes and also the mechanisms of action of therapeutic options;
- exhibit practical and technical skills in the laboratory to generate scientific data as well as employ research skills including data analysis, interpretation, literature critiquing and academic writing;
- work collaboratively to clearly and coherently communicate human physiology concepts to a range of audiences using oral, written and digital communication formats;
- exhibit ethical and professional (including culturally respectful) standards and workplace health and safety requirements.

Human Physiology Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered Ipswich	Semester(s) Offered External	Semester(s) Offered Online
BIO1104 Medical Microbiology and Immunology 1 [^]	2		2	
BIO1203 Human Anatomy and Physiology 1 ^{£^}	1	1	1,3	
BIO1204 Introduction to Biomedical Sciences ^{**}	1,2		1,2	
BIO1206 Human Anatomy and Physiology 2 ^{£^}	2	2	2,3	
BIO2118 Systems Physiology and Pharmacology [#]	1		1	
BIO2218 Concepts in Endocrinology [#]	2		2	
BIO3102 Human Pathophysiology				1
BIO3201 Extreme Physiology and Pharmacology				2

Footnotes

[^] Mandatory residential school for external students

[£] 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

^{**} Semester 1: External students attend mandatory residential school, on-campus students attend mandatory lab classes. Semester 2: External and on-campus students attend mandatory residential school.

[#] Mandatory residential school for external and on-campus students.

Second Major

The following double major combinations are recommended for supporting a students' career pathway.

Human Physiology and Mathematics and Statistics (8 unit major) for students intending to pursue a career in Bioinformatics.

Human Physiology and Physics for students intending to pursue a career in Microscopy and Imaging.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Courses from the Psychology major combined with Human Physiology will provide an appreciation of the connections between psychological and physiological aspects of human health.

Plant Agricultural Science (8-unit major)

Plant Agricultural Science Major Objectives

On completion of this major, graduate should be able to:

- demonstrate discipline specific expertise in plant agricultural science, suitable to undertake professional work and/or further study in the agricultural field now and/or into the future;
- exhibit competence in a range of cognitive and technical skills related to agricultural science including agronomy, plant physiology and breeding, and soil science;

- communicate effectively across a diverse range of stakeholders using oral, written and technology-based approaches and work effectively across multidisciplinary teams within the agricultural sector;
- work autonomously and collaboratively as plant agricultural scientists to critically analyse and evaluate information to construct and implement solutions to unpredictable and complex problems;
- demonstrate an appreciation for the environmental, demographic, logistical, economic, and global pressures facing agricultural systems today;
- make guided judgements in their professional practice when identifying and responding to cultural, ethical, and social issues including those relevant to indigenous peoples and those of diverse cultures and backgrounds.

Plant Agricultural Science Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
BIO1101 Biology 1*	1	1	
AGR2301 Agricultural Science	2		2
BIO2202 Plant Physiology [#]	2	2	
AGR2304 Plant Breeding [#]	2	2	
AGR2303 Agronomy	1		1
AGR3304 Soil Science	1		1
AGR3305 Precision and Smart Technologies in Agriculture	2		2
BIO3318 Plant Microbe Interactions	2	2	

Footnotes

* This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Second major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University. Combine with a second major, such as Animal, Food, Wine, or Environment and Sustainability to create a well-rounded agriculture degree and broaden your employment potential.

A double major in Plant Agricultural Science and Animal Science will provide graduates with a well-rounded degree in agricultural science, equipping them with the skills and knowledge to take on a future career within the agricultural sector. This combination is particularly relevant to students seeking a future career as animal/agricultural scientists, farm manager, nutritionist, or agronomists.

A double major in Plant Agricultural Science and Environment and Sustainability will provide graduates with the skills and knowledge to combat the present and future challenges of a growing agricultural sector and food security. This combination is particularly relevant to students seeking a future career in any facet of the agricultural industry.

A double major in Plant Agricultural Science and Food Science equips students with theoretical knowledge and important practical skills particularly suitable for students looking toward a career in the various and diverse sectors of the agricultural and food industries.

A double major in Plant Agricultural Science and Wine Science equips students with theoretical knowledge and important practical skills particularly suitable for students looking toward a career in the various and diverse sectors of the agricultural and viticultural industries.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

Wildlife Management (8-unit major)

Wildlife Management Major Objectives

Graduates who have completed the major in Wildlife Management will be able to:

- demonstrate more than a basic competence of the different types of wildlife and their management, and how and why wildlife needs to be conserved, utilized or controlled
- demonstrate a detailed knowledge of native and introduced wildlife species management and be able to apply this management knowing the strengths and weaknesses of different management techniques
- have a sound comprehension that wildlife can be iconic, important (ecologically, socially, economically), abundant, vulnerable to extinction and have an important role in animal biosecurity
- apply the principles of wildlife management to manage wildlife in captivity, to mitigate human-wildlife conflict, to measure and monitor wildlife populations for different purposes

Wildlife Management Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
AGR1101 Animal Health, Welfare and Behaviour *	1	1	
WLF2101 Management of Wildlife *	1	1	
WLF1201 Field Skills for Wildlife, Game and Pest Management ⁺		2	
REN3301 Biodiversity and Conservation	2		2
WLF2201 Vertebrate Pests and Biosecurity *	2	2	
WLF3101 Principles of Wildlife Management & Sustainable Use [^]			1
SCI3301 Science Project			1,2
WLF3201 Captive Wildlife Management ^{*,^}	2	2	

Footnotes

- * This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment)
- + This course has a mandatory residential school
- ^ This course will be introduced in 2024

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

There are a number of other courses, minors and majors with a focus on wildlife ecology that students may wish to study.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University.

Wine Science (8-unit major)

Wine Science Major Objectives

Graduates who have completed the major in Wine Science will be able to:

- show a sound understanding of vineyard management practices for quality wine grape production;
- demonstrate a detailed knowledge of the processes involved in production of different wine types and styles;
- illustrate understanding of sustainable and environmentally sensitive vineyard and winery management practices;
- display skills sensorial assessment of wine including gaining experience in judging wine show system;
- have an appreciation of the history and diversity of the global wine industry.

Wine Science Major Courses

Courses	Semester(s) Offered Toowoomba	Semester(s) Offered External	Semester(s) Offered Online
WIN1101 Grape and Wine Production			1
WIN2200 Viticultural and Winemaking Practice⁺		1	
WIN2215 Wine Biochemistry and Microbiology			2
WIN2210 Viticultural Principles and Production			2
WIN2220 Wine Production			2
WIN3310 Wine Sensory Analysis⁺		2	
WIN3304 Viticultural and Winemaking Practice 2⁺		3	
BIO1101 Biology 1[*]	1	1	

Footnotes

⁺ This course has a mandatory residential school

^{*} This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment)

Second Major

Second majors can be chosen from any of the other eight-unit majors defined for the Bachelor of Science or, with the approval of the Faculty of Health, Engineering and Sciences, from other eight-unit majors from other undergraduate programs in the University.

Minor Studies

Minor studies are a set of courses as defined in the [Minor Studies](#) section of the Handbook.

Electives

General electives are courses chosen from other Level 1, 2 or 3 courses in the University. Students without, or limited background in Mathematical Methods are recommended to take the following elective:

- [MAT1100 Foundation Mathematics](#)

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](#).

Animal Science

- [AGR1101 Animal Health, Welfare and Behaviour](#)
- [AGR2201 Animal Production Systems](#)
- [AGR3202 Animal Reproduction](#)
- [AGR2203 Animal Nutrition](#)
- [AGR3302 Sensors and Technology in Animal Production](#)
- [BIO2103 Biology 2](#)

Biology

- [BIO1101 Biology 1](#)
- [BIO2103 Biology 2](#)
- [BIO2107 Cell and Molecular Biology 1](#)
- [BIO3318 Plant Microbe Interactions](#)
- [BIO3207 Cell and Molecular Biology 2](#)
- [CHE1110 Chemistry 1](#)
- [CHE2120 Chemistry 2](#)

Food Science

- [BIO3810 Food Processing](#)
- [BIO3811 Food Product Development](#)
- [BIO3820 Food Microbiology](#)
- [BIO3821 Food Quality Assurance](#)

Human Physiology

- [BIO1104 Medical Microbiology and Immunology 1](#)
- [BIO1203 Human Anatomy and Physiology 1](#)
- [BIO1204 Introduction to Biomedical Sciences](#)
- [BIO1206 Human Anatomy and Physiology 2](#)
- [BIO2118 Systems Physiology and Pharmacology](#)
- [BIO2218 Concepts in Endocrinology](#)

Physics and Astronomical and Space Sciences

- [PHY3303 Modern Physics](#)
- [PHY3304 Photonics](#)

Plant Agricultural Science

- [AGR2304 Plant Breeding](#)
- [BIO1101 Biology 1](#)
- [BIO2202 Plant Physiology](#)
- [BIO3318 Plant Microbe Interactions](#)

Wildlife Management

- [AGR1101 Animal Health, Welfare and Behaviour](#)
- [WLF1201 Field Skills for Wildlife, Game and Pest Management](#)
- [WLF2101 Management of Wildlife](#)
- [WLF2201 Vertebrate Pests and Biosecurity](#)
- [WLF3201 Captive Wildlife Management](#)

Wine Science

- [WIN2200 Viticultural and Winemaking Practice](#)
- [WIN3304 Viticultural and Winemaking Practice 2](#)
- [WIN3310 Wine Sensory Analysis](#)
- [BIO1101 Biology 1](#)

Related programs

Requirements for entry to Master of Learning and Teaching

Students intending to become secondary school teachers are advised that they may need to complete a postgraduate teacher entry qualification (such as the two-year) after completion of their undergraduate program. For further information, students should refer to the Education section of this Handbook or address enquiries to the Faculty of Business, Education, Law and Arts.

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Science and who satisfy all of the requirements may exit with a [DPSC Diploma of Science](#).

Credit

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

For PSY course exemptions – Psychology courses taken at another university or institution will only be considered for psychology exemptions if the courses were part of an APAC (Australian Psychology Accreditation Council) accredited sequence. APAC regulations clearly state that only courses taken within an APAC sequence can be used for exemptions from any PSY courses.

Recommended Enrolment Pattern - BSCP- Psychology Extended

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
SCI1001 Succeeding in Science	1	1			1	1	Enrolment is not permitted in HAC1000 if CMS1000 or CMS1100 has been previously completed
HAC1000 The Skilful Communicator	1	2			1	2,3	
PSY1010 Foundation Psychology A	1	1			1	1,3	

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	
General Elective	1	1			1	1	
PSY1030 Cross-Cultural and Indigenous Psychology	1	2			1	2,3	
PSY1020 Foundation Psychology B	1	2			1	1, 2	
STA1003 Fundamental Statistics [§]	1	2			1	1,2,3	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
General Elective	1	2			1	2	
Year 2							
PSY2010 Social Processes of Behaviour	2	1			2	1	Pre-requisite: PSY1010
PSY2020 Motivation and Emotion	2	1			2	1	Pre-requisite: PSY1010 and PSY1020
PSY2100 Research Methods in Psychology A	2	1			2	1	Pre-requisite: PSY1010 and (STA2300 or STA1003). For students enrolled in Program BSSC with a major in BES: PSY1010 and STA3100
General Elective	2	1			2	1	
PSY2030 Developmental Psychology	2	2			2	2	Pre-requisite: PSY1010
PSY2040 Human Information Processing ^{<}	2	2			2	2	Pre-requisite: PSY1020 and (PSY2100 or STA2300 or STA1003)
PSY3111 Research Methods in Psychology B ^{^^}	2	2			2	2	Pre-requisite: PSY2100
General Elective	2	2			2	2	
Year 3							
PSY3010 Assessment of Behaviour	3	1			3	1	Pre-requisite: PSY2100
PSY3030 Abnormal Psychology	3	1			3	1	Pre-requisite: PSY1010
PSY3180 Practicum A			3	1			
PSY3060 Learning and Behaviour Change	3	1			3	1	Pre-requisite: PSY1020
PSY3050 Counselling Psychology [§]	3	2			3	2	Pre-requisite: PSY1010 or CDS3002
PSY3190 Practicum B ^{<}			3	2			Pre-requisite: PSY2105 (for WIL placement) OR students must be enrolled in BSED OR in third year of their psychology program (for Capstone project)
Psychology Elective (from list)	3	2			3	2	
Psychology Elective (from list)	3	2			3	2	

Footnotes

- § Unavailable online in S3 2023
< Not available ONC Ipswich in S2 2023
^^ Not available ONC Toowoomba or ONC Ipswich in S2 2023
\$ Not available ONC Toowoomba in S2 2023

Recommended Enrolment Pattern - 12 unit major - Information Technology

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
CSC1401 Foundation Programming [£]	1	1, 2			1	1, 2	
ELE1301 Computer Engineering	1	1			1	1	
CIS1000 Digital Disruption [£]	1	1			1	1	
MAT1101 Discrete Mathematics for Computing	1	1			1	1	
CMS1100 Communicating in the Sciences	1	1			1	1,2	
STA1003 Fundamental Statistics [§]	1	2			1	2	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
CSC2408 Software Development Tools	1	2			1	2	Pre-requisite: CSC1401
CSC2406 Web Technology 1	1	2			1	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 B SED
Year 2							
CSC2402 Object-Oriented Programming in C++	2	1			2	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
Choose one of the following two (2) courses (refer to footnote before choosing):							
CIS2000 Systems Analysis and Design [#]	2	1			2	1	
OR							
CSC1410 Software Engineering Foundations [#]		2				2	Pre-requisite: CSC1401
First general elective or course from the second major	2	1			2	1	
Second general elective or course from the second major	2	1			2	1	
CSC2401 Algorithms and Data Structures	2	2			2	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
Third general elective or course from the second major	2	2			2	2	
One specified course from the major list	2	2			2	2	
Fourth general elective or course from the second major	2	2			2	2	
Year 3							
CIS3002 Agile Methods	3	1			3	1,	Pre-requisite: CIS2000
CSC3412 System and Security Administration	3	1			3	1,	Pre-requisite: CSC2408
Fifth general elective or course from the second major	3	1			3	1	
Sixth general elective or course from the second major	3	1			3	1	
CSC3426 Web Technology 2	3	2			3	2	Pre-requisite: CSC2406
CSC3600 ICT Professional Project	3	2			3	1,2	Students enrolled from 2023 - Pre-requisite: CSC2000 and at least 16 courses including

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	
							six other BITC core courses Students enrolled prior to 2023 - Pre-requisite: CIS3002 and at least 16 courses including seven other BITC core courses
Seventh general elective or course from the second major	3	2			3	2	
Eighth general elective or course from the second major	3	2			3	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
- # Students are not required to complete both [CIS2000 Systems Analysis and Design](#) and [CSC1410 Software Engineering Foundations](#). [CSC1410 Software Engineering Foundations](#) is only offered in Semester 2. If a student chooses to complete [CSC1410 Software Engineering Foundations](#) in Semester 2 then the student will need to complete the fourth general elective or course from the second major in Semester 1.

Recommended Enrolment Pattern - 12 unit major - Astronomical and Space Sciences

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
PHY1104 Physics 1	1	1			1	1		Co-requisite: (MAT1102 or ENM2600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
PHY1101 Astronomy 1	1	1			1	1		
MAT1102 Algebra and Calculus I	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences					1	1,2		
MAT2100 Algebra and Calculus II	1	2			1	2		Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
PHY1911 Physics 2	1	2			1	2		Co-requisite: (MAT2100 or ENM1600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
PHY1107 Astronomy 2	1	2			1	2		
Year 2								
PHY3303 Modern Physics [#]			2	1			HR	Pre-requisite: PHY1104 and PHY1911
Course selected from 2nd major area or minor or general elective	2	1			2	1		
Choose one of the following three (3) courses:								
PHY2204 Astronomical Techniques					2	1,2		Pre-requisite: PHY1104 and PHY1911
PHY2206 Medical Physics					2	1,2		
PHY2208 Planetary and Exoplanetary Science					2	1,2		Pre-requisite: PHY1101

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
STA1003 Fundamental Statistics [§]	2	1,2,3			2	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
PHY2207 Optics					2	2		Pre-requisite: PHY1104 and PHY1911
Choose one of the following three courses								
PHY2204 Astronomical Techniques					2	2		Pre-requisite: PHY1104 and PHY1911
PHY2206 Medical Physics					2	2		
PHY2208 Planetary and Exoplanetary Science					2	2		Pre-requisite: PHY1101
CSC1401 Foundation Programming [£]	2	1,2,3			2	1,2,3		
Course selected from minor or general elective	2	1,2			2	1,2,3		
Year 3								
PHY3305 Quantum Mechanics					3	1		Pre-requisite or Co-requisite: PHY3303
PHY3306 Solar and Stellar Astronomy					3	1		Pre-requisite: PHY1104 and PHY1911
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
Course selected from 2nd major area or minor or general elective					3	1,2		
Course selected from 2nd major area or minor or general elective	3	2			3	2		
PHY3304 Photonics [#]			3	2			HR	Pre-requisite: PHY1104 and PHY1911
PHY3307 Galactic and Extragalactic Astronomy					3	2		Pre-requisite: PHY1104 and PHY1911
Course selected from 2nd major area or minor or general elective	3	2			3	2		

Footnotes

- # This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- § 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

Recommended Enrolment Pattern - 12 Unit major - Mathematics and Statistics Extended

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
CMS1100 Communicating in the Sciences	1	1			1	1, 2	
SCI1001 Succeeding in Science	1	1			1	1	
MAT1102 Algebra and Calculus I	1	1			1	1	
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3	
MAT2200 Operations Research 1	1	2			1	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.
MAT2100 Algebra and Calculus II	1	2			1	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
General Elective (or second major)	1	2			1	2	
Year 2							
MAT2409 High Performance Numerical Computing [†]	2	1			2	1	Pre-requisite: (CSC2410 or CSC1401) and (MAT1102 or ENM1600) or Students must be enrolled in one of the following Programs: MPIT or MCOT or MCTE
STA2301 Distribution Theory	2	1			2	1	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT1102 or ENM1600)
STA3300 Experimental Design	2	1			2	1	Pre-requisite: STA2300 or STA1003 or equivalent or approval of examiner
General Elective (or second major)	2	1			2	1	
STA2302 Statistical Inference					2	2	Pre-requisite: STA2301
STA3301 Statistical Models ^{>}	2	2			2	2	Pre-requisite: STA3300 or approval of examiner or Students must have completed S TA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
General Elective or second major	2	2			2	2	
General Elective or second major	2	2			2	2	
Year 3							
MAT3105 Harmony of Partial Differential Equations ⁺	3	1			3	1	Pre-requisite: ENM2600 or MAT2100 or MAT2500
MAT3201 Operations Research 2 ^{*†}	3	1			3	1	Pre-requisite: MAT1200 or MAT2200 or Students must be enrolled in one of the following Programs: MSCN or GDSI
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)

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	
STA3200 Multivariate Statistical Methods					3	1	Pre-requisite: STA2300 or STA1003 Enrolment is not permitted in STA3200 if STA8005 or STA6100 have been previously completed
General Elective or second major	3	2			3	2	
General Elective or second major	3	2			3	2	
MAT3103 Mathematical Modelling and Dynamical Systems ⁺	3	2			3	2	Pre-requisite: MAT2100 or MAT2500 or ENM2600
General Elective or second major	3	2			3	2	

Footnotes

§ 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 on-campus at Toowoomba in S1 2023

> Unavailable Semester 2, 2023 Toowoomba On-campus

+ The on-campus offering of this course is offered in even-numbered years only.

* The on-campus offering of this course is offered in odd-numbered years only.

Recommended Enrolment Pattern - BSCP - Psychology

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
SCI1001 Succeeding in Science	1	1			1	1	
HAC1000 The Skilful Communicator	1	2			1	2,3	Enrolment is not permitted in HAC1000 if CMS1000 or CMS1100 has been previously completed
PSY1010 Foundation Psychology A	1	1			1	1,3	
General Elective	1	1			1	1	
PSY1030 Cross-Cultural and Indigenous Psychology	1	2			1	2,3	
PSY1020 Foundation Psychology B	1	2			1	1, 2	
STA1003 Fundamental Statistics [§]	1	2			1	1,2,3	Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
General Elective	1	2			1	2	
Year 2							
PSY2010 Social Processes of Behaviour	2	1			2	1	Pre-requisite: PSY1010
PSY2020 Motivation and Emotion	2	1			2	1	Pre-requisite: PSY1010 and PSY1020
PSY2100 Research Methods in Psychology A	2	1			2	1	Pre-requisite: PSY1010 and (STA2300 or STA1003). For students enrolled in Program BSSC with a major in BES: PSY1010 and STA3100
General Elective	2	1			2	1	
PSY2030 Developmental Psychology	2	2			2	2	Pre-requisite: PSY1010
PSY2040 Human Information Processing ^{<}	2	2			2	2	Pre-requisite: PSY1020 and (PSY2100 or STA2300 or STA1003)

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	
PSY3111 Research Methods in Psychology B ^{^^}	2	2			2	2	Pre-requisite: PSY2100
General Elective	2	2			2	2	
Year 3							
PSY3010 Assessment of Behaviour	3	1			3	1	Pre-requisite: PSY2100
PSY3030 Abnormal Psychology	3	1			3	1	Pre-requisite: PSY1010
PSY3060 Learning and Behaviour Change	3	1			3	1	Pre-requisite: PSY1020
General Elective	3	1			3	1	
PSY3050 Counselling Psychology ^{\$}	3	2			3	2	Pre-requisite: PSY1010 or CDS3002
General Elective	3	2			3	2	
General Elective	3	2			3	2	
General Elective	3	2			3	2	

Footnotes

- § Unavailable online in S3 2023
 < Not available ONC Ipswich in S2 2023
 ^^ Not available ONC Toowoomba or ONC Ipswich in S2 2023
 \$ Not available ONC Toowoomba in S2 2023

Recommended Enrolment Pattern - 8 unit major - Animal Science

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics [§]	1	1,2			1	1		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
AGR1101 Animal Health, Welfare and Behaviour [*]	1	1	1	1			HR	
BIO2103 Biology 2 ^{\$*}	1	2	1	2			HR	
AGR2301 Agricultural Science	1	2			1	2		
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
General Elective (Or Major 2)	1	2			1	2		
Year 2								
AGR2201 Animal Production Systems [*]	2	1	2	1			HR	
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	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		
General Elective (Or Major 2)	2	1			2	1		
AGR2203 Animal Nutrition *	2	2	2	2			HR	Pre-requisite: BIO2103
BIO2219 Genetics	2	2			2	2		Pre-requisite: BIO1100 or BIO1101 or BIO1204 or AGR1101
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
Year 3								
General Elective (Or Major 2)	3	1			3	1		
AGR3202 Animal Reproduction *	3	1	3	1			HR	Pre-requisite: AGR1101 and BIO2103
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (Or Major 2)	3	1			3	1		
AGR3302 Sensors and Technology in Animal Production *	3	2	3	2			HR	
General Elective (Or Major 2)	3	2			3	2		
General Elective (Or Major 2)	3	2			3	2		
General Elective (Or Major 2)	3	2			3	2		

Footnotes

§ Unavailable online in S3 2023

* This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

§ If students are enrolled in the Biology Major as well as the Animal Science major, students are to take [AGR2303 Agronomy](#) in place of [BIO2103 Biology 2](#).

Recommended Enrolment Pattern - 8 unit major - Biology

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
BIO1101 Biology 1 *	1	1	1	1			HR	
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences	1	1			1	1,2		
CHE1110 Chemistry 1 *	1	1	1	1			HR	
STA1003 Fundamental Statistics §	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or

Course	Year of program and 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 or ENM2600 has been previously completed
BIO2103 Biology 2 [#]	1	2	1	2			HR	
CHE2120 Chemistry 2 [*]	1	2	1	2			HR	Pre-requisite: CHE1110
BIO2107 Cell and Molecular Biology 1 [#]	2	1	2	1			HR	Pre-requisite: CHE2120
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
BIO2219 Genetics	2	2			2	2		Pre-requisite: BIO1100 or BIO1101 or BIO1204 or AGR1101
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (Or Major 2)	3	1			3	1		
General Elective (Or Major 2)	3	1			3	1		
General Elective (Or Major 2)	3	1,2			3	1,2		
BIO3318 Plant Microbe Interactions [#]	3	2	3	2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
BIO3207 Cell and Molecular Biology 2 [#]	3	2	3	2			HR	Pre-requisite: BIO2107
General Elective (Or Major 2)	3	1,2			3	1,2		
General Elective (Or Major 2)	3	1,2			3	1,2		

Footnotes

- * This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- § Unavailable online in S3 2023
- # This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Recommended Enrolment Pattern - 8 unit major - Computing

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
ELE1301 Computer Engineering	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
CSC1401 Foundation Programming [£]	1	1,2			1	1, 2, 3	
CMS1100 Communicating in the Sciences	1	1			1	1,2	
CSC1410 Software Engineering Foundations		2				2	Pre-requisite: CSC1401
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or

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	
							STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
General Elective (or major 2)	1	2			1	2	
General Elective (or major 2)	1	2			1	2	
Year 2							
CSC2408 Software Development Tools	2	1,2			2	1, 2	Pre-requisite: CSC1401
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
CSC2406 Web Technology 1	2	2			2	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 B SED
General Elective (or major 2)	2	2			2	2	
General Elective (or major 2)	2	2			2	2	
General Elective (or major 2)	2	2			2	2	
Year 3							
CSC3400 Database Systems [£]	3	1			3	1	Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
CSC3412 System and Security Administration	3	1			3	1	Pre-requisite: CSC2408
CSC3426 Web Technology 2	3	2			3	2	Pre-requisite: CSC2406
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (or major 2)	3	1,2			3	1,2	
General Elective (or major 2)	3	1,2			3	1,2	
General Elective (or major 2)	3	1,2			3	1,2	
General Elective (or major 2)	3	1,2			3	1,2	

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

Recommended Enrolment Pattern - 8 unit major - Environment and Sustainability

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
REN1201 Environmental Studies ⁺	1	1			1	1	Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
CMS1100 Communicating in the Sciences [*]	1	1			1	1,2	
General Elective (or major 2)	1	2			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	
STA1003 Fundamental Statistics [§]	1	2			1	2,3	Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
General Elective (Or Major 2)	1	2			2	2	
Year 2							
REN2200 Ecology for Sustainability	2	1			2	1	Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
REN3302 Sustainable Resource Use	2	2			2	2	
CLI2201 Climate Change and Variability					2	2	
General Elective (or major 2)	2	2			2	2	
General Elective (or major 2)	2	2			2	2	
Year 3							
CLI3301 Climate and Environment Risk Assessment					3	1	
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (or major 2)	3	1			3	1	
General Elective (or major 2)	3	1			3	1	
CLI3302 Adaptation to Climate Change					3	2	
REN3301 Biodiversity and Conservation	3	2			3	2	
General Elective (or major 2)	3	2			3	2	
General Elective (or major 2)	3	2			3	2	

Footnotes

- + The Springfield on-campus offer is not available in 2023.
* Students may choose [HAC1000 The Skilful Communicator](#) in lieu of [CMS1100 Communicating in the Sciences](#) if they wish.
§ Unavailable online in S3 2023

Recommended Enrolment Pattern - 8 unit major – Food Science

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
BIO1810 Introduction to Food Science	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
General Elective (or major 2)	1	2			1	2		
General Elective (or major 2)	1	2			1	2		
General Elective (or major 2)	1	2			1	2		
Year 2								
CHE2810 Food Chemistry	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
CHE2820 Principles of Food Analysis	2	2			2	2		
BIO2810 Nutrition and Health	2	2			2	2		
General Elective (or major 2)	2	2			2	2		
General Elective (or major 2)	2	2			2	2		
Year 3								
BIO3810 Food Processing *	3	1	3	1			HR	
BIO3820 Food Microbiology *	3	1	3	1			HR	
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (or major 2)	3	1			3	1		
BIO3811 Food Product Development *	3	2	3	2			HR	Pre-requisite: BIO1810
BIO3821 Food Quality Assurance *	3	2	3	2			HR	
General Elective (or major 2)	3	2			3	2		
General Elective (or major 2)	3	2			3	2		

Footnotes

§ Unavailable online in S3 2023

* This offering has a highly recommended residential school for both on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Recommended Enrolment Pattern - 8 unit major – Geospatial Science

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

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	
Year 1							
GIS1402 Geographic Information Systems [£]	1	1			1	1	

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	
SCI1001 Succeeding in Science	1	1			1	1	
CMS1100 Communicating in the Sciences	1	1			1	1,2	
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
GIS1401 Geographic Data Presentation	1	2			1	2	
General Elective (or major 2)	1	2			1	2	
General Elective (or major 2)	1	2			1	2	
General Elective (or major 2)	1	2			1	2	
Year 2							
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
General Elective (or major 2)	2	1			2	1	
GIS2405 Spatial Analysis and Modelling	2	2			2	2	
GIS2407 Web Based Geographic Information System	2	2			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
General Elective (or major 2)	2	2			2	2	
General Elective (or major 2)	2	2			2	2	
Year 3							
CSC3400 Database Systems [£]	3	1			3	1,3	Pre-requisite: CSC1401 or CIS1000 Enrolment is not permitted in CSC3400 if CIS2002 has been previously completed.
GIS3407 GIS Programming and Visualisation	3	1			3	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
GIS3406 Remote Sensing and Image Processing	3	1			3	1	
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
GIS3008 Applications of GIS and Remote Sensing	3	2			3	2	Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT
General Elective (or major 2)	3	2			3	2	
General Elective (or major 2)	3	2			3	2	
General Elective (or major 2)	3	2			3	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

Recommended Enrolment Pattern - 8 unit major - Human Physiology

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
BIO1204 Introduction to Biomedical Sciences [#]	1	1	1	1			M	
CMS1100 Communicating in the Sciences	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
BIO1203 Human Anatomy and Physiology 1 ^{£#}	1	1	1	1,3			M	
BIO1104 Medical Microbiology and Immunology 1 [#]	1	2	1	2			M	
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 previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
BIO1206 Human Anatomy and Physiology 2 ^{£#}	1	2	1	2			M	Pre-requisite: BIO1203
Year 2								
BIO2118 Systems Physiology and Pharmacology [*]	2	1	2	1			M	Pre-requisite: BIO1203 Co-requisite: STA2300 or STA1003
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
BIO2218 Concepts in Endocrinology [*]	2	2	2	2			M	Pre-requisite: BIO2118
General Elective (or major 2)	2	2			2	2		
General Elective (or major 2)	2	2			2	2		
General Elective (or major 2)	2	2			2	2		
Year 3								
BIO3102 Human Pathophysiology					3	1		Pre-requisite: BIO2118 and BIO2218
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (or major 2)	3	1			3	1		
General Elective (or major 2)	3	1			3	1		
BIO3201 Extreme Physiology and Pharmacology					3	2		Pre-requisite: BIO2118
General Elective (or major 2)	3	2			3	2		
General Elective (or major 2)	3	2			3	2		
General Elective (or major 2)	3	2			3	2		

Footnotes

- # Mandatory residential school for external students
£ 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
* Mandatory residential school for external and on-campus students

Recommended Enrolment Pattern - 8 unit major - Mathematics and Statistics

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below

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	
Year 1							
CMS1100 Communicating in the Sciences	1	1			1	1, 2	
SCI1001 Succeeding in Science	1	1			1	1	
MAT1102 Algebra and Calculus I	1	1			1	1	
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if S TA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3	
MAT2200 Operations Research 1	1	2			1	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.
MAT2100 Algebra and Calculus II	1	2			1	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
General Elective or second major	1	2			1	2	
Year 2							
MAT2409 High Performance Numerical Computing ^{#†}	2	1			2	1	Pre-requisite: (CSC2410 or CSC1401) and (MAT1102 or ENM1600) or Students must be enrolled in one of the following Programs: MPIT or MCOT or MCTE
STA2301 Distribution Theory	2	1			2	1	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT1102 or ENM1600)
General Elective or second major	2	1			2	1	
General Elective or second major	2	1			2	1	
General Elective or second major	2	2			2	2	
General Elective or second major	2	2			2	2	
General Elective or second major	2	2			2	2	
General Elective or second major	2	2			2	2	
Year 3							
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
STA3200 Multivariate Statistical Methods					3	1	Pre-requisite: STA2300 or STA1003 Enrolment is not permitted in STA3200 if S TA8005 or STA6100 have been previously completed
STA3300 Experimental Design	3	1			3	1	Pre-requisite: STA2300 or STA1003 or equivalent or approval of examiner

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	
General Elective or second major	3	1			3	1	
STA3301 Statistical Models ^{>}	3	2			3	2	Pre-requisite: STA3300 or approval of examiner or Students must have completed STA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
General Elective or second major	3	2			3	2	
General Elective or second major	3	2			3	2	
General Elective or second major	3	2			3	2	

Footnotes

- § 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
To enrol in [MAT2409](#) students should ensure they have first completed the prerequisite of [CSC2410](#) (preferred) or [CSC1401](#).
† Unavailable on-campus at Toowoomba in S1 2023
> Unavailable Semester 2, 2023 Toowoomba On-campus

Recommended Enrolment Pattern - 8 unit major - Physics

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
PHY1104 Physics 1	1	1			1	1		Co-requisite: (MAT1102 or ENM2600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
MAT1102 Algebra and Calculus I	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
Course selected from 2nd major area or minor or general electives	1	1			1	1		
PHY1911 Physics 2	1	2			1	2		Co-requisite: (MAT2100 or ENM1600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
MAT2100 Algebra and Calculus II	1	2			1	2		Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
CMS1100 Communicating in the Sciences	1	1			1	1,2		
Course selected from 2nd major area or minor or general electives	1	2			1	2		
Year 2								
Choose two (2) of the following three (3) courses								
PHY2204 Astronomical Techniques					2	1		Pre-requisite: PHY1104 and PHY1911
PHY2206 Medical Physics					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		
PHY2208 Planetary and Exoplanetary Science					2	2		Pre-requisite: PHY1101
STA1003 Fundamental Statistics [§]	2	1, 2			2	1,2		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
Course selected from 2nd major area or minor or general elective	2	1			2	1		
Course selected from 2nd major area or minor or general elective	2	1			2	1		
PHY2207 Optics					2	2		Pre-requisite: PHY1104 and PHY1911
CSC1401 Foundation Programming [£]	2	1,2,3			2	1,2,3		
Course selected from 2nd major area or minor or general elective	2	2			2	2		
Year 3								
PHY3303 Modern Physics [#]			3	1			HR	Pre-requisite: PHY1104 and PHY1911
PHY3305 Quantum Mechanics					3	1		Pre-requisite or Co-requisite: PHY3303
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
Course selected from 2nd major area or minor or general elective	3	1			3	1		
PHY3304 Photonics ^{**#}			3	2			HR	Pre-requisite: PHY1104 and PHY1911
Course selected from 2nd major area or minor or general elective	3	2			3	2		
Course selected from 2nd major area or minor or general elective	3	2			3	2		
Course selected from 2nd major area or minor or general elective	3	2			3	2		

Footnotes

[§] 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

[#] This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

^{**} Students who have completed PHYS313 through UNE are unable to enrol in [PHY3304](#).

Recommended Enrolment Pattern - 8 unit major – Plant Agricultural Science

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below

Course	Year of program and 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								
BIO1101 Biology 1 *	1	1	1	1			HR	
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics §	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
AGR2301 Agricultural Science	1	2			1	2		
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
General Elective (or major 2)	1	2			1	2		
General Elective (or major 2)	1	2			1	2		
Year 2								
AGR2303 Agronomy	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
General Elective (or major 2)	2	1			2	1		
AGR2304 Plant Breeding #	2	2	2	2			HR	Pre-requisite: BIO1101
BIO2202 Plant Physiology #	2	2	2	2			HR	Pre-requisite: BIO1101
General Elective (or major 2)	2	2			2	2		
General Elective (or major 2)	2	2			2	2		
Year 3								
AGR3304 Soil Science	3	1			3	1		
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (or major 2)	3	1			3	1		
General Elective (or major 2)	3	1			3	1		
BIO3318 Plant Microbe Interactions #	3	2	3	2			HR	Pre-requisite: BIO1101 or Students must be enrolled in one of the following Programs: BATM or BENV or GCSC or GDSI or MSCN
AGR3305 Precision and Smart Technologies in Agriculture	3	2			3	2		
General Elective (or major 2)	3	2			3	2		
General Elective (or major 2)	3	2			3	2		

Footnotes

- * This offering has a highly recommended residential school for external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- § Unavailable online in S3 2023
- # This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Recommended Enrolment Pattern - 8 unit major - Wildlife Management

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
SCI1001 Succeeding in Science	1	1			1	1		
CMS1100 Communicating in the Sciences	1	1			1	1,2		
WLF2101 Management of Wildlife [*]	1	1	1	1			HR	
AGR1101 Animal Health, Welfare and Behaviour [*]	1	1	1	1			HR	
General Elective (Or Major 2)	1	2			1	2		
WLF1201 Field Skills for Wildlife, Game and Pest Management ⁺			1	2			M	
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
WLF2201 Vertebrate Pests and Biosecurity [*]	1	2	1	2			HR	
Year 2								
STA1003 Fundamental Statistics [§]	2	1,2			2	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
General Elective (Or Major 2)	2	2			2	2		
Year 3								
WLF3101 Principles of Wildlife Management & Sustainable Use [^]					3	1		
SCI3301 Science Project					3	1,2		
General Elective (Or Major 2)	3	1			3	1		
General Elective (Or Major 2)	3	1			3	1		
WLF3201 Captive Wildlife Management ^{**^}	3	2	3	2			HR	
REN3301 Biodiversity and Conservation	3	2			3	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		
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (Or Major 2)	3	2			3	2		

Footnotes

- * This offering has a highly recommended residential school for on-campus and external students (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- + This course has a mandatory residential school
- § Unavailable online in S3 2023
- ^ This course will be introduced in 2024

Recommended Enrolment Pattern - 8 unit major - Wine Science

Students studying part-time should complete the major in a logical sequence as to reflect as close as possible the enrolment pattern below.

Course	Year of program and 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								
WIN1101 Grape and Wine Production					1	1		
BIO1101 Biology 1	1	1	1	1				
SCI1001 Succeeding in Science	1	1			1	1		
General Elective (Or Major 2)	1	1			1	1		
General Elective (Or Major 2)	1	2			1	2		
CMS1100 Communicating in the Sciences					1	2		
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 previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
General Elective (Or Major 2)	1	2			1	2		
Year 2								
WIN2200 Viticultural and Winemaking Practice			2	1			M	Co-requisite: WIN1101
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
General Elective (Or Major 2)	2	1			2	1		
WIN2215 Wine Biochemistry and Microbiology					2	2		Pre-requisite: WIN1101
WIN2220 Wine Production					2	2		Pre-requisite: WIN1101
WIN2210 Viticultural Principles and Production					2	2		Pre-requisite: WIN1101
General Elective (Or Major 2)	2	2			2	2		
Year 3								
General Elective (Or Major 2)	3	1			3	1		
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
General Elective (Or Major 2)	3	1			3	1		
General Elective (Or Major 2)	3	1			3	1		

Consult the Handbook on the Web at <https://www.unisq.edu.au/handbook/current> for any updates that may occur during the year.
Bachelor of Science or Bachelor of Science (Psychology) (BSClorBSCP) - BSc or BSci(Psychology) (2023)

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
WIN3310 Wine Sensory Analysis			3	2			M	Pre-requisite: WIN1101
General Elective (Or Major 2)	3	2			3	2		
General Elective (Or Major 2)	3	2			3	2		
WIN3304 Viticultural and Winemaking Practice 2			3	3			M	Pre-requisite: WIN1101

Footnotes

§ Unavailable online in S3 2023

Bachelor of Technology (Wine) (BTWN) - BTechWine

QTAC code (Australian and New Zealand applicants): (Australian and New Zealand applicants): Toowoomba campus and Distance education: 906109

This program is only offered to continuing students. No new admissions will be accepted. Students who are interested in this study area should [contact us](#).

	On-campus *	External *
Start:		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
Residential school:	Toowoomba campus and Queensland College of Wine Tourism, Stanthorpe (compulsory)	Toowoomba campus and Queensland College of Wine Tourism, Stanthorpe (compulsory)
Standard duration:	3 years full-time; 6 years part-time	

Footnotes

* This program is not available fully on-campus or fully by external mode; to complete the program students will need to undertake courses in a mix of external and on-campus modes.

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 Bachelor of Technology (Wine) aims to develop knowledge and skills in wine making, wine science, viticulture, wine business and wine appraisal. Graduates will have a knowledge base and skills that will fit them for a career in vineyards, wineries, production management, wine marketing, quality control, research and development in the wine, brewing and food processing industries. Its aim is to provide graduates with an excellent technical understanding of wine making through provision of a relevant and coherent body of knowledge on wine production and wine science a scientific base that allows the underlying principles and concepts to be understood, and industry-relevant skills.

Program objectives

Upon completion, graduates from the Bachelor of Technology (Wine) program will have the following knowledge and skills:

Knowledge

- a firm science foundation that provides the principles and concepts required to understand grape and wine production
- an understanding of the wine production process for all major wine types, including how wine production is influenced by demands of cost, quality and throughput

- awareness of how scientific principles in the fields of biology, biochemistry, chemistry, and microbiology influence technical aspects of wine production
- an understanding at a biochemical and physiological level of how viticultural management influences grape quality
- an understanding of wine business management principles and wine marketing
- awareness of factors that have shaped the Australian and global wine industries and their current directions of development
- an understanding of sensory evaluation of wines and wine judging systems.

Skills

- ability to inter-relate scientific concepts and principles to production processes so that production problems are quickly identified and new production situations and demands are successfully handled
- the practical skills to manage a winery or a vineyard
- sensory evaluation skills that permit identification of winemaking problems, rapid detection of faults, and reliable assessment of wine quality and characteristics
- ability to understand and participate in wine judging processes
- ability to understand, and communicate effectively with technical vineyard and winery staff
- ability to apply principles of business management and marketing of wines.

Admission requirements

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

Australian applicants:

To be eligible for a place in this program, applicants will have at least a Sound Achievement over four semesters in Queensland Senior (Years 11 and 12) English. It is also recommended to have a Sound Achievement over four semesters in Mathematics B and Biological Science or Chemistry, or the equivalent of these qualifications.

It is recommended that international applicants should have the equivalent of a Sound Achievement over four semesters of Queensland Senior (Years 11 and 12) in Mathematics B and Biological Science or Chemistry. Please refer to [UniSQ International](#) for information about entry requirements.

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

To qualify for the award of Bachelor of Technology (Wine), a candidate must complete or be exempted from courses with a total value of at least 24 units, according to the following recommended enrolment pattern.

Required time limits

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

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.

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](#).

[Residential Schools](#) of three to five days duration are compulsory for those courses listed as having residential schools in the Recommended Enrolment Patterns below. Residential Schools of 3 days duration will be held at the Toowoomba Campus for the courses [BIO1101](#), [BIO2202](#), [CHE1110](#) and [CHE2120](#). Residential Schools of 5 days duration will be held at the Toowoomba Campus or the Queensland College of Wine Tourism (QCWT), Stanthorpe, Queensland, for the courses WIN2201, WIN2202, WIN2203, [WIN3304](#), and WIN3306.

Enquires on the Residential Schools should be directed to:

Prospective Students

- telephone 1800 269 500 (within Australia Free Call), +61 7 4631 5315 (From outside Australia) or complete an [enquiry form](#).
- email studysci@usq.edu.au

Currently Enrolled Students

- telephone +61 7 4631 2361
- email studysci@usq.edu.au

Credit

Candidates must complete at least eight units of courses offered by UniSQ whilst enrolled in this program so at most sixteen units of exemptions may be granted.

Course transfers

Transfer or credit for completed courses from UniSQ or other institutions from incomplete programs to the Bachelor of Technology (Wine) program will be allowed in accordance with UniSQ regulations provided the courses in question are compatible with the requirements for the Bachelor of Technology (Wine).

Honours

Students meeting academic requirements in the undergraduate program may become eligible to continue on to a research Honours program, an 8-unit Coursework Masters program and further postgraduate study.

Recommended Enrolment Pattern: Full Time

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			
Year 1									
WIN1101 Grape and Wine Production	1	1	1	1					
BIO1101 Biology 1 *	1	1	1	1			C		Residential School: TWM BA
CHE1110 Chemistry 1 *	1	1	1	1			C		Residential School: TWM BA
MKT1001 Marketing Fundamentals	1	1	1	1, 2, 3				Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Marketing major students)	
WIN2102	1	2	1	2					
BIO2202 Plant Physiology *	1	2	1	2			C	Pre-requisite: BIO1101	
CHE2120 Chemistry 2 *	1	2	1	2			C	Pre-requisite: CHE1110	Residential School: TWM BA
STA2300	1	2	1	2, 3			O		
WIN2201	1	3					C		
Year 2									
WIN2202	2	1					C		Residential School: QCWT
WIN2203	2	1					C		Residential School: QCWT
ACC1101	2	1,2	2	1,2,3					
WIN2204			2	2					
WIN2205			2	2					
WIN2206			2	2					
Business Elective	2	2	2	2					
Year 3									
WIN3301 Sensory Analysis			3	1					
WIN3302 Viticultural Production			3	1					
CLI1110 Weather and Climate			3	1					

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			
WIN3303 Wine Production			3	1					
MGT3004 Creativity, Innovation and Entrepreneurship [^]			3	2					
WIN3304 Viticultural and Winemaking Practice 2	3	3					C	Pre-requisite: WIN1101	Residential School: QCWT
SCI3302 Work-Integrated-Learning	3	1, 2, 3						Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)	
WIN3306 Sensory Analysis Practice	3	1					C		
Business Elective Courses									
MKT2001 Marketing Communications	2	1	2	1, 3					
MKT2002 Global Marketing	2	1	2	1					
MKT3001 Marketing Intelligence	2	1	2	1				Pre-requisite: MKT1001	
MKT1002 Consumer Psychology	2	2	2	1, 2					
MKT2004 Marketing Channels	2	2	2	2					
MKT3007 Marketing Strategy	2	2	2	2				Pre-requisite: MKT1001	
TOU3010			2	2					

Footnotes

- * These courses are designed primarily for other programs, and have EXT residential school practical components. Candidates of the BTWN will undertake the residential schools as two blocks (Semester 1 - Biology 1 & Chemistry 1: Semester 2 – Chemistry 2 and Plant Physiology). International and Domestic students residing overseas wishing to carry forward all prac components into the final year will need to study these courses in 1st year and will carry IDM grades until the practical components are completed.
- [^] Students that have already completed MKT3006 Small and Medium Enterprise Development do not complete MKT3004.

Recommended Enrolment Pattern: Part Time

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			
Year 1									
WIN1101 Grape and Wine Production	1	1	1	1					
CHE1110 Chemistry 1 *	1	1	1	1			C		Residential School: TWM BA
WIN2102	1	2	1	2					
CHE2120 Chemistry 2 *	1	2	1	2			C	Pre-requisite: CHE1110	Residential School: TWM BA
Year 2									
BIO1101 Biology 1 *	2	1	2	1			C		Residential School: TWM BA

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			
MKT1001 Marketing Fundamentals	2	1	2	1, 2, 3				Enrolment is not permitted in MKT1001 if MKT1100 has been previously completed (excluding BBIZ 19398 Marketing major students)	
BIO2202 Plant Physiology *	2	2	2	2			C	Pre-requisite: BIO1101	Residential School: TWM BA
STA2300	2	2	2	2, 3			O		
WIN2201	3	3					C		
Year 3									
WIN2202	3	1					C		Residential School: QCWT
WIN2204			3	2					
WIN2205			3	2					
Year 4									
WIN2203	4	1					C		Residential School: QCWT
ACC1101	4	1,2	4	1,2,3					
WIN2206			4	2					
Business Elective	4	2	4	2					
Year 5									
WIN3301 Sensory Analysis			5	1					
WIN3302 Viticultural Production			5	1					
MGT3004 Creativity, Innovation and Entrepreneurship ^			5	2					
WIN3304 Viticultural and Winemaking Practice 2	5	3					C	Pre-requisite: WIN1101	Residential School: QCWT
Year 6									
WIN3303 Wine Production			6	1					
CLI1110 Weather and Climate			6	1					
SCI3302 Work-Integrated-Learning	6	1, 2, 3						Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)	
WIN3306 Sensory Analysis Practice	6	1					C		
Business Elective Courses									
MKT2001 Marketing Communications	4	1	4	1, 3					
MKT2002 Global Marketing	4	1	4	1					
MKT3001 Marketing Intelligence	4	1	4	1				Pre-requisite: MKT1001	
MKT1002 Consumer Psychology	4	2	4	1, 2					

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			
MKT2004 Marketing Channels	4	2	4	2					
MKT3007 Marketing Strategy	4	2	4	2				Pre-requisite: MKT1001	
TOU3010			4	2					

Footnotes

- * These courses are designed primarily for other programs, and have EXT residential school practical components. Candidates of the BTWN will undertake the residential schools as two blocks (Semester 1 - Biology 1 & Chemistry 1: Semester 2 – Chemistry 2 and Plant Physiology). International and Domestic students residing overseas wishing to carry forward all prac components into the final year will need to study these courses in 1st year and will carry IDM grades until the practical components are completed.
- ^ Students that have already completed MKT3006 Small and Medium Enterprise Development do not complete MGT3004.

Bachelor of Science (Honours) or Bachelor of Science (Honours) (Psychology) (BSCHorBSHP) - BSc(Hons) or BSci(Hon)(Psychology)

CRICOS code (International applicants): 043510M

	On-campus *	External	Online +
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Ipswich, 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	Commonwealth supported place Domestic full fee paying place
Standard duration:	1 year full-time; 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.

Footnotes

- * On-campus: The Psychology major (BSHP) is only available at UniSQ Ipswich. This major is no longer available at UniSQ Toowoomba for international students.
- + Online: Psychology major (BSHP) 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 Phone + 61 7 4631 1540 Email: usq.support@usq.edu.au

Professional accreditation

The Bachelor of Science (Honours) (BSHP) program Psychology major, is available in both on-campus and online modes, and is fully accredited by the [Australian Psychology Accreditation Council \(APAC\)](#) as a fourth-year program in psychology.

As a graduate of the Bachelor of Science (Honours) (Psychology) (BSHP) program, students will be eligible to apply for provisional registration as a psychologist with the Psychology Board of Australia. However, there is a requirement to complete a further two years of supervised practice or an approved Masters program after initial registration. Graduates are also eligible to apply to the [Australian Psychological Society](#) for Associate Membership. If graduates achieve a high level of Honours (either First Class or Second Class, Division A), they would be eligible to apply for a Masters program or PhD at UniSQ and other universities.

Program aims

The Bachelor of Science (Honours) aims to begin the training of students as research scientists in a variety of scientific disciplines including applied mathematics/statistics, biology, chemistry, environment and sustainability, computing, physics and psychology. Successful completion of the Bachelor of Science (Honours) (Psychology) (BSHP) psychology major enables graduates to register with the Psychology Board of Australia. Graduates who achieve a high level of Honours (either First Class or Second Class division A) would be eligible to apply for a Masters program or PhD at UniSQ and other universities.

Program objectives

Upon completion of the Honours program, graduates should be able to:

- (1) demonstrate high levels of proficiency in research and specific methodology including research planning and implementation, analysis, interpretation and evaluation of research results, and the presentation and communication of research findings
- (2) demonstrate a commitment to the ethical and social responsibilities of a practising scientist
- (3) develop the professional identity that leads to autonomy, well-developed judgement, adaptability and responsibility as a practitioner or scientist in their discipline
- (4) analyse critically, evaluate and transform information in order to develop solutions to complex problems in their chosen specialist area
- (5) demonstrate advanced knowledge and skills for work as a Professional or to proceed to PhD study subject to competitive evaluation of qualifications

Admission requirements

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

- Completion of an Australian university Bachelor degree (or equivalent) in the area of Honours study, normally, with a substantial amount of undergraduate study in the major area of the discipline in which the Honours study is to be undertaken, with a Grade Point Average (GPA) of 5 or above for: the whole program; or 5 or above in the second and third years of the program; or 5 or above in the major study area.
- Applicants must also be current in their major area of study. To ensure currency of knowledge, students will have commenced their undergraduate degree no earlier than eight years previous to the year of application and will have satisfied requirements for the award of that degree no more than three years previously.
- English Language Proficiency requirements of Category 2.

Applicants are advised to also note the following:

- Candidates for the Bachelor of Science (Honours) (Psychology) (BSHP) must have completed a program of study approved by the Australian Psychology Accreditation Council (APAC) as constituting the first three years (or equivalent) of study in psychology within the last three years.
- Candidates for all majors other than psychology must have both supervisory and honours committee approval prior to enrolment.

Satisfaction of admission requirements does not guarantee admission.

Note: Places within the Bachelor of Science (Honours) program specialising in Bachelor of Science (Honours) (Psychology) (BSHP) are limited by quota. Selection from applicants who met admission requirements will be based on ranking by GPA from previous Psychology studies. Quota size is determined by the availability of supervision places. Where the quota is filled in the Semester 1 intake, no further places will be offered in Semester 2 of that year.

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 Honours program consists of eight units of study including project courses and specialised courses. The program has seven majors - Applied Mathematics/Statistics, Bachelor of Science (Honours) (Psychology) (BSHP), Biology, Chemistry, Environment & Sustainability, Computing and Physics.

Students enrolled in the Bachelor of Science (Honours) will be given further information about project selection with their offers.

The project courses give students appropriate opportunity for research and scientific investigation of a topic within the area of the major study.

Required time limits

Students have a maximum of 2 years to complete this program.

Major studies

On enrolment, each student must choose one of the majors Applied Mathematics/Statistics, Biology, Chemistry, Environment & Sustainability, Computing, Physics or Bachelor of Science (Honours) (Psychology) (BSHP).

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](#). With prior approval by the Program Director, students may complete up to two courses cross-institutionally from Semester 1 2018 (and apply to students that commenced in 2017).

Honours

The level of honours awarded will be determined based on the UniSQ procedure. Please refer to the [Class of Honours Standard Schedule](#). Class of Honours will be calculated on Schedule A.

Enrolment

Mid-year intake

Mid-year intake is available for the Applied Mathematics/Statistics; Biology; Chemistry; Environment & Sustainability; Computing and Physics majors in the Bachelor of Science (Honours) program.

Recommended enrolment pattern - Applied Mathematics/Statistics; Biology; Chemistry; Environment & Sustainability; Computing; and Physics major

Supervisory approval must be obtained before undertaking external study

Students may commence their studies in either semester 1 or semester 2.

A part-time enrolment pattern is available. Students wanting to study part-time should [contact us](#) for this enrolment pattern.

To identify a potential honours supervisor, students need to contact the Program Director and can do this by emailing usq.support@usq.edu.au. Students must have supervisory approval before beginning their studies.

Major study: Applied Mathematics/Statistics, Biology, Chemistry, Environment & Sustainability, Computing, Physics							
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	
SCI4409 Science Honours Project 1 ^{* ^}	1	1	1	1			
SCI4410 Science Honours Project 2 ^{* ^}	1	2	1	2			
SCI4403 Special Study in Science [*]	1	1,2	1	1,2			
SCI4405 Research Practice and Ethics	1	1,2			1	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH or BHSH or BHEH
SCI4407 Complementary Studies A [#]	1	1			1	1	
SCI4408 Complementary Studies B [#]	1	2			1	2	

Footnotes

* Students must consult the Program Director on the selection of an appropriate project, and a suitable specialist topic for [SCI4403 Special Study in Science](#).

^ Two-unit course.

The online (ONL) offering (depending on the students' negotiated topic, studies and assessment) may have attendance requirements.

Recommended enrolment pattern - Bachelor of Science (Honours) (Psychology) (BSHP) major

A part-time enrolment pattern is available. Students wanting to study part-time should [contact us](#) for this enrolment pattern.

There are six compulsory courses (worth eight units). The compulsory courses are as follows.

Major study: Bachelor of Science (Honours) (Psychology) (BSHP)							
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	
PSY4101 Psychology Honours Project A ^{+\$}	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (12302 Psychology) or BSHP or MRES (19112)

Major study: Bachelor of Science (Honours) (Psychology) (BSHP)							
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	
							Psychology). BPSH students need to apply for manual enrolment in this course.
PSY4111 Advanced Research Approaches ^{^§}	1	1			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.
PSY4020 Ethical and Professional Practice ^{^§}	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH (Psychology major 12302) or BSHP or MSCR (Psychology Research)
PSY4040 Psychological Interventions ^{++^}	1	2			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.
PSY4102 Psychology Honours Project B ^{+++*}	1	2			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.
PSY4070 Assessment and Interview Skills ^{+++^}	1	2			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.

Footnotes

- * If you start the Honours project in semester 1 (by enrolling in [PSY4101](#)), you must complete it by the end of semester 2 in the same year (by enrolling in [PSY4102](#)). The length of the project is normally two semesters and this is only extended with the written permission of the examiner for the thesis project courses.
- + Two unit course.
- § Not available ONC Ipswich in S1 2023
- ^ Part-time students are advised that they should enrol in the following compulsory courses ([PSY4020](#), [PSY4040](#), [PSY4111](#) and [PSY4070](#)) in the first year of enrolment.
- ++ Not available ONC Ipswich in S2 2023
- +++ Not available ONC Ipswich in S2 2023

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	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
Computing	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
Food Science	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
Human Physiology	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
Mathematics	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
Statistics	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • ENM1600 Engineering Mathematics • ENM2600 Advanced Engineering Mathematics • CMS1100 Communicating in the Sciences • SCI1001 Succeeding in Science • STA1003 Fundamental Statistics 	3
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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](#)

Bachelor of Agricultural Technology and Management (BATM) - BATMan

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 907231; External: 907445

CRICOS code (International applicants): 108983C

	On-campus	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Toowoomba	-
Fees:	Commonwealth supported place International full fee paying place	Commonwealth supported place International full fee paying place
Residential school:	Mandatory	Mandatory
Standard duration:	3 years full-time, 6 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

Program aims

The Bachelor of Agricultural Technology and Management (BATM) will produce job ready graduates who have the expertise and practical skills to apply and develop new and emerging agricultural technologies in both crop and animal production settings, and deliver outcomes that are safe, effective and financially and environmentally sustainable to address industry needs.

Program objectives

On completion of this program, students should be able to:

- Evaluate, adapt and utilise knowledge and skills that underpin the agricultural production sector, including knowledge of emerging agricultural technologies, agricultural science, data science and business management to achieve key outcomes.
- Evaluate operational management of agricultural production systems and identify opportunities for system enhancement through the integration of new and emerging technologies.
- Communicate effectively across a diverse range of stakeholders using oral, written and technology-based approaches and work effectively across multidisciplinary teams within the agricultural production sector.
- Integrate and apply discipline expertise to address production, financial, environmental and social challenges within the agricultural production system.
- Appraise systems in agricultural production, operations and their associated supporting technologies and make informed decisions to ensure their use in an efficient and safe manner.

- Engage in lifelong learning through reflection, self-education and professional development, and be accountable for their personal and professional actions by managing personal performance.
- Make guided judgements in their professional practice when identifying and responding to cultural, ethical and social issues including those relevant to indigenous peoples and those of diverse cultures and backgrounds.

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.[^]
- English Language Proficiency requirements for Category 2.

Applicants are advised to also address the following:

- Assumed knowledge expectations: English and General Mathematics (Units 3 & 4, C) or equivalent.
- Recommended Prior Study: One of Agricultural Science, Biological Science, Chemistry or 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](#).

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 consists of 24 units comprised of:

- Five core courses (2 courses worth 0.5 units each)
- Production Technology 12-unit extended major

And a choice of:

- Eight units of electives;
- Two 4-unit minors from: Agricultural Systems, Animal Production, Computing, Crop Production, Data Analytics, Food Technology or Geographic Information Systems;
- One 4-unit Minor from: Agricultural Systems, Animal Production, Computing, Crop Production, Data Analytics, Food Technology or Geographic Information Systems and four units of Electives.

Program completion requirements

Students must satisfactorily complete 24 credit points of units, of which a minimum of 7 units are Level 3 courses.

Some courses have mandatory attendance requirements.

Required time limits

Students have a maximum of 9 years to complete this program.

Core courses

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

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Core Courses				
AGR1109 Professionalism in Agriculture *	1,2			1,2
AGR2109 Practical Investigations in Agricultural Technology	1		1	
AGR2209 Innovation and Entrepreneurship in Agriculture *	2			2
AGR3109 Agricultural Technology Industry Placement			1,2	
AGR3209 Agricultural Technology and Management Project	2			2

Footnotes

* 0.5-unit course

Production Technology Extended 12-unit Major courses

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Major Courses				
STA1003 Fundamental Statistics §	1,2	2		1,2,3
CSC1401 Foundation Programming £	1,2,3	1,2		1,2,3
GIS1402 Geographic Information Systems £	1	1		1,3
SVY1110 Introduction to Global Positioning System	2	2		2
AGR1104 Farm Safety and Operations 1 *	1		1	
AGR2104 Farm Safety and Operations 2 *	1,2		1,2	
AGR2302 Agricultural Machinery	1			1
AGR2202 Instrumentation and Automation in Agriculture	2		2	
AGR2008 Business Principles for Agriculture				2
AGR3305 Precision and Smart Technologies in Agriculture	2			2
AGR3105 Smart Data Farming	1			1
LAW3600 Agricultural Technologies and the Law	1			1
AGR3302 Sensors and Technology in Animal Production	2		2	

Footnotes

§ 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

* 0.5-unit course

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.

Before undertaking any course or minor, students should ensure that all enrolment requirements are satisfied.

The following [minor studies](#) are available in the Bachelor of Agricultural Technology and Management:

- [Agricultural Systems](#)
- [Animal Production](#)
- [Computing](#)
- [Crop Production](#)
- [Data Analytics](#)
- [Food Technology](#)
- [Geographic Information Systems](#)

IT requirements

For information technology requirements, please refer to the [minimum computing standards](#).

Other program requirements

This program requires students to work with animals and in outdoor environments. For their protection, students must be immunised for:

- Tetanus
- Q-fever (unless the student has proven immunity – tested prior to vaccination)

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](#).

If you are enrolled in the External study mode in this degree, you will have the opportunity to come on-campus for residential schools, where you will attend workshops and tutorials, use the facilities and meet staff and other students.

The courses below include residential school:

Core Courses

- [AGR2109 Practical Investigations in Agricultural Technology](#)

Production Technology Extended 12-unit major

- [AGR1104 Farm Safety and Operations 1](#)
- [AGR2104 Farm Safety and Operations 2](#)
- [AGR2202 Instrumentation and Automation in Agriculture](#)

Animal Production 4-unit minor

- [AGR1101 Animal Health, Welfare and Behaviour](#)
- [AGR2203 Animal Nutrition](#)
- [AGR3202 Animal Reproduction](#)
- [BIO2103 Biology 2](#)

Crop Production 4-unit minor

- [AGR2304 Plant Breeding](#)
- [BIO1101 Biology 1](#)
- [BIO2202 Plant Physiology](#)
- [BIO3318 Plant Microbe Interactions](#)

Food Technology 4-unit minor

- [BIO3811 Food Product Development](#)
- [BIO3821 Food Quality Assurance](#)

Credit

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

Full-time recommended enrolment pattern - Semester 1 start

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.

Course	Year of program and 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								
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3		
GIS1402 Geographic Information Systems [£]	1	1			1	1,3		
Minor course or elective	1	1			1	1		
AGR1109 Professionalism in Agriculture ^{* +}	1	1,2			1	1,2		
AGR1104 Farm Safety and Operations 1 ^{^ * +}	1	1	1	1			M	
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
Minor course or elective [@]	1	2			1	2		
SVY1110 Introduction to Global Positioning System	1	2			1	2		
AGR2202 Instrumentation and Automation in Agriculture [^]	1	2	1	2			M	
Year 2								
Minor course or elective [%]	2	1			2	1		
Minor course or elective ^{<}	2	1			2	1		
AGR2302 Agricultural Machinery	2	1			2	1		
AGR2109 Practical Investigations in Agricultural Technology [#]	2	1	2	1			M	Pre-requisite or Co-requisite: AGR1104 and AGR2104
AGR2104 Farm Safety and Operations 2 ^{^ * +}	2	1,2	2	1,2			M	
Minor course or elective	2	2			2	2		
AGR3305 Precision and Smart Technologies in Agriculture	2	2			2	2		
AGR2008 Business Principles for Agriculture					2	2		
AGR2109 Practical Investigations in Agricultural Technology [#]	2	2	2	2			M	Pre-requisite or Co-requisite: AGR1104 and AGR2104
AGR2209 Innovation and Entrepreneurship in Agriculture [*]	2	2			2	2		Pre-requisite or Co-requisite: AGR2008
Year 3								
Minor course or elective [~]	3	1			3	1		
AGR3105 Smart Data Farming	3	1			3	1		
LAW3600 Agricultural Technologies and the Law	3	1			3	1		
AGR3109 Agricultural Technology Industry Placement			3	1,2				
Minor course or elective	3	2			3	2		
Minor course or elective	3	2			3	2		
AGR3302 Sensors and Technology in Animal Production	3	2	3	2			HR	
AGR3209 Agricultural Technology and Management Project	3	2			3	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
*	0.5–unit course
+	These 0.5–unit courses build initial knowledge and are not sequential
^	Mandatory residential school for external students
§	Unavailable online in S3 2023
@	Recommended AGR2301 Agricultural Science from Agricultural Systems minor
%	Recommended AGR2303 Agronomy from Agricultural Systems minor
<	Recommended AGR2201 Animal Production Systems from Agricultural Systems minor
#	This course will run over Semester 1 and Semester 2. Students enrol in Semester 1.
~	Recommended AGR3304 Soil Science from Agricultural Systems minor

Full-time recommended enrolment pattern - Semester 2 start

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.

Course	Year of program and 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								
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3		
Minor course or elective [@]	1	2			1	2		
SVY1110 Introduction to Global Positioning System	1	2			1	2		
AGR1109 Professionalism in Agriculture ^{* +}	1	1,2			1	1,2		
AGR2104 Farm Safety and Operations 2 ^{^ * +}	1	1,2	1	1,2			M	
Minor course or elective	1	1			1	1		
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
GIS1402 Geographic Information Systems [£]	1	1			1	1,3		
AGR1104 Farm Safety and Operations 1 ^{^ * +}	1	1	1	1			M	
AGR2109 Practical Investigations in Agricultural Technology [#]	1	1	1	1			M	Pre-requisite or Co-requisite: AGR1104 and AGR2104
Year 2								
AGR2008 Business Principles for Agriculture					2	2		
AGR3305 Precision and Smart Technologies in Agriculture	2	2			2	2		
AGR2202 Instrumentation and Automation in Agriculture [^]	2	2	2	2			M	
AGR2109 Practical Investigations in Agricultural Technology [#]	2	2	2	2			M	Pre-requisite or Co-requisite: AGR1104 and AGR2104
AGR2209 Innovation and Entrepreneurship in Agriculture [*]	2	2			2	2		Pre-requisite or Co-requisite: AGR2008
Minor course or elective [%]	2	1			2	1		
Minor course or elective ^{<}	2	1			2	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		
AGR2302 Agricultural Machinery	2	1			2	1		
Minor course or elective	2	1			2	1		
Year 3								
AGR3109 Agricultural Technology Industry Placement			3	1,2				
Minor course or elective	3	2			3	2		
Minor course or elective	3	2			3	2		
AGR3302 Sensors and Technology in Animal Production	3	2	3	2			HR	
Minor course or elective ~	3	1			3	1		
AGR3105 Smart Data Farming	3	1			3	1		
LAW3600 Agricultural Technologies and the Law	3	1			3	1		
AGR3209 Agricultural Technology and Management Project	3	1			3	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
- @ Recommended [AGR2301 Agricultural Science](#) from Agricultural Systems minor
- * 0.5–unit course
- + These 0.5–unit courses build initial knowledge and are not sequential
- ^ Mandatory residential school for external students
- \$ Unavailable online in S3 2023
- # This course will run over Semester 1 and Semester 2. Students enrol in Semester 1.
- % Recommended [AGR2303 Agronomy](#) from Agricultural Systems minor
- < Recommended [AGR2201 Animal Production Systems](#) from Agricultural Systems minor
- ~ recommended [AGR3304 Soil Science](#) from Agricultural Systems minor

Bachelor of Environmental Science (BENV) - BEnvSc

QTAC code (Australian and New Zealand applicants): Toowoomba campus: 906441; External: 907375

CRICOS code (International applicants): 108984B

	On-campus~	External
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Toowoomba	-
Fees:	Commonwealth supported place International full fee paying place	Commonwealth supported place International full fee paying place
Residential school:	Mandatory	Mandatory
Standard duration:	3 years full-time, 6 years part-time	
Program articulation:	From : Diploma of 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

~ Not all courses are available in on-campus mode

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 Bachelor of Environmental Science aims to provide detailed knowledge of major environmental issues, human impacts and their key environmental drivers, and apply this knowledge towards more sustainable environmental and resource management. The program provides students with in-depth knowledge and understanding and practical/technological skills within four majors (climate science, ecology and conservation, water science, and wildlife and pest management) in order to operate as competent professionals in a wide range of environmental science careers.

Program Rules

Students are required to:

- Satisfactorily complete 24 credit points (24 mandatory courses) as listed in the standard progression to graduate from the program.
At least four units will be at Level 3. .
- Satisfactorily complete all courses within 9 years.
- Maintain satisfactory academic achievement throughout the duration of the program, consistent with the UniSQ [Student Academic Progress Procedure](#).

- Meet all mandatory residential school requirements where present in courses.

Program objectives

On completion of this program, students should be able to:

- apply a broad and coherent body of theoretical and applied knowledge in the environmental sciences, with in-depth knowledge in one or more specialist disciplines.
- apply a range of cognitive, technical and practical skills reflecting the underlying principles of one or more environmental science disciplines, to collect, analyse, interpret and present environmental science data using appropriate experimental, computational, statistical and technological approaches.
- exhibit well developed scientific literacy and oral, written and digital communication skills to explain environmental sciences issues and scientific results to a range of audiences.
- work independently and collaboratively to critically and creatively analyse issues and develop appropriate understanding and solutions to complex environmental problems across a range of cultural, institutional, national and global contexts.
- display ethical, professional and cultural awareness, including those of Indigenous knowledge systems and practises, in a wide diversity of professional applications.

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.[^]
- English Language Proficiency requirements for Category 2.
- Subject Pre-requisite: General Mathematics (Units 3 & 4, C) or equivalent.

Applicants are advised to also address the following:

- Assumed knowledge expectations: English.
- Recommended Prior Study: Mathematical Methods and one of Biology, Chemistry or Physics (Units 3 & 4, C) or equivalent.

If students do not have the recommended Mathematical Methods level for entry then they will be required to undertake [MAT1000 Mathematics Fundamentals](#) as an elective.

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](#).

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 consists of 24 units comprised of:

- 8 core courses;
- 1 x 8-unit Major;

And either:

- 8 x Elective units; or
- 1 x 8-unit Second Major; or
- 2 x 4-unit Discipline Minors; or
- 1 x 4-unit Discipline Minor and 1 x 4-unit University Minor; or
- 1 x 4-unit Discipline Minor and 4 units of Electives.

At least 4 courses in the program must be at Level 3.

Required time limits

Students have a maximum of 9 years to complete this program.

Core courses

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

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
REN1201 Environmental Studies ⁺	1	1		1
CLI1110 Weather and Climate	1	1		1
SCI1001 Succeeding in Science	1			1

CMS1100 Communicating in the Sciences	1			2
STA1003 Fundamental Statistics §	1,2	2		1,2,3
MAT1100 Foundation Mathematics	2	2		2
IDK2203 Indigenous Environmental Perspectives and Knowledge	2			2
SCI3302 Work-Integrated-Learning	1,2,3		1,2,3	

Footnotes

+ The Springfield on-campus offer is not available in 2023.

§ Unavailable online in S3 2023

Major studies

The following 8-unit majors are available in the Bachelor of Environmental Science:

Climate Science

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Major Courses				
CSC1401 Foundation Programming £	1,2,3	1,2		1,2,3
MAT1102 Algebra and Calculus I	1			1
MAT2100 Algebra and Calculus II	2			2
CLI2201 Climate Change and Variability				2
STA2301 Distribution Theory	1			1
CLI3301 Climate and Environment Risk Assessment				1
CLI3302 Adaptation to Climate Change				2
STA3301 Statistical Models >	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 Semester 2, 2023 Toowoomba On-campus

Ecology and Conservation

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Major Courses				
ENV2105 Applied Chemistry and Microbiology	1			1
REN2200 Ecology for Sustainability	1			1
REN2201 Ecological Methods +	2		2	
BIO2100 The Australian Biota #	1		1	
REN3301 Biodiversity and Conservation	2			2
REN3302 Sustainable Resource Use	2			2
REN3103 Applied Terrestrial Ecology +	1		1	
REN3104 Applied Freshwater Ecology +	1		1	

Footnotes

- + Mandatory residential school (ONC students and EXT students attend Residential School)
Highly recommended residential school (ONC students and EXT students attend Residential School)

Water Science

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Major Courses				
WAT1101 Introduction to Water Science ^{#†}	1		1	
MAT1102 Algebra and Calculus I	1			1
MAT2100 Algebra and Calculus II	2			2
REN2200 Ecology for Sustainability	1			1
WAT2202 Catchment and Water Resources Management ^{#@}	2		2	
ENV3105 Hydrology	2	2		2
WAT3101 Hydrological Modelling and Simulation [^]	1			1
REN3104 Applied Freshwater Ecology ⁺	1		1	

Footnotes

- # Highly recommended residential school (ONC students and EXT students attend Residential School)
† Unavailable in 2023
@ This course is not available in 2023
^ This course will be offered in 2024
+ Mandatory residential school (ONC students and EXT students attend Residential School)

Wildlife and Pest Management

Course Name and Code	Semester(s) Offered			
	Toowoomba	Springfield	External	Online
Major Courses				
AGR1101 Animal Health, Welfare and Behaviour [#]	1		1	
WLF1201 Field Skills for Wildlife, Game and Pest Management [*]			2	
WLF2101 Management of Wildlife [#]	1		1	
BIO2100 The Australian Biota [#]	1		1	
WLF2201 Vertebrate Pests and Biosecurity [#]	2		2	
REN2201 Ecological Methods ⁺	2		2	
WLF3101 Principles of Wildlife Management & Sustainable Use [@]				1
AGR3302 Sensors and Technology in Animal Production	2		2	

Footnotes

- # Highly recommended residential school (ONC students and EXT students attend Residential School)
* Mandatory residential school
+ Mandatory residential school (ONC students and EXT students attend Residential School)

@ This course will be offered in 2024

Minor Studies

Discipline Minor studies in Environmental Sciences are designed to enable students to widen their knowledge and perspectives, or to complement their choice of major.

Students may choose any combination of up to two Discipline Minors listed below or [University Minors](#) or 4-8 units of general electives instead:

- [Agricultural Studies](#)
- [Applied Data Analysis](#)
- [Biodiversity](#)
- [Climatology](#)
- [Geographic Information Systems](#)
- [Indigenous Studies](#)
- [Journalism](#)
- [Urban and Regional Planning](#)
- [Water Resources](#)
- [Wildlife Studies](#)

Students can replace any completed course(s) in a listed minor with a general elective(s). Students may consult the Program Director for a recommendation.

Students should be aware that some courses may have residential school requirements and enrolment requirements (such as pre-requisites) that must be satisfied for any course selection.

Electives/Approved courses

Elective courses enable students to further increase their knowledge and widen their perspectives. Students can choose up to 8 electives which may be any UniSQ course. Choice of an elective will depend on the availability of the course(s), timetabling constraints, any specified pre-requisites and quotas. Students may consult the Program Director for a recommendation.

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](#).

Ecology and Conservation Major

- [BIO2100 The Australian Biota](#)
- [REN2201 Ecological Methods](#)
- [REN3103 Applied Terrestrial Ecology](#)
- [REN3104 Applied Freshwater Ecology](#)

Water Science Major

- [REN3104 Applied Freshwater Ecology](#)
- [WAT1101 Introduction to Water Science](#)
- [WAT2202 Catchment and Water Resources Management](#)

Wildlife and Pest Management Major

- [BIO2100 The Australian Biota](#)
- [REN2201 Ecological Methods](#)

- [WLF1201 Field Skills for Wildlife, Game and Pest Management](#)
- [WLF2101 Management of Wildlife](#)
- [WLF2201 Vertebrate Pests and Biosecurity](#)
- [AGR1101 Animal Health, Welfare and Behaviour](#)
- [AGR3302 Sensors and Technology in Animal Production](#)

Exit points

Students who, for whatever reason, are unable to complete the Bachelor of Environmental Science and who satisfy all of the requirements may exit with a [DPSC Diploma of Science](#).

Credit

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

Enrolment

Progression

Students are advised to consult with student support usq.support@usq.edu.au in situations where their progression is affected either by failure in pre-requisite courses, or where they choose a part-time study pattern.

Recommended enrolment pattern - Climate Science Major - commencing in Semester 1

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	
Year 1							
REN1201 Environmental Studies ⁺	1	1			1	1	Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3	
CMS1100 Communicating in the Sciences	1	1			1	1,2	
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	2	
Year 2							
Second Major or Minor or Elective (recommended PHY1104 Physics 1)	2	1			2	1	
MAT1102 Algebra and Calculus I	2	1			2	1	
Second Major or Minor or Elective (recommended ENV2105 Applied Chemistry and Microbiology)	2	1			2	1	
Second Major or Minor or Elective	2	1			2	1	
CLI2201 Climate Change and Variability					2	2	
MAT2100 Algebra and Calculus II	2	2			2	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
							the following program: MSCN or MEPR or BSED
Second Major or Minor or Elective (recommended WAT2202 Catchment and Water Resources Management) @*	2	2	2	2			
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2	
Year 3							
CLI3301 Climate and Environment Risk Assessment					3	1	
STA2301 Distribution Theory	3	1			3	1	Pre-requisite: (STA2300 or STA1003 or e equivalent) and (MAT1102 or ENM1600)
Second Major or Minor or Elective	3	1			3	1	
Choose one of the following courses:							
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR							
Second Major or Minor or Elective	3	1			3	1	
CLI3302 Adaptation to Climate Change					3	2	
Second Major or Minor or Elective (recommended REN3302 Sustainable Resource Use)	3	2			3	2	
STA3301 Statistical Models >	3	2			3	2	Pre-requisite: STA3300 or approval of examiner or Students must have completed STA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
Choose one of the following courses:							
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
Second Major or Minor or Elective	3	2			3	2	

Footnotes

- + The Springfield on-campus offer is not available in 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 S3 2023
@ This course is not available in 2023
* WAT2202 Catchment and Water Resources Management has a highly recommended residential school for on-campus and external students
SCI3302 Work-Integrated-Learning is a core course and must be completed
> Unavailable Semester 2, 2023 Toowoomba On-campus

Recommended enrolment pattern - Climate Science Major - commencing in Semester 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	
Year 1							
CMS1100 Communicating in the Sciences	1	1			1	1,2	
STA1003 Fundamental Statistics §	1	1,2			1	1,2,3	Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed.

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 enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	2	
REN1201 Environmental Studies ⁺	1	1			1	1	Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1	
SCI1001 Succeeding in Science	1	1			1	1	
CSC1401 Foundation Programming [£]	1	1,2,3			1	1,2,3	
Year 2							
Second Major or Minor or Elective (recommended WAT2202 Catchment and Water Resources Management) ^{@*}	2	2	2	2			
CLI2201 Climate Change and Variability					2	2	
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2	
STA3301 Statistical Models ^{>}	2	2			2	2	Pre-requisite: STA3300 or approval of examiner or Students must have completed STA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
Second Major or Minor or Elective (recommended PHY1104 Physics 1)	2	1			2	1	
MAT1102 Algebra and Calculus I	2	1			2	1	
Second Major or Minor or Elective (recommended ENV2105 Applied Chemistry and Microbiology)	2	1			2	1	
Second Major or Minor or Elective	2	1			2	1	
Year 3							
CLI3302 Adaptation to Climate Change					3	2	
Second Major or Minor or Elective (recommended REN3302 Sustainable Resource Use)	3	2			3	2	
MAT2100 Algebra and Calculus II	3	2			3	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
Choose one of the following courses:							
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR							
Second Major or Minor or Elective	3	2			3	2	
CLI3301 Climate and Environment Risk Assessment					3	1	
STA2301 Distribution Theory	3	1			3	1	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT1102 or ENM1600)
Second Major or Minor or Elective	3	1			3	1	

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 courses:							
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR							
Second Major or Minor or Elective	3	1			3	1	

Footnotes

- § Unavailable online in S3 2023
+ The Springfield on-campus offer is not available in 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 course is not available in 2023
* WAT2202 Catchment and Water Resources Management has a highly recommended residential school for on-campus and external students
> Unavailable Semester 2, 2023 Toowoomba On-campus
[SCI3302 Work-Integrated-Learning](#) is a core course and must be completed

Recommended enrolment pattern - Ecology and Conservation Major - commencing in Semester 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 1								
REN1201 Environmental Studies ⁺⁺	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
Second Major or Minor or Elective (recommended BIO1101 Biology 1) [^]	1	1	1	1			HR	
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	2		
Year 2								
REN2200 Ecology for Sustainability	2	1			2	1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
ENV2105 Applied Chemistry and Microbiology	2	1			2	1		
BIO2100 The Australian Biota ⁺	2	1	2	1			HR	

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Second Major or Minor or Elective	2	1			2	1		
Second Major or Minor or Elective (recommended BIO2103 Biology 2) ^{\$}	2	2	2	2			HR	
Second Major or Minor or Elective (recommended BIO2219 Genetics)	2	2			2	2		
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
REN2201 Ecological Methods [*]	2	2	2	2			M	Pre-requisite: STA1003
Year 3								
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
REN3103 Applied Terrestrial Ecology [*]	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
REN3104 Applied Freshwater Ecology [*]	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
Second Major or Minor or Elective	3	1			3	1		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	2		
REN3301 Biodiversity and Conservation	3	2			3	2		
REN3302 Sustainable Resource Use	3	2			3	2		
Second Major or Minor or Elective (recommended BIO3318 Plant-Microbe Interactions) ^{**}	3	2	3	2			HR	

Footnotes

- ++ The Springfield on-campus offer is not available in 2023.
[^] BIO1101 Biology 1 has a highly recommended residential school for external students
^{\$} Unavailable online in S3 2023
⁺ Highly recommended residential school for on-campus and external students
^{\$} BIO2103 Biology 2 has a highly recommended residential school for on-campus and external students
^{*} Mandatory residential school for on-campus and external students
[#] SCI3302 Work-Integrated-Learning is a core course and must be completed
^{**} BIO3318 Plant Microbe Interactions has a highly recommended residential school for on-campus and external students

Recommended enrolment pattern - Ecology and Conservation Major - commencing in Semester 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		
Year 1								
CMS1100 Communicating in the Sciences	1	1			1	1,2		

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		
STA1003 Fundamental Statistics §	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	2		
REN1201 Environmental Studies ++	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
Second Major or Minor or Elective (recommended BIO1101 Biology 1) ^	1	1	1	1			HR	
Year 2								
Second Major or Minor or Elective (recommended BIO2103 Biology 2) §	2	2	2	2			HR	
Second Major or Minor or Elective (recommended BIO2219 Genetics)	2	2			2	2		
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
Second Major or Minor or Elective (recommend BIO3318 Plant Microbe Interactions) **	2	2	2	2			HR	
ENV2105 Applied Chemistry and Microbiology	2	1			2	1		
BIO2100 The Australian Biota +	2	1	2	1			HR	
REN2200 Ecology for Sustainability	2	1			2	1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
Second Major or Minor or Elective	2	1			2	1		
Year 3								
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	2		
REN3301 Biodiversity and Conservation	3	2			3	2		
REN3302 Sustainable Resource Use	3	2			3	2		
REN2201 Ecological Methods *	3	2	3	2			M	Pre-requisite: STA1003

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
REN3103 Applied Terrestrial Ecology [*]	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
REN3104 Applied Freshwater Ecology [*]	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
Second Major or Minor or Elective	3	1			3	1		

Footnotes

- § Unavailable online in S3 2023
 ++ The Springfield on-campus offer is not available in 2023.
 ^ [BIO1101 Biology 1](#) has a highly recommended residential school for external students
 \$ [BIO2103 Biology 2](#) has a highly recommended residential school for on-campus and external students
 ** [BIO3318 Plant Microbe Interactions](#) has a highly recommended residential school for on-campus and external students
 + Highly recommended residential school for on-campus and external students
 # [SCI3302 Work-Integrated-Learning](#) is a core course and must be completed
 * Mandatory residential school for on-campus and external students

Recommended enrolment pattern - Water Science Major - commencing in Semester 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 1								
REN1201 Environmental Studies ⁺⁺	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
WAT1101 Introduction to Water Science ^{* †}	1	1	1	1			HR	
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics [§]	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or S TA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	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		
Year 2								
REN2200 Ecology for Sustainability	2	1			2	1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
Second Major or Minor or Elective (recommend ENV2105 Applied Chemistry and Microbiology)	2	1			2	1		
MAT1102 Algebra and Calculus I	2	1			2	1		
Second Major or Minor or Elective (recommend ENV2201 Land Studies)	2	1			2	1		
Second Major or Minor or Elective (recommended CLI2201 Climate Change and Variability)	2	2			2	2		
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
MAT2100 Algebra and Calculus II	2	2			2	2		Pre-requisite: MAT1102 or MAT1502 or ENM1600 or S tudents must be enrolled in the following program: MSCN or MEPR or BSED
WAT2202 Catchment and Water Resources Management *@	2	2	2	2			HR	
Year 3								
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
REN3104 Applied Freshwater Ecology +	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
WAT3101 Hydrological Modelling and Simulation ^^	3	1			3	1		
Second Major or Minor or Elective	3	1			3	1		
Second Major or Minor or Elective (recommend REN3302 Sustainable Resource Use)	3	2			3	2		
ENV3105 Hydrology	3	2			3	2		
Second Major or Minor or Elective	3	2			3	2		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	2		

Footnotes

- ++ The Springfield on-campus offer is not available in 2023.
 * Highly recommended residential school for on-campus and external students
 † Unavailable in 2023
 § Unavailable online in S3 2023
 @ This course is not available in 2023
 # [SCI3302 Work-Integrated-Learning](#) is a core course and must be completed
 + Mandatory residential school for on-campus and external students
 ^^ This course will be offered in 2024

Recommended enrolment pattern - Water Science Major - commencing in Semester 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		
Year 1								
CMS1100 Communicating in the Sciences	1	1			1	1,2		
STA1003 Fundamental Statistics §	1	1,2			1	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or undertaking the Accounting Major in the BBCM, are not eligible for enrolment.
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
Second Major or Minor or Elective	1	2			1	2		
REN1201 Environmental Studies ++	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
CLI1110 Weather and Climate	1	1			1	1		
SCI1001 Succeeding in Science	1	1			1	1		
WAT1101 Introduction to Water Science * †	1	1	1	1			HR	
Year 2								
Second Major or Minor or Elective (recommended CLI2201 Climate Change and Variability)	2	2			2	2		
WAT2202 Catchment and Water Resources Management *@	2	2	2	2			HR	
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
Second Major or Minor or Elective	2	2			2	2		
REN2200 Ecology for Sustainability	2	1			2	1		Enrolment is not permitted in REN2200 if REN8202 has been previously completed.
Second Major or Minor or Elective (recommend ENV2201 Land Studies)	2	1			2	1		
MAT1102 Algebra and Calculus I	2	1			2	1		
Second Major or Minor or Elective (recommend ENV2105 Applied Chemistry and Microbiology)	2	1			2	1		
Year 3								
Second Major or Minor or Elective (recommend REN3302 Sustainable Resource Use)	3	2			3	2		
MAT2100 Algebra and Calculus II	3	2			3	2		Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
ENV3105 Hydrology	3	2			3	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		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	2		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning [#]	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
REN3104 Applied Freshwater Ecology ⁺	3	1	3	1			M	Pre-requisite: STA1003 and (REN2200 or REN2201)
WAT3101 Hydrological Modelling and Simulation ^{^^}	3	1			3	1		
Second Major or Minor or Elective	3	1			3	1		

Footnotes

- § Unavailable online in S3 2023
 ++ The Springfield on-campus offer is not available in 2023.
 * Highly recommended residential school for on-campus and external students
 † Unavailable in 2023
 @ This course is not available in 2023
 # [SCI3302 Work-Integrated-Learning](#) is a core course and must be completed
 + Mandatory residential school for on-campus and external students
 ^^ This course will be offered in 2024

Recommended enrolment pattern - Wildlife and Pest Management Major - commencing in Semester 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 1								
AGR1101 Animal Health, Welfare and Behaviour *	1	1	1	1			HR	
REN1201 Environmental Studies ++	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SCI1001 Succeeding in Science	1	1			1	1		
WLF2101 Management of Wildlife *	1	1	1	1			HR	
Second Major or Minor or Elective (recommend BIO2103 Biology 2) ^	1	2	1	2			HR	
CMS1100 Communicating in the Sciences	1	1			1	1,2		
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
WLF1201 Field Skills for Wildlife, Game and Pest Management			1	2			M	

Course	Year of program and 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								
Second Major or Minor or Elective (recommended REN2200 Ecology for Sustainability)	2	1			2	1		
STA1003 Fundamental Statistics §	2	1,2			2	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
BIO2100 The Australian Biota *	2	1	2	1			HR	
CLI1110 Weather and Climate	2	1			2	1		
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
Second Major or Minor or Elective (recommended BIO2219 Genetics)	2	2			2	2		
REN2201 Ecological Methods +	2	2	2	2			M	Pre-requisite: STA1003
WLF2201 Vertebrate Pests and Biosecurity *	2	2	2	2			HR	
Year 3								
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
WLF3101 Principles of Wildlife Management & Sustainable Use					3	1		
Second Major or Minor or Elective	3	1			3	1		
Second Major or Minor or Elective	3	1			3	1		
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	2		
Second Major or Minor or Elective (recommended WLF3201 Captive Wildlife Management) ** §	3	2	3	2			HR	
Second Major or Minor or Elective (recommended REN3301 Biodiversity and Conservation)	3	2			3	2		
AGR3302 Sensors and Technology in Animal Production	3	2	3	2			HR	

Footnotes

* Highly recommended residential school (ONC students and EXT students attend Residential School)

++ The Springfield on-campus offer is not available in 2023.

^ [BIO2103 Biology 2](#) has a highly recommended residential school for on-campus and external students

§ Unavailable online in S3 2023

+ Mandatory residential school for on-campus and external students

[SCI3302 Work-Integrated-Learning](#) is a core course and must be completed

** [WLF3201 Captive Wildlife Management](#) has a highly recommended residential school for on-campus and external students

\$ WLF3201 Captive Wildlife Management will commence in 2024

Recommended enrolment pattern - Wildlife and Pest Management Major - commencing in Semester 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		
Year 1								
Second Major or Minor or Elective (recommend BIO2103 Biology 2) ^	1	2	1	2			HR	
CMS1100 Communicating in the Sciences	1	1			1	1,2		
MAT1100 Foundation Mathematics	1	2			1	2		Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
WLF1201 Field Skills for Wildlife, Game and Pest Management			1	2			M	
AGR1101 Animal Health, Welfare and Behaviour *	1	1	1	1			HR	
REN1201 Environmental Studies ++	1	1			1	1		Enrolment is not permitted in REN1201 if REN8101 has been previously completed.
SCI1001 Succeeding in Science	1	1			1	1		
WLF2101 Management of Wildlife *	1	1	1	1			HR	
Year 2								
IDK2203 Indigenous Environmental Perspectives and Knowledge	2	2			2	2		
Second Major or Minor or Elective (recommended BIO2219 Genetics)	2	2			2	2		
REN2201 Ecological Methods +	2	2	2	2			M	Pre-requisite: STA1003
WLF2201 Vertebrate Pests and Biosecurity *	2	2	2	2			HR	
Second Major or Minor or Elective (recommended REN2200 Ecology for Sustainability)	2	1			2	1		
STA1003 Fundamental Statistics §	2	1,2			2	1,2,3		Enrolment is not permitted in STA1003 if STA2300 or STA8170 or STA6200 or STA1004 has been previously completed. Students enrolled in the BACT, or under taking the Accounting Major in the BBCM, are not eligible for enrolment.
BIO2100 The Australian Biota *	2	1	2	1			HR	
CLI1110 Weather and Climate	2	1			2	1		
Year 3								
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	2			3	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		
Second Major or Minor or Elective (recommended WLF3201 Captive Wildlife Management) ** \$	3	2	3	2			HR	
Second Major or Minor or Elective (recommended REN3301 Biodiversity and Conservation)	3	2			3	2		
AGR3302 Sensors and Technology in Animal Production	3	2	3	2			HR	
Choose one of the following courses:								
SCI3302 Work-Integrated-Learning #	3	1	3	1				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
OR								
Second Major or Minor or Elective	3	1			3	1		
WLF3101 Principles of Wildlife Management & Sustainable Use					3	1		
Second Major or Minor or Elective	3	1			3	1		
Second Major or Minor or Elective	3	1			3	1		

Footnotes

- ^ [BIO2103 Biology 2](#) has a highly recommended residential school for on-campus and external students
- * Highly recommended residential school (ONC students and EXT students attend Residential School)
- ++ The Springfield on-campus offer is not available in 2023.
- + Mandatory residential school for on-campus and external students
- \$ Unavailable online in S3 2023
- # [SCI3302 Work-Integrated-Learning](#) is a core course and must be completed
- ** WLF3201 Captive Wildlife Management has a highly recommended residential school for on-campus and external students
- \$ WLF3201 Captive Wildlife Management will commence in 2024

Postgraduate programs

Graduate Certificate of Agricultural Futures (GCAG) - GradCertAgFut

	Online
Start:	Semester 1 (February) Semester 2 (July)
Fees:	Commonwealth supported place
Standard duration:	1 semester full-time
Program articulation:	To: Graduate Diploma of 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.

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 provides an overview of a broad range of environmental, technical, political, social and scientific issues and innovations which can impact on agricultural production, as well as an overview of the biological and ecological principles to manage resources into the future.

Program objectives

On completion of this program graduates should be able to:

- Understand a body of specialised knowledge in agriculture;
- Apply established theories to a body of specialised knowledge or practice in agriculture;
- Critically analyse and reflect on complex information, problems, concepts and theories applicable to agriculture;
- Interpret and transmit specialised knowledge, skills and ideas, both individually and collaboratively, to a range of audiences;
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

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 any area, or equivalent.
OR
equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- 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](#).

Program structure

The structure allows flexibility to complete the program in Semester 1 or 2 on a full-time basis or complete the program on a part time basis and complete the program either on-campus or online or a combination of modes. It also allows part time students some flexibility to tailor their program based on their existing experience and interest. At least two courses in the program must be at Level 8.

Course	Semester	Mode
1st Core unit (one of the following two courses):		
AGR8001 Food Security in the 21st Century	1	ONC, ONL
AGR8003 Critical Issues in Agriculture	2	ONC, ONL
2nd Core unit (one of the following two courses):		
AGR2303 Agronomy	1	ONC, ONL
AGR8002 Emerging Technologies in Agriculture	2	ONC, ONL
Any two of the following courses:		
CLI8001 Climate Risk	1	ONL
AGR3303 Agricultural Materials and Post-Harvest Technologies	1	ONC, ONL
BIO8201 Biology Foundations	2	ONL

REN3302 Sustainable Resource Use	2	ONC, ONL
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Required time limits

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

IT requirements

For information technology requirements please refer to the [minimum computing standards](#).

Articulation

A student successfully completing all courses in the Graduate Certificate of Agricultural Futures will receive full credit towards the [Graduate Diploma of Science](#) in the Agricultural Science Specialisation. Students intending to continue with the Graduate Diploma must apply for separate admission and may EITHER Graduate with a Graduate Certificate and receive full credit as exemptions into the Graduate Diploma, OR choose not to graduate with the Graduate Certificate, in order to transfer their grades, maintain their GPA and articulate into the Graduate Diploma and ultimately qualify from this higher award only. Students who wish to transfer their grades and maintain their GPA into the Graduate Diploma, must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate and this must occur prior to completion of the Graduate Certificate of Agricultural Futures.

Credit

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

Recommended enrolment pattern - Full-time (1 Semester, S1 entry)

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	
AGR8001 Food Security in the 21st Century	1	1			1	1	
AGR2303 Agronomy	1	1			1	1	
CLI8001 Climate Risk					1	1	
AGR3303 Agricultural Materials and Post-Harvest Technologies	1	1			1	1	

Recommended enrolment pattern - Full-time (1 Semester, S2 entry)

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	
AGR8003 Critical Issues in Agriculture	1	2			1	2	
BIO8201 Biology Foundations					1	2	
AGR8002 Emerging Technologies in Agriculture	1	2			1	2	
REN3302 Sustainable Resource Use	1	2			1	2	

Graduate Certificate of Science (GCSC) - GradCertSci

QTAC code (Australian and New Zealand applicants): Toowoomba campus: GCSC01; External: GCSC02

CRICOS code (International applicants): 069701A

	On-campus*+	External#*
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, 1 year part-time	
Program articulation:	To: Graduate Diploma of 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

- * Please refer to the Program Structure for further information on mode of offer for each specialisation.
- + The Computing specialisation is available to international on-campus students at UniSQ Toowoomba.
- # Only the Applied Data Science, Computing or General (depending on the courses chosen) specialisations have a Semester 3 intake.

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 Graduate Certificate of Science provides students with the opportunity to further their knowledge in discipline areas critical to their professional responsibilities and interests.

Program objectives

On completion of the program graduates should be able to:

- Understand a body of specialised knowledge in a discipline of science;
- Apply established theories to a body of specialised knowledge or practice in a relevant science discipline;
- Critically analyse and reflect on complex information, problems, concepts and theories applicable to a relevant science discipline;
- Interpret and transmit specialised knowledge, skills and ideas, both individually and collaboratively, to a range of audiences;
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

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.

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Admission requirements

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

- Completion of an Australian university three year Bachelor degree in any area, or equivalent.
Or
equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- 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

All specialisations within the program consist of four units of study taken from the Recommended Enrolment Pattern section. The Program Director, via usq.support@usq.edu.au may also grant substitution of one course

from outside these disciplines. At least two courses must be Level 6 and/or 8 (all specialisations). The student must select courses according to the pre- and co-requisite requirements contained in individual course specifications. Some courses may include a mandatory or highly recommended residential school.

Specialisation	Offering		
	On-campus	Online	External
Agricultural Science (part-time only) [@]	Toowoomba	Online	or external with highly recommended residential schools depending on chosen approved courses
Applied Climate Science (part-time only)		Online only	
Applied Data Science (part-time only) [^]	Toowoomba	Online	
Astronomy (part-time only)		Online only	
Biology (part-time only) [@]	Toowoomba	Online	or external with highly recommended residential schools depending on chosen approved courses
Chemistry (part-time only) [@]	Toowoomba		external (some courses have highly recommended residential schools)
Computing (full-time or part-time) [@]	Toowoomba	Online	or external (some courses, depending on topics, have workshops)
Environment and Sustainability (part-time only)	Toowoomba	Online	
Mathematics and Statistics (part-time only)	Toowoomba	Online	
Mathematics for High School Teaching (part-time only) [#]	Toowoomba	Online	
Mathematics for Primary/Middle School Teaching (part-time only) [#]		Online only	
Physics (part-time only)		Online only	
Science for Primary/Middle School Teaching (full-time or part-time) ^{#@}	Toowoomba	Online	or external with highly recommended residential schools depending on chosen approved courses
Wine Science (S1 part-time only, S2 full-time or part-time) [@]	Toowoomba	Online	or external with mandatory or highly recommended residential schools depending on chosen approved courses).

General	Toowoomba	Online	or external with highly recommended residential schools depending on chosen approved courses
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Footnotes

- @ Some approved courses for selection have mandatory or highly recommended residential schools and students enrolled externally must be able to attend the residential schools at the specified UniSQ campus.
- ^ The Semester 2 intake for the Applied Data Science specialisation will be subject to the approval of the Program Director and may only be available less than part-time (<2 courses in some semesters).
- # The teaching specialisations alone do not meet eligibility for teacher registration and therefore should only be taken by students who already have completed an initial teacher education program.

Those teachers studying who are relying on government scholarships or are seeking accreditation in a particular state, are advised to check with their funding agency or Education Authority that they are enrolled in an appropriate approved combination of courses. For further advice on these and other possible course combinations please contact the Program Director via usq.support@usq.edu.au.

Required time limits

Students have a maximum of 3 years to complete this program.

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](#).

Agricultural Science (approved course)

- [BIO3318 Plant Microbe Interactions](#)

Biology (approved course)

- [BIO2107 Cell and Molecular Biology 1](#)
- [BIO2202 Plant Physiology](#)
- [BIO3207 Cell and Molecular Biology 2](#)

Chemistry (core courses)

- [CHE1110 Chemistry 1](#)
- [CHE2120 Chemistry 2](#)

Science for Primary/Middle School Teaching (approved courses)

- [CHE1110 Chemistry 1](#)
- [CHE2120 Chemistry 2](#)

Wine Science (approved courses)

- [CHE1110 Chemistry 1](#)
- [WIN2200 Viticultural and Winemaking Practice](#)
- [BIO2202 Plant Physiology](#)

Articulation

A student successfully completing all courses in the Graduate Certificate of Science program will receive full credit towards the [Graduate Diploma of Science](#) in the same specialisation. Students intending to continue with the Graduate Diploma must apply for separate admission and may EITHER Graduate with a Graduate Certificate and receive full credit as exemptions into the Graduate Diploma, OR choose not to graduate with the Graduate Certificate, in order to transfer their grades, maintain their GPA and articulate into the Graduate Diploma and ultimately qualify from this higher award only. Students who wish to transfer their grades and

maintain their GPA into the Graduate Diploma, must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate and this must occur prior to completion of the Graduate Certificate of Science.

Credit

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

Students who have successfully completed STA2300 are not permitted to undertake [STA6200 Statistics for Quantitative Researchers](#). Instead they should contact the Program Director to choose an alternative Level 6 and/or 8 course.

Applied Data Science specialisation: Where a student's enrolment pattern does not allow them to complete [STA6200 Statistics for Quantitative Researchers](#) in S1, they may replace it with STA2300 in S2 or S3, as long as the student completes the required number of Level 6 and/or 8 courses for their program.

Enrolment

Enrolment patterns will need to be determined for individual students. On acceptance into the program, students must submit an enrolment pattern for approval to the Program Director via usq.support@usq.edu.au.

Pre-requisite courses should be taken as a guide to the assumed knowledge required for a course. It is the student's responsibility to ensure that they have the assumed knowledge before enrolling in a particular course.

Agricultural Science specialisation 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		
AGR8001 Food Security in the 21st Century		1				1		
Approved course (Select from the approved course list below)								
AGR8003 Critical Issues in Agriculture		2				2		
Approved course (Select from the approved course list below)								
Approved courses: Choose two from the following:								
AGR2303 Agronomy		1				1		
AGR3303 Agricultural Materials and Post-Harvest Technologies		1				1		
AGR4305 Agricultural Soil Mechanics		1				1		
CLI8001 Climate Risk						1		
SCI3302 Work-Integrated-Learning[#]		3		1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
AGR8002 Emerging Technologies in Agriculture		2				2		
BIO3318 Plant Microbe Interactions[^]		2		2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
BIO8201 Biology Foundations						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.
REN3302 Sustainable Resource Use		2		2				

Footnotes

[#] Industry Placement may be available subject to approval of the Program Director and availability of relevant placement.

^ This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Applied Climate Science specialisation recommended enrolment pattern - part-time Semester 1 entry

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	
CLI8204 Global Environmental Systems						1	
CLI8001 Climate Risk						1	
CLI8205 Climate and Sustainability						2	
CLI3302 Adaptation to Climate Change						2	

Applied Data Science specialisation recommended enrolment pattern - part-time S1 entry

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	
STA6200 Statistics for Quantitative Researchers		1				1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
CSC5020 Foundations of Programming [£]		1,2,3				1,2,3	
CSC6001 Introduction to Data Science and Visualisation		2				2	
CSC6002 Big Data Management [£]		2				2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS

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

Astronomy specialisation recommended enrolment pattern - part-time

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	
SCI6103 Research Fundamentals and Ethics						1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
PHY1101 Astronomy 1 *		1				1	
SCI6102 Research Skills						1,2	
PHY1107 Astronomy 2 *		2				2	

Footnotes

* Astronomical observations for each course are made remotely via internet access to UniSQ'S Mt Kent Observatory. Voluntary field nights will also be made available.

Biology specialisation recommended enrolment pattern - part-time

At least two of the four courses completed must be at Level 6 and/or 8.

Course	Year of program and 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 below):		1		1		1		
Approved course (Select from the approved course list below):		1		1		1		
BIO8201 Biology Foundations						2		
Approved course (Select from the approved course list below):		2		2		2		
Approved courses: Choose three from the following (at least one must be Level 6 and/or 8):								
AGR8001 Food Security in the 21st Century						1		
BIO2107 Cell and Molecular Biology 1 [†]		1		1			HR	Pre-requisite: CHE2120
BIO3207 Cell and Molecular Biology 2 [†]		2		2			HR	Pre-requisite: BIO2107
BIO3318 Plant Microbe Interactions [†]		2		2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
REN8101 Environment, Society and Sustainability						1		Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
REN3301 Biodiversity and Conservation		2				2		
BIO2219 Genetics		2				2		Pre-requisite: BIO1100 or BIO1101 or BIO1204 or AGR1101
BIO2202 Plant Physiology [†]				2			HR	Pre-requisite: BIO1101
REN8202 Conservation for Sustainable Futures						2		Enrolment is not permitted in REN8202 if REN2200 has been previously completed.

Footnotes

[†] This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Chemistry specialisation 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		
SCI6103 Research Fundamentals and Ethics						1		Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
CHE1110 Chemistry 1 [†]		1		1			HR	
SCI6102 Research Skills						1,2		
CHE2120 Chemistry 2 [†]		2		2			HR	Pre-requisite: CHE1110

Footnotes

† External offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Computing specialisation recommended enrolment pattern - full-time or part-time

Take four approved courses, with at least two being at Level 6 and/or 8.

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	
Approved courses (at least two must be at Level 6 and/or 8):							
CSC8450 Relational Database Systems		1				1	Pre-requisite: CSC5020
CSC8503 Principles of Programming Languages		1				1	
CSC8510 Internetworking		2				2	Co-requisite: CSC5050 or Students must be enrolled in the following Program: MCYS
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
CSC2408 Software Development Tools		1,2				1,2	Pre-requisite: CSC1401
CSC8380 Designing Networks		2				2	Pre-requisite: CSC8540
CSC8540 Routing and Switching		1				1	Pre-requisite: CSC8510
CSC5020 Foundations of Programming [£]		1,2,3				1,2,3	
CSC2401 Algorithms and Data Structures		2				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
CSC2404 Operating Systems		2				2	Pre-requisite: CSC1401 or CSC2408 or have experience using Linux systems 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
CSC2406 Web Technology 1		2				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 B SED
CSC1410 Software Engineering Foundations		2				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

Environment and Sustainability specialisation recommended enrolment pattern - part-time

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	
REN8101 Environment, Society and Sustainability						1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
SCI6103 Research Fundamentals and Ethics						1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.

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	
Approved courses: Take any two of the following::							
REN8202 Conservation for Sustainable Futures						2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
REN3301 Biodiversity and Conservation		2				2	
REN3302 Sustainable Resource Use		2				2	
CLI8204 Global Environmental Systems						1	
CLI8205 Climate and Sustainability						2	

Mathematics and Statistics specialisation recommended enrolment pattern - part-time

Students may seek approval from the Discipline Coordinator to enrol in courses not listed in this table.

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	
STA6200 Statistics for Quantitative Researchers		1				1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
MAT1102 Algebra and Calculus I		1				1	
MAT8190 Mathematics/Statistics Complementary Studies B**		2				2	
CSC2410 Computational Thinking with Python		2				2	

Footnotes

** MAT8190 is a topics based course. Students should select their topic from the course specifications and email the examiner prior to enrolment to receive enrolment approval.

Mathematics for High School Teaching specialisation recommended enrolment pattern - part-time

This specialisation alone does not meet eligibility for teacher registration and therefore should only be taken by students who already have completed an initial teacher education program.

Students may seek approval from the Discipline Coordinator to enrol in courses not listed in this table.

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	
MAT1102 Algebra and Calculus I [#]		1				1	
MAC8901 Issues in Teaching Mathematics						2	
STA6200 Statistics for Quantitative Researchers		1				1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
Approved courses: Choose one of the following (other courses are available from the Mathematics and Statistics specialisation):							
MAT2100 Algebra and Calculus II [#]		2				2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
MAT2200 Operations Research 1		2				2	Pre-requisite: MAT1102 or ENM1600 or equivalent or approval from the examiner.

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	
							Enrolment is not permitted in MAT2200 if MAT1200 has been previously completed.
MAT1101 Discrete Mathematics for Computing		1				1	

Footnotes

[MAT1102](#) and [MAT2100](#) give a higher level of Algebra & Calculus that are essential for teaching Mathematics B & C (or equivalent) in schools. Students without an appropriate background for [MAT1102](#) should contact the Program Director via usq.support@usq.edu.au to discuss options. Students can take [ENM1600](#) and [ENM2600](#) as alternatives to these two courses with the approval of the Program Director.

Mathematics for Primary/Middle School Teaching specialisation recommended enrolment pattern - part-time

This specialisation alone does not meet eligibility for teacher registration and therefore should only be taken by students who already have completed an initial teacher education program.

Students may seek approval from the Discipline Coordinator to enrol in courses not listed in this table.

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	
Approved Course (choose from the list below):						1,2	
Approved Course (choose from the list below):						1	
MAC8901 Issues in Teaching Mathematics						2	
STA8190 Advanced Statistics B ^{**}						2	
Approved courses: Choose two of the following:							
MAT1100 Foundation Mathematics		2				2	Enrolment is not permitted in MAT1100 if ENM1500 or MAT2100 or MAT1102 or ENM1600 or ENM2600 has been previously completed
MAT1000 Mathematics Fundamentals		1				1	
EDU8326 Learning Difficulties: Mathematics						1	

Footnotes

** [STA8190](#) is a topics based course. Students should select their topic from the course specifications and email the examiner prior to enrolment to receive enrolment approval.

Physics specialisation recommended enrolment pattern - part-time

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	
PHY1104 Physics 1		1				1	Co-requisite: (MAT1102 or ENM2600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
SCI6103 Research Fundamentals and Ethics						1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADs or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
PHY1911 Physics 2		2				2	Co-requisite: (MAT2100 or ENM1600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
SCI6102 Research Skills						2	

Science for Primary/Middle School Teaching specialisation recommended enrolment pattern

This specialisation alone does not meet eligibility for teacher registration and therefore should only be taken by students who already have completed an initial teacher education program.

Choose four approved courses, at least two of which must be at Level 6 and/or 8.

Course	Year of program and 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: Choose four courses, at least two of which must be at Level 6 and/or 8:								
CHE1110 Chemistry 1 [†]		1		1			HR	
CLI1110 Weather and Climate		1				1		
PHY1101 Astronomy 1 [*]		1				1		
PHY1104 Physics 1 ⁺		1				1		Co-requisite: (MAT1102 or ENM2600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
REN8101 Environment, Society and Sustainability						1		Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
SCI6103 Research Fundamentals and Ethics						1		Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
REN3301 Biodiversity and Conservation		2				2		
REN3302 Sustainable Resource Use		2				2		
CHE2120 Chemistry 2 [†]		2		2			HR	Pre-requisite: CHE1110
PHY1911 Physics 2		2				2		Co-requisite: (MAT2100 or ENM1600) or Students must be enrolled in one of the following Programs: MSCN or GDSI or GCSC
PHY1107 Astronomy 2 [*]		2				2		
REN8202 Conservation for Sustainable Futures						2		Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
BIO8201 Biology Foundations						2		

Footnotes

- [†] External offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).
- ^{*} Astronomical observations for each course are made remotely via Internet access to UniSQ's Mt Kent Observatory. Voluntary field nights will also be made available.
- ⁺ This course uses in-home practical kits. There is no residential school requirement.

Wine Science specialisation 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		
SCI6103 Research Fundamentals and Ethics						1		Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Approved course: (choose from the list below):								
BIO8201 Biology Foundations						2		
Approved course: (choose from the list below):								
Approved courses: Choose two from the following:								
SCI6102 Research Skills						1,2		
WIN1101 Grape and Wine Production						1		
WIN2220 Wine Production						2		Pre-requisite: WIN1101
CHE1110 Chemistry 1 [†]		1		1			HR	
WIN2200 Viticultural and Winemaking Practice [*]				1			M	Co-requisite: WIN1101
WIN2215 Wine Biochemistry and Microbiology						2		Pre-requisite: WIN1101
SCI3302 Work-Integrated-Learning		3		1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
BIO2202 Plant Physiology [†]				2			HR	Pre-requisite: BIO1101

Footnotes

[†] This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

*

This offering requires attendance at a mandatory residential school (a mandatory residential school is compulsory and has an associated pass/fail assessment linked to the residential school attendance).

General Specialisation

This specialisation enables students to choose four courses from within any of the Graduate Certificate of Science specialisations, with at least 2 courses being at Level 6 and/or 8. This specialisation is designed primarily to enable a general exit point from the [GDSI Graduate Diploma of Science](#) or the [MSCN Master of Science](#).

Graduate Certificate of Science for Primary/Middle School Teaching (GCSP) - GradCertScTeach

This program is only offered to continuing students. No new admissions will be accepted. Students who are interested in this area of study should [contact us](#).

	Online
Start:	Semester 2 (July)
Fees:	Commonwealth supported place
Standard duration:	0.5 year full-time
Program articulation:	To: Graduate Diploma of 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.

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

This program provides foundation knowledge in a range of science topics suitable for teachers wanting to improve their understanding of sciences related to the Australian Curriculum. This program alone does not meet eligibility for teacher registration and therefore should only be taken by students who have already completed an initial teacher education program.

Program objectives

On completion of this program graduates should be able to:

- Understand a body of specialised knowledge in a discipline of science
- Apply established theories to a body of specialised knowledge or practice in a relevant science discipline
- Critically analyse and reflect on complex information, problems, concepts and theories applicable to a relevant science discipline
- Interpret and transmit specialised knowledge, skills and ideas, both individually and collaboratively, to a range of audiences
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

Admission requirements

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

- Completion of an Australian university three-year bachelor degree in any area, or equivalent.

OR

- equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- 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](#).

Program structure

The Graduate Certificate of Science for Primary/Middle School Teaching consists of four units of study which are all available in the online study mode.

[REN8202 Conservation for Sustainable Futures](#)

[BIO8201 Biology Foundations](#)

Select two courses from:

[REN3302 Sustainable Resource Use](#)

[SCI1901 Science Fundamentals](#)

[PHY1107 Astronomy 2](#)

Required time limits

Students have a maximum of 3 years to complete this program.

IT requirements

For information technology requirements please refer to the [minimum computing standards](#).

Articulation

A student successfully completing all courses in the Graduate Certificate of Science for Primary/Middle School Teaching will receive full credit towards the [Graduate Diploma of Science](#) in the General Specialisation. Students intending to continue with the Graduate Diploma must apply for separate admission and may EITHER Graduate with a Graduate Certificate and receive full credit as exemptions into the Graduate Diploma, OR choose not to graduate with the Graduate Certificate, in order to transfer their grades, maintain their GPA and articulate into the Graduate Diploma and ultimately qualify from this higher award only. Students who wish to transfer their grades and maintain their GPA into the Graduate Diploma, must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate and this must occur prior to completion of the Graduate Certificate of Science for Primary/Middle School Teaching.

Credit

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

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	
Two core courses:							
REN8202 Conservation for Sustainable Futures					1	2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
BIO8201 Biology Foundations					1	2	
Select two of the following courses:							
REN3302 Sustainable Resource Use					1	2	
SCI1901 Science Fundamentals					1	1,2	
PHY1107 Astronomy 2					1	2	

Graduate Diploma of Science (GDSI) - GradDipSci

CRICOS code (International applicants): 031448M

	On-campus*+^#@	External * @
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Ipswich, 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:		Ipswich (Mandatory)
Standard duration:	1 year full-time, 2 years part-time	
Program articulation:	To: Master of Science ; Master of Science (Research)	

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

- * Please refer to the Program Structure for further information on mode of offer for each specialisation.
- + The Applied Data Science specialisation is only available to international on-campus students at UniSQ Toowoomba and, for students commencing in Semester 1, only to students who have completed ([STA6200 Statistics for Quantitative Researchers](#) or [STA2300 Data Analysis](#) or [STA1003 Fundamental Statistics](#)) and ([CSC1401 Foundation Programming](#) or [CSC5020 Foundations of Programming](#)) or equivalent in their previous study.
- ^ The Mathematics and Statistics specialisation is available to international on-campus students at UniSQ Toowoomba — Semester 1 only.
- # The Sport and Exercise specialisation is available to International on-campus students at UniSQ Ipswich. International on-campus students enrolled at the Ipswich campus must consult with the Program Director in selecting their elective courses to ensure they meet ESOS requirements.
- @ Sport and Exercise specialisation: courses that include a practical skill competency component and residential school will be conducted at the Ipswich 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

Program aims

The program aims to produce graduates that are equipped with essential scientific and/or mathematical knowledge and an appreciation of the latest literature and technologies.

Agricultural Science specialisation

This specialisation provides graduates with a knowledge of contemporary issues associated with agricultural production and sustainability. The program aims to produce graduates with the capacity to engage with a range of agriculture related disciplines.

Applied Climate Science specialisation

The global climate service industry is estimated to have a significant and growing economic value. In Australia, the need for 'climate smart' professionals working within their chosen industry is growing with hundreds of

job opportunities in industry and the public sector organisation. This specialisation is designed to provide graduates with the knowledge and decision-making skills to work as 'climate smart' professionals in many sectors of economic activity including agriculture, food, water, energy, health, and natural resource management industries.

Applied Data Science specialisation

This specialisation is designed to provide an opportunity for graduates from all disciplines to gain skills and knowledge in handling data which are commonly known as Big Data, as well as producing and interpreting data analytics. The aim of this program is to provide students with a career path in the Data Science area or an opportunity for advancement in their career.

Environment and Sustainability specialisation

This specialisation provides graduates with knowledge of selected basic concepts and skills associated with environmental and climate science and the broad area of sustainability. The program aims to produce graduates with knowledge and skills for the integration of social, environmental and economic research within an interdisciplinary planning and policy framework and to provide capacity for the sustainable management of natural resources, businesses and communities.

Mathematics and Statistics specialisation

This specialisation aims to provide graduates with skills in key areas of mathematics or statistics that relate to the needs of their profession or industry, including teaching.

Physics and Astronomy specialisation

This specialisation is designed to provide an opportunity to gain knowledge and skills in physics and astronomy and develop scientific research skills. The program provides professional development in science for those in educational or science communication careers.

Sport and Exercise specialisation

This specialisation aims to provide graduates with the opportunity to develop and extend their knowledge and skills relevant to health, fitness and sports performance across the lifespan to an advanced level. The specialisation is designed to meet personal achievement goals or provide for career opportunities within the health, sports and fitness industry such as sports coaches, personal trainers, sports development officers or a range of other roles.

General specialisation

This specialisation enables students who have completed at least 8 courses with at least 4 courses at Level 6 and/or 8 from courses within other Graduate Diploma of Science specialisations to exit from the [MSCN Master of Science](#).

Program objectives

On completion of the program graduates should be able to:

- Synthesise an understanding of a complex body of advanced knowledge in a discipline of science.
- Apply established theories to a body of advanced knowledge or practice in a relevant science discipline.
- Critically analyse, evaluate and consolidate on complex advanced information, problems, concepts and theories applicable to a relevant science discipline.
- Interpret and transmit advanced knowledge, skills and ideas, both individually and collaboratively, to a range of audiences.
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

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 any area, or equivalent or equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- 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

All specialisations within the program consist of eight units of study taken from the specialisation tables. At least four units must be at Level 6 and/or 8.

Specialisation	Offering		
	On-campus	Online	External
Agricultural Science ^	Toowoomba	Online	Depending on chosen approved courses
Applied Climate Science		Online only	

Applied Data Science (part-time, full-time with approval) [#]	Toowoomba	Online	
Environment and Sustainability		Online only	
Mathematics and Statistics (Semester 1 full-time or part-time; Semester 2 part-time only) [@]	Toowoomba	Online	depending on chosen approved courses
Physics and Astronomy		Online only	
Sport and Exercise	Ipswich		some courses have mandatory residential schools which will be held at the Ipswich campus.
General	Toowoomba	Online	depending on chosen approved courses

Footnotes

- [^] Some approved courses for selection have mandatory or highly recommended residential schools and students enrolled externally must be able to attend the residential schools at the specified UniSQ campus.
- [#] Available in Semester 1 full-time only to students who have completed ([CSC1401 Foundation Programming](#) or [CSC5020 Foundations of Programming](#)) and ([STA2300 Data Analysis](#) or [STA1003 Fundamental Statistics](#) or [STA6200 Statistics for Quantitative Researchers](#)) in their previous study. The Semester 2 full-time intake will be subject to the approval of the Program Director.
- [@] The Semester 1 full-time enrolment assumes students have current skills at the level of Queensland Senior Secondary Schools Studies Mathematical Methods equivalent. Students without this knowledge might have to study part-time. The Semester 2 full-time intake will be subject to the approval of the Program Director.

Required time limits

Students have a maximum of 3 years to complete this program.

Agricultural Science specialisation

This specialisation consists of 4 core courses, all available in online mode, and 4 approved courses.

Semester 1 [^]	Semester 2 [^]
Mandatory core courses:	
AGR8001 Food Security in the 21st Century	AGR8002 Emerging Technologies in Agriculture
CLI8001 Climate Risk	AGR8003 Critical Issues in Agriculture
And four of the following Approved Courses:	
AGR2303 Agronomy	BIO3318 Plant Microbe Interactions [*]
AGR3303 Agricultural Materials and Post-Harvest Technologies	BIO8201 Biology Foundations
AGR4305 Agricultural Soil Mechanics	ENV4106 Irrigation Science
SCI3302 Work-Integrated-Learning [#]	REN3302 Sustainable Resource Use

Footnotes

- [^] Students may vary their enrolment on the basis of prior studies or professional requirements with the approval of the Program Director via usq.support@usq.edu.au.
- ^{*} This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment)
- [#] [SCI3302 Work-Integrated-Learning](#) may be available subject to approval of the Program Director via usq.support@usq.edu.au and availability of relevant placement.

Applied Climate Science specialisation

This specialisation consists of the following courses, which are all available by online mode only. Students may vary their enrolment on the basis of prior studies or professional requirements with the approval of the Program Director via usq.support@usq.edu.au. This specialisation is not suitable for international on-campus students.

Semester 1	Semester 2
CLI8001 Climate Risk	CLI3302 Adaptation to Climate Change
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability
CLI8002 Climate, Human and Environmental Health and Disaster Management *	CLI8003 Climate, Food, Water and Energy Security *

Footnotes

* Two unit course

Applied Data Science specialisation

This specialisation consists of eight courses which are all available on-campus and online.

Semester 1	Semester 2	Either Semester
CSC8450 Relational Database Systems	CSC6001 Introduction to Data Science and Visualisation	CSC5020 Foundations of Programming £*
STA6100 Multivariate Analysis for High-Dimensional Data	CSC6002 Big Data Management £	CIS8008 Business Intelligence
CSC6004 Data Mining		STA6200 Statistics for Quantitative Researchers *

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

* Semester 1 full-time entry is only available if students have completed ([STA6200](#) or [STA2300](#) or [STA1003](#)) and ([CSC1401](#) or [CSC5020](#)) in their previous study, in which case they will study two appropriate electives instead.

Environment and Sustainability specialisation

This specialisation consists of the following eight core courses which are all available in online mode. Students may vary their enrolment on the basis of prior studies or professional requirements with the approval of the Program Director via usq.support@usq.edu.au. This specialisation is not suitable for international on-campus students.

Semester 1	Semester 2
REN8101 Environment, Society and Sustainability	REN8202 Conservation for Sustainable Futures
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability
CLI3301 Climate and Environment Risk Assessment	REN8203 Sustainability Science
SCI6103 Research Fundamentals and Ethics	And one of: <ul style="list-style-type: none"> REN3301 Biodiversity and Conservation REN3302 Sustainable Resource Use

Mathematics and Statistics specialisation

This specialisation consists of eight units of study. The courses studied will depend on the student's background in mathematics.

Students without [MAT1102](#) (S1) and [STA6200](#) (S1, S2) may not be able to complete in one year.

Students must complete eight courses from the following tables. At least four courses must be at Level 6 and/or 8. Students may seek approval from the Discipline Coordinator to enrol in courses not listed in these tables.

Semester 1 Courses

Level 1	Level 2	Level 3	Level 6/8
MAT1101 Discrete Mathematics for Computing	MAT2409 High Performance Numerical Computing [†]	MAT3105 Harmony of Partial Differential Equations	MAT8180 Mathematics/Statistics Complementary Studies A
MAT1102 Algebra and Calculus I	ENM2600 Advanced Engineering Mathematics [§]	MAT3201 Operations Research 2 [†]	STA8180 Advanced Statistics A
	STA2301 Distribution Theory	STA3300 Experimental Design	STA6100 Multivariate Analysis for High-Dimensional Data

Footnotes

[†] Unavailable on-campus at Toowoomba in S1 2023

[§] Unavailable online in Semester 3 2023

Semester 2 Courses

Level 1	Level 2	Level 3	Level 8
MAT1100 Foundation Mathematics	MAT2100 Algebra and Calculus II	MAT3103 Mathematical Modelling and Dynamical Systems	MAC8901 Issues in Teaching Mathematics
	CSC2410 Computational Thinking with Python	MAT3104 Mathematical Modelling in Financial Economics	MAT8190 Mathematics/Statistics Complementary Studies B
	STA2302 Statistical Inference	STA3301 Statistical Models [~]	STA8190 Advanced Statistics B
	MAT2200 Operations Research 1		

Footnotes

[~] Unavailable Semester 2, 2023 Toowoomba On-campus

Courses Offered in Either Semester 1 Or Semester 2

Level 1	Level 2	Level 3	Level 6
ENM1600 Engineering Mathematics		SCI3302 Work-Integrated-Learning	STA6200 Statistics for Quantitative Researchers
		CSC5020 Foundations of Programming [£]	

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

Physics and Astronomy specialisation

This specialisation consists of eight units of study (six (6) core courses and one (1) approved two-unit course). Students may vary their enrolment on the basis of prior studies or professional requirements with the approval

of the Program Director via usq.support@usq.edu.au. This specialisation is not suitable for international on-campus students.

Semester 1	Semester 2
PHY1101 Astronomy 1	PHY1107 Astronomy 2
PHY1104 Physics 1	PHY1911 Physics 2
SCI6103 Research Fundamentals and Ethics	SCI6102 Research Skills
Plus one two-unit course selected from the following:	
PHY8001 Observational Astronomy	PHY8003 Galactic Astronomy and Cosmology
PHY8002 Planetary Science	PHY8004 Stellar Astronomy

Sport and Exercise specialisation

This specialisation consists of four compulsory courses and four approved courses.

Compulsory Courses:
SES8001 Advanced Biomechanics
SES8005 Advanced Exercise Physiology
SES8006 Advanced Exercise Programming and Rehabilitation
SES8007 Advanced Exercise Assessment and Delivery
Approved Courses:
Three of the following coursework courses from the Sport and Exercise specialisation in the Master of Science (MSCN) — one course must be Level 8:
PSY3250 Sport and Exercise Psychology
SES1103 Nutrition and Exercise
SES2203 Physical Activity and Health
SES3206 Strength Training and Conditioning
SES8003 Advanced Motor Control and Learning
SES8008 Advanced Anatomy and Physiology
One of the following elective courses or as approved by the Program Director:
CSC5020 Foundations of Programming[£]
EDU8400 Mentoring and Coaching
EDU8606 Lifelong Career Development
HSW8220 Promoting Community Access and Inclusion^{##}
MBA8000 Applied Business Research and Ethics
MGT8033 Leading Organisational Change
MGT8038 Leadership Development
PCM5000 Practical Editorial Skills
PUB5001 Introduction to Editing and Publishing

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
- ## HSW8220 is not available ONL in S1 2023

General specialisation

This specialisation enables students who have completed at least 8 courses with at least 4 courses at Level 6 and/or 8 from courses within other Graduate Diploma of Science specialisations to exit from the [Master of Science](#). Students can use completed courses that meet the program objectives of the Graduate Diploma of Science to exit with that qualification.

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](#).

Sport and Exercise specialisation: For all modes there will be on-campus and practical attendance requirements for some courses. In order to successfully complete the program students must be able to fulfil any designated practical attendance requirements of a one week residential school in each year.

Agricultural Science (approved course)

- [BIO3318 Plant Microbe Interactions](#)

Sport and Exercise Specialisation

Core Courses:

- [SES8001 Advanced Biomechanics](#)
- [SES8005 Advanced Exercise Physiology](#)
- [SES8006 Advanced Exercise Programming and Rehabilitation](#)
- [SES8007 Advanced Exercise Assessment and Delivery](#)

Approved Courses:

- [SES1103 Nutrition and Exercise](#)
- [SES3206 Strength Training and Conditioning](#)
- [SES8001 Advanced Biomechanics](#)
- [SES8003 Advanced Motor Control and Learning](#)
- [SES8008 Advanced Anatomy and Physiology](#)

Articulation

Graduate Diploma of Science students may articulate to the [Master of Science](#) coursework program with further completion of eight courses, as required by that program.

A student successfully completing all courses in the Graduate Diploma of Science program will receive full credit towards the [Master of Science](#) in the same specialisation. Students intending to continue with the Master of Science must apply for separate admission and may EITHER graduate with a Graduate Diploma of Science and receive full credit as exemptions into the Master of Science, OR choose not to graduate with the Graduate Diploma, in order to transfer their grades, maintain their GPA and articulate into the Masters of Science and ultimately qualify from this higher award only. Students who wish to transfer their grades and maintain their GPA into the Master of Science, must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate and this must occur prior to completion of the Graduate Diploma of Science.

Graduate Diploma of Science students may articulate to the [Master of Science \(Research\)](#) program if they meet other requirements for entry into that program. Students must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate to the [Master of Science \(Research\)](#) and should seek

the advice of the Program Director with respect to transfer or application for course exemptions prior to graduation from the Graduate Diploma of Science.

Exit points

Students may exit with the [Graduate Certificate of Science](#) if the courses completed satisfy the requirements of a Graduate Certificate of Science specialisation.

Sport and Exercise specialisation - students may exit with the [Graduate Certificate of Sport and Exercise](#) if the courses completed satisfy the requirements of the Graduate Certificate of Sport and Exercise.

Students should consult the Program Director via usq.support@usq.edu.au should they wish to exit to ensure they satisfy requirements for the Graduate Certificate.

Credit

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

Sport and Exercise specialisation:

Exemption of four units may be granted if student has completed the [Graduate Certificate of Sport and Exercise](#) offered by UniSQ.

Enrolment

Enrolment patterns will need to be determined for individual students. On acceptance into the program, students must submit an enrolment pattern for approval to the Program Director via usq.support@usq.edu.au.

Pre-requisite courses should be taken as a guide to the assumed knowledge required for a course. It is the student's responsibility to ensure that they have the assumed knowledge before enrolling in a particular course.

Agricultural Science specialisation recommended enrolment pattern - full-time (2 Semesters, S1 entry)

Note: This specialisation is not available for International on-campus students as core courses are available in online mode only.

The recommended enrolment pattern for this specialisation is a recommended example. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director via usq.support@usq.edu.au

Course	Year of program and 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								
CLI8001 Climate Risk					1	1		
AGR8001 Food Security in the 21st Century	1	1			1	1		
Choose two approved courses: #								
AGR2303 Agronomy	1	1			1	1		
AGR3303 Agricultural Materials and Post-Harvest Technologies	1	1			1	1		
AGR4305 Agricultural Soil Mechanics	1	1			1	1		
SCI3302 Work-Integrated-Learning ^	1	1,	1	1				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
Year 1, Semester 2								
AGR8003 Critical Issues in Agriculture	1	2			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		
AGR8002 Emerging Technologies in Agriculture	1	2			2	2		
Choose two approved courses:[#]								
BIO3318 Plant Microbe Interactions *	1	2	1	2			HR	Pre-requisite: BIO1101 or Students must be enrolled in one of the following Programs: BATM or BENV or GCSC or GDSI or MSCN
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.
BIO8201 Biology Foundations					1	2		
SCI3302 Work-Integrated-Learning ^	1	2,3	1	2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
REN3302 Sustainable Resource Use	1	2			1	2		

Footnotes

Students should ensure that their choice of courses satisfy the program requirements of at least four Level 6 and/or 8 courses.

^ SCI3302 Industry Placement may be available subject to approval of the Program Director via usq.support@usq.edu.au and availability of relevant placement.

* This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Agricultural Science specialisation recommended enrolment pattern - part-time (4 Semesters, S1 or S2 entry)

Note: This specialisation is not available for International on-campus students as core courses are available in online mode only.

The recommended enrolment pattern for this specialisation is a recommended example. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director via usq.support@usq.edu.au

Course	Year of program and 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								
Approved Course 1 #	1	1			1	1		
AGR8001 Food Security in the 21st Century	1	1			1	1		
AGR8002 Emerging Technologies in Agriculture	1	2			1	2		
Approved Course 2 #	1	2			1	2		
Year 2								
CLI8001 Climate Risk					2	1		
Approved Course 3 #	2	1			2	1		
AGR8003 Critical Issues in Agriculture	2	2			2	2		
Approved Course 4 #	2	2			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		
Approved courses include: [#]								
AGR2303 Agronomy		1				1		
AGR3303 Agricultural Materials and Post-Harvest Technologies		1				1		
AGR4305 Agricultural Soil Mechanics		1				1		
SCI3302 Work-Integrated-Learning		1,2,3		1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
BIO3318 Plant Microbe Interactions *		2		2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
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.
BIO8201 Biology Foundations						2		
REN3302 Sustainable Resource Use		2				2		

Footnotes

Selection of potential approved courses should be discussed with the Program Director. Students should ensure that their choice of courses satisfy the program requirements of at least four Level 6 and/or 8 courses.

* This offering has a highly recommended residential school (linked to an assessment item and non-attendance will mean a student misses an element for assessment preparation or an element of assessment).

Applied Climate Science specialisation recommended enrolment pattern - full-time S1 or S2 entry

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	
CLI8001 Climate Risk					1	1	
CLI8204 Global Environmental Systems					1	1	
CLI8002 Climate, Human and Environmental Health and Disaster Management *					1	1	
CLI3302 Adaptation to Climate Change					1	2	
CLI8205 Climate and Sustainability					1	2	
CLI8003 Climate, Food, Water and Energy Security *					1	2	

Footnotes

* Two unit course.

Applied Climate Science specialisation recommended enrolment pattern - part-time S1 or S2 entry

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	
CLI8001 Climate Risk					1	1	

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	
CLI8204 Global Environmental Systems					1	1	
CLI8003 Climate, Food, Water and Energy Security *					1	2	
CLI8002 Climate, Human and Environmental Health and Disaster Management *					2	1	
CLI8205 Climate and Sustainability					2	2	
CLI3302 Adaptation to Climate Change					2	2	

Footnotes

* Two unit course

Applied Data Science specialisation recommended enrolment pattern - full-time S1 entry

This enrolment pattern is only available to students who have completed ([CSC1401 Foundation Programming](#) or [CSC5020 Foundations of Programming](#)) **and** ([STA6200 Statistics for Quantitative Researchers](#) or [STA2300 Data Analysis](#) or [STA1003 Fundamental Statistics](#)) **in previous study.**

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	
CIS8008 Business Intelligence	1	1			1	1	
CSC8450 Relational Database Systems	1	1			1	1	Pre-requisite: CSC5020
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
CSC6004 Data Mining	1	1			1	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CSC6001 Introduction to Data Science and Visualisation	1	2			1	2	
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
Approved course — One STA course at level 2 or above					1	2	
Approved course — One CSC course at level 2 or above	1	2			1	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

Applied Data Science specialisation recommended enrolment pattern - part-time S1 entry

This enrolment pattern is only available to students who have completed ([CSC1401 Foundation Programming](#) or [CSC5020 Foundations of Programming](#)) **and** ([STA6200 Statistics for Quantitative Researchers](#) or [STA2300 Data Analysis](#) or [STA1003 Fundamental Statistics](#)) **in previous study.**

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	
CIS8008 Business Intelligence	1	1			1	1,2	
CSC8450 Relational Database Systems	1	1			1	1	Pre-requisite: CSC5020

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	
CSC6001 Introduction to Data Science and Visualisation	1	2			1	2	
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
Approved Course — One STA course at level 2 or above	2	2			2	2	
Approved Course — One CSC course at level 2 or above	2	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

Applied Data Science specialisation recommended enrolment pattern - part-time S1 entry (without ([CSC1401](#) or [CSC5020](#)) and ([STA6200](#) or [STA2300](#) or [STA1003](#)) in previous study)

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	
Year 1, Semester 1							
CSC8450 Relational Database Systems	1	1			1	1	Pre-requisite: CSC5020
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
Year 1, Semester 2							
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
CSC6001 Introduction to Data Science and Visualisation	1	2			1	2	
Year 2, Semester 1							
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolmen t is not permitted in STA6100 if STA3200 has been previously completed
Year 2, Semester 2							
CIS8008 Business Intelligence					2	1,2	
CSC6002 Big Data Management [£]	2	2			2	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent pro gram and statistical knowledge and skills or students are enrolled in MCYS

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

Applied Data Science specialisation recommended enrolment pattern - full-time S2 entry (requires Program Director approval)

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	
Year 1, Semester 2							
CSC5020 Foundations of Programming ^{£#}	1	1,2,3			1	1,2,3	
CSC6001 Introduction to Data Science and Visualisation	1	2			1	2	
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
STA6200 Statistics for Quantitative Researchers [*]					1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
Year 1, Semester 1							
CIS8008 Business Intelligence					1	1,2	
CSC6004 Data Mining	1	1			1	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CSC8450 Relational Database Systems	1	1			1	1	Pre-requisite: CSC5020
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 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

If [CSC1401](#) Foundation Programming has been completed previously, contact the Program Director to choose an alternative course to [CSC5020](#).

* If [STA2300](#) Data Analysis has been completed previously, contact the Program Director to choose an alternative Level 6 and/or 8 course to [STA6200](#).

Applied Data Science specialisation recommended enrolment pattern - part-time S2 entry

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	
Year 1, Semester 2							
CSC5020 Foundations of Programming ^{£#}	1	1,2,3			1	1,2,3	
CSC6001 Introduction to Data Science and Visualisation	1	2			1	2	
Year 1, Semester 1							
STA6200 Statistics for Quantitative Researchers [*]	1	1			1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
CSC8450 Relational Database Systems	1	1			1	1	Pre-requisite: CSC5020

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	
Year 2, Semester 2							
CSC6002 Big Data Management [£]	2	2			2	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
CIS8008 Business Intelligence					2	1,2	
Year 2, Semester 1							
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 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
- # If [CSC1401](#) Foundation Programming has been completed previously, contact the Program Director to choose an alternative course to [CSC5020](#).
- * If [STA2300](#) Data Analysis has been completed previously, contact the Program Director to choose an alternative Level 6 and/or 8 course to [STA6200](#).

Environment and Sustainability specialisation recommended enrolment pattern - full-time S1 or S2 entry

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	
Year 1, Semester 1							
REN8101 Environment, Society and Sustainability					1	1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
CLI8204 Global Environmental Systems					1	1	
CLI3301 Climate and Environment Risk Assessment					1	1	
SCI6103 Research Fundamentals and Ethics					1	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Year 1, Semester 2 (or Semester 2 entry)							
CLI8205 Climate and Sustainability					1	2	
REN8202 Conservation for Sustainable Futures					1	2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
REN8203 Sustainability Science					1	2	Pre-requisite: REN8101 or REN8202 or REN3302 or REN3301 or CLI8204 or CLI8205 or ECO8011
And one of:							
REN3301 Biodiversity and Conservation	1	2			1	2	
REN3302 Sustainable Resource Use	1	2			1	2	

Environment and Sustainability specialisation recommended enrolment pattern - part-time S1 or S2 entry

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	
Year 1							
REN8101 Environment, Society and Sustainability					1	1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
SCI6103 Research Fundamentals and Ethics					1	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
REN8202 Conservation for Sustainable Futures					1	2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
And one of:							
REN3301 Biodiversity and Conservation	1	2			1	2	
REN3302 Sustainable Resource Use	1	2			1	2	
Year 2							
CLI3301 Climate and Environment Risk Assessment					2	1	
CLI8204 Global Environmental Systems					2	1	
CLI8205 Climate and Sustainability					2	2	
REN8203 Sustainability Science					2	2	Pre-requisite: REN8101 or REN8202 or REN3302 or REN3301 or CLI8204 or CLI8205 or ECO8011

Mathematics and Statistics specialisation recommended enrolment pattern - full-time S1 entry (with QSSSS Mathematical Methods)

The recommended enrolment pattern for this specialisation is an example only for S1 enrolment. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director.

This pattern assumes students have current skills at the level of Queensland Senior Secondary School Studies Mathematical Methods or equivalent. Students without this knowledge should contact the Program Director for advice and may have to study part-time.

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	
Semester 1							
MAT1102 Algebra and Calculus I [#]	1	1			1	1	
STA6200 Statistics for Quantitative Researchers ^{<#\$}	1	1			1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed

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	
MAT8180 Mathematics/Statistics Complementary Studies A ^{##}	1	1			1	1	
Semester 2							
MAT2200 Operations Research 1 [#]	1	2			1	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.
STA8190 Advanced Statistics B ^{*\$}					1	2	
MAT2100 Algebra and Calculus II [#]	1	2			1	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
CSC2410 Computational Thinking with Python	1	2			1	2	

Footnotes

Recommended for students wanting to teach mathematics.

< If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.

\$ Recommended for students wanting to specialise in statistics.

* This course is topic based. Students should select their topic from the course specification and email the examiner for approval prior to enrolment.

Mathematics and Statistics specialisation recommended enrolment pattern - full-time S1 entry (without MAT1102 or STA1003 (or STA6200))

The recommended enrolment pattern for this specialisation is an example only for S1 enrolment. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director.

This pattern requires students to have knowledge equivalent to [MAT1102 Algebra and Calculus I](#) and [STA6200 Statistics for Quantitative Researchers](#) or [STA2300](#)).

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	
Semester 1							
ENM2600 Advanced Engineering Mathematics ^{\$}	1	1			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
STA8180 Advanced Statistics A ^{\$*}					1	1	
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
MAT3201 Operations Research 2 ^{<#†}	1	1			1	1	Pre-requisite: MAT1200 or MAT2200 or Students must be enrolled in one of the following Programs: MSCN or GDSI
Semester 2							
MAT8190 Mathematics/Statistics Complementary Studies B ^{#*}	1	2			1	2	
STA8190 Advanced Statistics B ^{\$*}					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	
MAT2200 Operations Research 1 [#]	1	2			1	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.
CSC2410 Computational Thinking with Python	1	2			1	2	

Footnotes

§ Unavailable online in S3 2023

\$ Recommended for students wanting to specialise in statistics.

* This course is topic based. Students should select their topic from the course specification, ensuring they have any prerequisites stated for their chosen topic, and email the examiner for approval prior to enrolment.

< The on-campus offering of this course is offered in odd—numbered years only.

Recommended for students wanting to teach mathematics.

† Unavailable on-campus at Toowoomba in S1 2023

Mathematics and Statistics specialisation recommended enrolment pattern - part-time S1 entry

The recommended enrolment pattern for this specialisation is an example only for S1 enrolment. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director via usq.support@usq.edu.au.

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	
Semester 1							
STA6200 Statistics for Quantitative Researchers ^{***\$}	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
MAT1102 Algebra and Calculus I [#]	1	1			1	1	
Semester 2							
MAT2100 Algebra and Calculus II [#]	1	2			1	2	Pre-requisite: MAT1102 or MAT1502 or ENM1600 or Students must be enrolled in the following program: MSCN or MEPR or BSED
CSC2410 Computational Thinking with Python	1	2			1	2	
Choose four (4) of the following (at least three (3) of which must be at Level 6 and/or 8):							
STA2301 Distribution Theory ^{\$}	2	1			2	1	Pre-requisite: (STA2300 or STA1003 or e quivalent) and (MAT1102 or ENM1600)
STA3300 Experimental Design ^{\$}	2	1			2	1	Pre-requisite: STA2300 or STA1003 or equiv alent or approval of examiner
STA6100 Multivariate Analysis for High-Dimensional Data ^{# ^}	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolmen t is not permitted in STA6100 if STA3200 has been previously completed
STA2302 Statistical Inference ^{\$}					2	2	Pre-requisite: STA2301
STA3301 Statistical Models ^{~\$}	2	2			2	2	Pre-requisite: STA3300 or approval of exam iner or Students must have completed S TA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
STA8180 Advanced Statistics A ^{\$ *}					2	1	

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	
STA8190 Advanced Statistics B ^{\$ *}					2	2	
MAT2409 High Performance Numerical Computing [†]	2	1			2	1	Pre-requisite: (CSC2410 or CSC1401) and (MAT1102 or ENM1600) or Students must be enrolled in one of the following Programs: MPIT or MCOT or MCTE
MAT2200 Operations Research 1 [#]	2	2			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.
MAT3105 Harmony of Partial Differential Equations ^{# <}	2	1			2	1	Pre-requisite: ENM2600 or MAT2100 or MAT2500
MAT3103 Mathematical Modelling and Dynamical Systems ^{# <}	2	2			2	2	Pre-requisite: MAT2100 or MAT2500 or ENM2600
MAT3201 Operations Research 2 ^{>#†}	2	1			2	1	Pre-requisite: MAT1200 or MAT2200 or Students must be enrolled in one of the following Programs: MSCN or GDSI
MAT3104 Mathematical Modelling in Financial Economics ^{#>}	2	2			2	2	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT2100 or MAT2500 or ENM2600)
MAC8901 Issues in Teaching Mathematics ^{# %}	2	2			2	2	
SCI3302 Work-Integrated-Learning [@]	2	3		1,2,3			Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
MAT8180 Mathematics/Statistics Complementary Studies A ^{# \$ *}	2	1			1	1	
MAT8190 Mathematics/Statistics Complementary Studies B ^{# \$ *}	2	2			1	2	

Footnotes

- ** If [STA2300](#) has been completed previously, contact the Program Director to choose an alternative course to [STA6200](#).
- # Recommended for students wanting to teach mathematics.
- \$ Recommended for students wanting to specialise in statistics.
- ^ recommended for teachers wanting to improve their content knowledge in statistics.
- ~ Unavailable Semester 2, 2023 Toowoomba On-campus
- * This course is topic based. Students should select their topic from the course specification and email the examiner for approval prior to enrolment.
- † Unavailable on-campus at Toowoomba in S1 2023
- < The on-campus offering of this course is offered in even years only.
- > The on-campus offering of this course is offered in odd—numbered years only.
- % Recommended for teachers only. Teachers wishing to improve their content knowledge in statistics should also complete [STA6100](#).
- @ This course is available subject to approval of the Program Director via usq.support@usq.edu.au; and availability of a relevant placement.

Physics and Astronomy specialisation recommended enrolment pattern - full-time S1 or S2 entry

The recommended enrolment pattern for this specialisation is a recommended example. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director via usq.support@usq.edu.au.

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	
PHY1101 Astronomy 1 *	1	1			1	1	
PHY1104 Physics 1	1	1			1	1	Co-requisite: (MAT1102 or ENM2600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC

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	
SCI6103 Research Fundamentals and Ethics					1	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
SCI6102 Research Skills [^]					1	1,2	
PHY1107 Astronomy 2 [*]	1	2			1	2	
PHY1911 Physics 2	1	2			1	2	Co-requisite: (MAT2100 or ENM1600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
Approved courses - Choose one of the following two-unit courses:							
PHY8001 Observational Astronomy ^{†#}					1	1	
PHY8002 Planetary Science ^{†#}					1	1	
PHY8003 Galactic Astronomy and Cosmology ^{† #}					1	2	
PHY8004 Stellar Astronomy ^{† #}					1	2	

Footnotes

- * Astronomical observations for each course are made remotely via internet access to UniSQ's Mt Kent Observatory. Voluntary field nights will also be made available.
- ^ [SCI6102](#) can be taken in S2 and an approved course taken in S1.
- † Two unit course.
- # Astronomical observations for each course are made remotely via internet access to UniSQ's Mt Kent Observatory.

Physics and Astronomy Specialisation recommended enrolment pattern - part-time S1 or S2 entry

The recommended enrolment pattern for this specialisation is a recommended example. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Director via usq.support@usq.edu.au.

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	
PHY1101 Astronomy 1 *	1	1			1	1	
PHY1104 Physics 1	1	1			1	1	Co-requisite: (MAT1102 or ENM2600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
PHY1107 Astronomy 2 *	1	2			1	2	
PHY1911 Physics 2	1	2			1	2	Co-requisite: (MAT2100 or ENM1600) or S tudents must be enrolled in one of the follow ing Programs: MSCN or GDSI or GCSC
SCI6103 Research Fundamentals and Ethics					2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
SCI6102 Research Skills					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	
	Approved courses - Choose one of the following two-unit courses:						
PHY8001 Observational Astronomy ^{† #}					2	1	
PHY8002 Planetary Science ^{† #}					2	1	
PHY8003 Galactic Astronomy and Cosmology ^{† #}					2	2	
PHY8004 Stellar Astronomy ^{† #}					2	2	

Footnotes

* Astronomical observations for each course are made remotely via internet access to UniSQ's Mt Kent Observatory. Voluntary field nights will also be made available.

† Two unit course.

Astronomical observations for each course are made remotely via internet access to UniSQ's Mt Kent Observatory.

Sport and Exercise Specialisation recommended enrolment pattern - full-time S1 or S2 entry

Course	Year of program and 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								
SES8005 Advanced Exercise Physiology *	1	1	1	1			M	
SES8006 Advanced Exercise Programming and Rehabilitation *	1	1	1	1			M	
One of the following level 8 coursework courses from the Sport and Exercise specialisation in the Master of Science (MSCN):								
SES8003 Advanced Motor Control and Learning *	1	1	1	1			M	
SES8008 Advanced Anatomy and Physiology *	1	1	1	1			M	
One elective course from the list below or as approved by the Program Director	1	1			1	1		
Year 1/Semester 2								
SES8007 Advanced Exercise Assessment and Delivery *	1	2	1	2			M	
SES8001 Advanced Biomechanics *	1	2	1	2			M	
Two of the following coursework courses from the Sport and Exercise specialisation in the Master of Science (MSCN):								
SES2203 Physical Activity and Health	1	2			1	2		
SES1103 Nutrition and Exercise	1	2	1	2			M	
PSY3250 Sport and Exercise Psychology					1	2		Pre-requisite: PSY1010 or 5 students must be enrolled in one of the following programs: GDSI or MSCN
SES3206 Strength Training and Conditioning *	1	2	1	2			M	Pre-requisite: SES2103 and SES2104
Approved electives:								
CSC5020 Foundations of Programming £	1	1,2,3			1	1,2,3		
EDU8400 Mentoring and Coaching					1	1,2		
EDU8606 Lifelong Career Development					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		
HSW8220 Promoting Community Access and Inclusion ^{##}					1	1		
MBA8000 Applied Business Research and Ethics [#]	1	1			1	1,2		
MGT8033 Leading Organisational Change	1	1,2			1	1,2		
MGT8038 Leadership Development					1	1,2		
PCM5000 Practical Editorial Skills					1	1		
PUB5001 Introduction to Editing and Publishing					1	1,3		

Footnotes

* Only available in on-campus mode at Ipswich.

£ 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

^{##} HSW8220 is not available ONL in S1 2023

[#] The Semester 2 online offering will not be available in 2023.

Master of Data Science (MADS) - MDSc

CRICOS code (International applicants): 0101854

	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 years full-time, 4 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

Provisional accreditation of the Master of Data Science with the Australian Computer Society ([ACS](#)) is pending. Once provisional accreditation is approved, students will be eligible for ACS membership and recognition by ACS for certification.

Program aims

With the popularity of social media and the wide spread use of the Internet, enormous amounts of data of various types are generated at all times. The Master of Data Science is designed to provide an opportunity for graduates from all disciplines to gain advanced skills and knowledge in handling data more commonly known as Big Data, as well as producing and interpreting data analytics. The aim of this program is to provide students with a career path in Data Science and an opportunity for advancement in their career.

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 the Inherent Requirements for the Master of Data Science.

Program objectives

On completion of the program students should be able to:

- Autonomously apply key ICT and data science professional knowledge, technologies and programming skills to critically investigate and analyse contemporary core issues in a global market, and to develop big data analysis and evidence-based decision-making skills.
- Select, adapt and apply specialised quantitative and technical skills to work independently and collaboratively to process and interpret major theories and concepts associated with big data to solve and interpret complex and real-life problems.
- Work under broad direction within a team environment, manage conflict, and take a leadership role for a task within the project.
- Apply and communicate ethical, legal, and professional standards related to big data privacy and building of a security culture, and assess and evaluate risks in order to comply with customer organisational requirements.
- Investigate, critically analyse, evaluate and communicate research findings and problem solutions associated with applied data theories and methodologies 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.

Admission requirements

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

- Completion of an Australian university three year Bachelor degree in any area, or equivalent OR
- A minimum of five years' professional work experience equivalent to a qualification at AQF Level 7.
- 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.

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 program consists of 16 units comprising of:

- 12 units of core ICT courses; or
- 12 units of core ICT courses for the Artificial Intelligence and Machine Learning specialisation; or
- 12 units of core ICT courses for the Data Analytics specialisation
- **And either:** 4 units of Research course; or
- 4 units of Research Training; or
- 4 units of elective courses (any Postgraduate courses, subject to pre-requisite satisfaction)

Research

Research dissertation courses as electives

Students wishing to pursue a PhD are encouraged to complete the research dissertation courses below as their electives.

Courses	Online	Toowoomba	Springfield
MSC6001 Research Project I ^{*#}	1,2	1,2	
MSC6002 Research Project II ^{*#}	1,2	1,2	

Footnotes

* Two-unit course

Subject to prior approval by Program Director

Research training courses as electives

Students wishing to pursue a research and development career are encouraged to complete the research training courses below as their elective.

Courses	Online	Toowoomba	Springfield
MSC6003 Industry Based Research Practice I ^{*#}	1	1,2	
MSC6004 Industry Based Research Practice II ^{*#}	2	2	
OR			
SCI6101 Science in Practice	1,2		

SCI6102 Research Skills	1,2		
SCI6103 Research Fundamentals and Ethics	1,2	1,2	
1 x Elective course			

Footnotes

- * Two-unit course
Subject to prior approval by Program Director

Required time limits

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

Enterprise Data Science

Courses	Semester of offer Online	Semester of offer Toowoomba campus	Semester of offer Springfield campus
CSC5020 Foundations of Programming[£]	1,2,3	1,2,3	
CIS5310 IS/ICT Project Management[£]	1,2,3	1	1
STA6200 Statistics for Quantitative Researchers	1,2	1	
CIS8008 Business Intelligence	1,2	1	1
CSC6001 Introduction to Data Science and Visualisation	1,2	1,2	
CSC6002 Big Data Management[£]	2,3	2	2
CSC6003 Machine Learning[£]	2,3	2	
CSC6004 Data Mining	1	1	
STA6100 Multivariate Analysis for High-Dimensional Data	1	1	
CIS8025 Big Data Visualisation	1,2	1,2	1,2
CIS8500 Applied Research for Information System Professionals	1,2	2	1
CSC6200 Advanced ICT Professional Project	1,2	1,2	

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

Artificial Intelligence and Machine Learning Specialisation

Courses	Semester of offer Online	Semester of offer Toowoomba campus	Semester of offer Springfield campus
CSC5020 Foundations of Programming[£]	1,2,3	1,2,3	
CIS5310 IS/ICT Project Management[£]	1,2,3	1	1
STA6200 Statistics for Quantitative Researchers	1,2	1	
CSC6201 Deep Learning^{>}	1	1	

CSC6202 Natural Language Processing Techniques and Applications ^{>}	1	1	
CSC6203 Intelligent Multimedia (Computer Vision, Audio Analysis) ^{>}	2		
CSC6204 Information Retrieval and Knowledge Management [^]	1,2	1,2	
CSC6002 Big Data Management [£]	2,3	2	2
CSC6003 Machine Learning [£]	2,3	2	
CSC6004 Data Mining	1	1	
STA6100 Multivariate Analysis for High-Dimensional Data	1	1	
CSC6200 Advanced ICT Professional Project	1,2	1,2	

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
> Commencing 2024
^ First offer S2 2023

Data Analytics Specialisation

Courses	Semester of offer Online	Semester of offer Toowoomba campus	Semester of offer Springfield campus
CSC5020 Foundations of Programming [£]	1,2,3	1,2,3	
CIS5310 IS/ICT Project Management [£]	1,2,3	1	1
STA6200 Statistics for Quantitative Researchers	1,2	1	
CIS8008 Business Intelligence	1,2	1	1
CSC8450 Relational Database Systems	1	1	
CSC6002 Big Data Management [£]	2,3	2	2
CSC6003 Machine Learning [£]	2,3	2	
CSC6004 Data Mining	1	1	
STA6100 Multivariate Analysis for High-Dimensional Data	1	1	
CIS8711 Cloud Security	2		2
CSC6205 Applied Analytics ^{>}	2		
CSC6200 Advanced ICT Professional Project	1,2	1,2	

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
> Commencing 2024

IT requirements

For information technology requirements please refer to the [minimum computing standards](#).

Articulation

Students completing the research project track within the Master of Data Science would be eligible to apply for articulation to the [Master of Research](#) or [Doctor of Philosophy](#) programs if they meet other requirements for entry into those programs. Students completing the research training track within the Master of Data Science with the appropriate GPA would be eligible to apply for enrolment in the [Master of Science \(Research\)](#) (Advanced) and then could progress (articulate) to a [Doctor of Philosophy](#) via that route once they have demonstrated satisfactory progress in a significant research component.

Exit points

Students may exit with the [Graduate Diploma of Science](#) (Applied Data Science) on successful completion of at least eight courses within the Master of Data Science if they have satisfied the requirements of a [Graduate Diploma of Science](#) (Applied Data Science). Students may exit with the [Graduate Diploma of Science](#) (General) if they have completed at least eight courses from the Master of Data Science, including four post-graduate courses coded at 5000 level or above.

Students may exit with the [Graduate Certificate of Science](#) (Applied Data Science) on successful completion of at least four courses within the Master of Data Science if they have satisfied the requirements of a [GCSC Graduate Certificate of Science](#) (Applied Data Science). Students may exit with the [Graduate Certificate of Science](#) (General) if they have completed at least four courses from the Master of Data Science, including at least two courses coded at 5000 level or above.

Credit

Exemptions/credit for all specialisations will be assessed according to [UniSQ procedure](#).

- Up to **four** units of coursework exemptions or credit will be granted if the student has completed courses equivalent to courses offered in the Master of Data Science in either:
 - UniSQ's [Graduate Certificate of Science](#); or
 - A Graduate Diploma or Bachelor's Honours Degree qualification in a discipline different from the current area of study.
- Up to **eight** units of coursework credit or exemptions will be granted if the student has completed courses equivalent to courses offered in the Master of Data Science in either:
 - UniSQ's [Graduate Diploma of Science](#); or
 - A Graduate Diploma or Bachelor's Honours Degree qualification in a discipline equivalent to the current area of study.

Notes:

- (1) All requests for credits or exemptions need to be sought by the student and approved by the Program Director.
- (2) The Program Director will deem to what extent prior studies are equivalent.

Enrolment

Recommended Enrolment Pattern - Full-time (4 Semesters, S1 entry) - Enterprise Data Science

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project

courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 1							
CIS8025 Big Data Visualisation	1	1,2			1	1,2	Enrolment is not permitted in CIS8025 if CIS8701 has been previously completed.
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
CSC6001 Introduction to Data Science and Visualisation	1	1,2			1	1,2	
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
Year 1 Semester 2							
CIS5310 IS/ICT Project Management [£]	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CIS8008 Business Intelligence	1	1			1	1,2	
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
CSC6003 Machine Learning [£]	1	2			1	2,3	Pre-requisite: (STA2300 or STA1003 or S TA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statis tical knowledge and skills or CSC8002 or CSC6002 for MCYS students
Year 2 Semester 1							
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolmen t is not permitted in STA6100 if STA3200 has been previously completed
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	2	1			2	1	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coor dinator

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							
MSC6003 Industry Based Research Practice I *	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 2 Semester 2							
CSC6200 Advanced ICT Professional Project	2	1,2			2	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
CIS8500 Applied Research for Information System Professionals	2	1,2			2	1,2	Pre-requisite: CIS8001 or CIS8008
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	2	1,2			2	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	2	2			2	2	Pre-requisite: MSC8003 or MSC6003

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

* Two unit course

Recommended Enrolment Pattern - Full-time (4 Semesters, S2 entry) - Enterprise Data Science

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 2							
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CIS8008 Business Intelligence	1	1			1	2	
CIS5310 IS/ICT Project Management [£]	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
Year 2 Semester 1							
CSC6001 Introduction to Data Science and Visualisation	2	1,2			2	1,2	
CIS8025 Big Data Visualisation	2	1,2			2	1,2	Enrolment is not permitted in CIS8025 if CIS8701 has been previously completed.

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	
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CIS8500 Applied Research for Information System Professionals	2	1,2			2	1,2	Pre-requisite: CIS8001 or CIS8008
Year 2 Semester 2							
CSC6002 Big Data Management [£]	2	2			2	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
CSC6003 Machine Learning [£]	2	2			2	2,3	Pre-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statistical knowledge and skills or CSC8002 or CSC6002 for MCYS students
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
or							
MSC6003 Industry Based Research Practice I [*]	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 3 Semester 1							
STA6100 Multivariate Analysis for High-Dimensional Data	3	1			3	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
CSC6200 Advanced ICT Professional Project	3	1,2			3	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	3	1,2			3	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	3	1			3	1	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II [*]	3	1,2			3	1,2	Pre-requisite: MSC8001 or MSC6001

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							
MSC6004 Industry Based Research Practice II *	3	2			3	2	Pre-requisite: MSC8003 or MSC6003

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

* Two unit course

Recommended Enrolment Pattern - Part-time (8 Semesters, S1 entry) - Enterprise Data Science

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1							
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
CSC6001 Introduction to Data Science and Visualisation	1	1,2			1	1,2	
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
Year 2							
CIS8025 Big Data Visualisation	2	1,2			2	1,2	Enrolment is not permitted in CIS8025 if CIS8701 has been previously completed.
CIS8008 Business Intelligence	2	1			2	1,2	
CSC6003 Machine Learning [£]	2	2			2	2,3	Pre-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statistical knowledge and skills or CSC8002 or CSC6002 for MCYS students
CIS5310 IS/ICT Project Management [£]	2	1			2	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
Year 3							
STA6100 Multivariate Analysis for High-Dimensional Data	3	1			3	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
CSC6004 Data Mining	3	1			3	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)

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	
CSC6200 Advanced ICT Professional Project	3	1,2			3	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
CIS8500 Applied Research for Information System Professionals	3	1,2			3	1,2	Pre-requisite: CIS8001 or CIS8008
Year 4							
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	4	1,2			4	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
SCI6101 Science in Practice					4	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I *	4	1,2			4	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
or							
MSC6003 Industry Based Research Practice I *	4	1,2			4	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Either the following two courses for the Research Training Track							
SCI6102 Research Skills					4	1,2	
Elective	4	2			4	2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	4	1,2			4	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	4	2			4	2	Pre-requisite: MSC8003 or MSC6003

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
- * Two unit course

Recommended Enrolment Pattern - Full-time (4 Semesters, S1 entry) - Artificial Intelligence and Machine Learning

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project

courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 1							
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
CSC6004 Data Mining	1	1			1	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolmen t is not permitted in STA6100 if STA3200 has been previously completed
Year 1 Semester 2							
CSC6204 Information Retrieval and Knowledge Management [^]	1	1,2			1	1,2	Pre-requisite or Co-requisite: CSC5020 and STA6200
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent pro gram and statistical knowledge and skills or students are enrolled in MCYS
CSC6003 Machine Learning [£]	1	2			1	2,3	Pre-requisite: (STA2300 or STA1003 or S TA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statis tical knowledge and skills or CSC8002 or CSC6002 for MCYS students
CIS5310 IS/ICT Project Management [£]	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
Year 2 Semester 1							
CSC6202 Natural Language Processing Techniques and Applications ^{>}	2	1			2	1	
CSC6201 Deep Learning ^{>}	2	1			2	1	
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	2	1			2	1	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coor dinator

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							
MSC6003 Industry Based Research Practice I *	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 2 Semester 2							
CSC6200 Advanced ICT Professional Project	2	1,2			2	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
CSC6203 Intelligent Multimedia (Computer Vision, Audio Analysis) ^{>}					2	2	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	2	1,2			2	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	2	2			2	2	Pre-requisite: MSC8003 or MSC6003

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
- ^ First offer S2 2023
- > Commencing 2024
- * Two unit course

Recommended Enrolment Pattern - Full-time (4 Semesters, S2 entry) - Artificial Intelligence and Machine Learning

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 2							
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS

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	
CIS5310 IS/ICT Project Management [£]	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
Year 2 Semester 1							
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CSC6204 Information Retrieval and Knowledge Management [^]	2	1,2			2	1,2	Pre-requisite or Co-requisite: CSC5020 and STA6200
CSC6202 Natural Language Processing Techniques and Applications ^{>}	2	1			2	1	
Year 2 Semester 2							
CSC6003 Machine Learning [£]	2	2			2	2,3	Pre-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statistical knowledge and skills or CSC8002 or CSC6002 for MCYS students
CSC6203 Intelligent Multimedia (Computer Vision, Audio Analysis) ^{>}					2	2	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCOO or MADS or have the approval of their program coordinator
or							
MSC6003 Industry Based Research Practice I [*]	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 3 Semester 1							
CSC6201 Deep Learning ^{>}	3	1			3	1	
CSC6200 Advanced ICT Professional Project	3	1,2			3	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	3	1,2			3	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	3	1			3	1	

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 one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	3	1,2			3	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	3	2			3	2	Pre-requisite: MSC8003 or MSC6003

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
^ First offer S2 2023
> Commencing 2024
* Two unit course

Recommended Enrolment Pattern - Full-time (4 Semesters, S1 entry) - Data Analytics Specialisation

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 1							
STA6100 Multivariate Analysis for High-Dimensional Data	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
CSC5020 Foundations of Programming£	1	1,2,3			1	1,2,3	
CIS8008 Business Intelligence	1	1			1	1,2	
Year 1 Semester 2							
CIS5310 IS/ICT Project Management£	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC6002 Big Data Management£	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
CSC6003 Machine Learning£	1	2			1	2,3	Pre-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statistical knowledge and skills or CSC8002 or CSC6002 for MCYS students
CIS8711 Cloud Security^#	1	2			1	2	Pre-requisite: CSC8100 and CIS5100 and Students must be enrolled in the following Program: MCYS; OR Pre-requisite or Co-

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	
							requisite: CSC6002 and Students must be enrolled in the following Program: MADS
Year 2 Semester 1							
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CSC8450 Relational Database Systems	2	1			2	1	Pre-requisite: CSC5020
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	2	1			2	1	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I *	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
or							
MSC6003 Industry Based Research Practice I *	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 2 Semester 2							
CSC6200 Advanced ICT Professional Project	2	1,2			2	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
CSC6205 Applied Analytics ^					2	2	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	2	1,2			2	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	2	2			2	2	Pre-requisite: MSC8003 or MSC6003

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 at Springfield only
- # MADS students may receive prerequisites override by the MADS Program Director
- * Two unit course
- ^ Commencing 2024

Recommended Enrolment Pattern - Full-time (4 Semesters, S2 entry) - Data Analytics Specialisation

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or 1 approved course) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)) or ([MSC6003 Industry Based Research Practice I](#) and [MSC6004 Industry Based Research Practice II](#)).

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	
Year 1 Semester 2							
CSC5020 Foundations of Programming [£]	1	1,2,3			1	1,2,3	
STA6200 Statistics for Quantitative Researchers	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
CSC6002 Big Data Management [£]	1	2			1	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent pro gram and statistical knowledge and skills or students are enrolled in MCYS
CIS8711 Cloud Security ^{^^#}	1	2			1	2	Pre-requisite: CSC8100 and CIS5100 and Students must be enrolled in the following Program: MCYS; OR Pre-requisite or Co-requisite: CSC6002 and Students must be enrolled in the following Program: MADS
Year 2 Semester 1							
CIS8008 Business Intelligence	2	1			2	1,2	
CSC6004 Data Mining	2	1			2	1	Pre-requisite or Co-requisite: (STA2300 or STA1003 or STA8170 or STA6200) and (CSC1401 or CSC5020)
CIS5310 IS/ICT Project Management [£]	2	1			2	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
STA6100 Multivariate Analysis for High-Dimensional Data	2	1			2	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolmen t is not permitted in STA6100 if STA3200 has been previously completed
Year 2 Semester 2							
CSC6205 Applied Analytics [^]					2	2	
CSC6003 Machine Learning [£]	2	2			2	2,3	Pre-requisite: (STA2300 or STA1003 or S TA8170 or STA6200) and (CSC1401 or CSC5020) or equivalent program and statis tical knowledge and skills or CSC8002 or CSC6002 for MCYS students
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice					2	1,2	
SCI6102 Research Skills					2	1,2	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1,2			2	1,2	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS

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 have the approval of their program coordinator
or							
MSC6003 Industry Based Research Practice I *	2	1,2			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MADS
Year 3 Semester 1							
CSC8450 Relational Database Systems	3	1			3	1	Pre-requisite: CSC5020
CSC6200 Advanced ICT Professional Project	3	1,2			3	1,2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics	3	1,2			3	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
Elective	3	1			3	1	
or one of the following courses for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	3	1,2			3	1,2	Pre-requisite: MSC8001 or MSC6001
or							
MSC6004 Industry Based Research Practice II *	3	2			3	2	Pre-requisite: MSC8003 or MSC6003

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 at Springfield only
- # MADS students may receive prerequisites override by the MADS Program Director
- ^ Commencing 2024
- * Two unit course

Master of Science (MSCN) - MSc

QTAC code (Australian and New Zealand applicants): Environment & Sustainability (Toowoomba campus: MSCN04; External: MSCN10); Sport & Exercise (Toowoomba campus: MSCN06; External: MSCN12); Astrophysics (Toowoomba campus: MSCN03; External: MSCN09); Mathematics & Statistics (Toowoomba campus: MSCN05; External: MSCN11); Unspecified (Toowoomba campus: MSCN02; External: MSCN08)

CRICOS code (International applicants): 078596M

	On-campus*†@#	External*^†@	Online*†
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Ipswich, 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	Commonwealth supported place Domestic full fee paying place International full fee paying place
Residential school:		Ipswich (Mandatory)	
Standard duration:	2 years full-time, 4 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.

Footnotes

- * Please refer to the Program Structure section for further information on mode of offer for each specialisation.
- † The Semester 2 intake for the Mathematics and Statistics specialisation will be subject to the approval of the Program Director.
- @ Sport and Exercise specialisation: courses that include a practical skill competency component and residential school will be conducted at UniSQ Ipswich.
- # The Agricultural Science specialisation is available at Toowoomba campus only, commencing in either Semester 1 or Semester 2.
- ^ The Sport and Exercise specialisation is not available to international overseas 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

Program aims

The aim of the Master of Science program is to produce graduates who are equipped with essential scientific knowledge and an appreciation of the latest literature and technologies.

Agricultural Science specialisation

The Australian agricultural industry contributes substantially to national GDP, as well, is a significant employer across all states/regions. There is a current demand for graduates with knowledge of contemporary agricultural production approaches, particularly in light of declining national water availability and quality. This

specialisation provides graduates with an understanding of both national and global issues associated with agricultural production and sets these in a context of agroecosystem sustainability and broader societal challenges. Graduates from the program will have the capacity to engage across a range of agriculture related disciplines.

Applied Climate Science specialisation

The global climate service industry is estimated to have a significant and growing economic value. In Australia, the need for 'climate smart' professionals working within their chosen industry is growing with hundreds of job opportunities in industry and the public sector organisation. This specialisation is designed to provide graduates with the knowledge and decision-making skills to work as 'climate smart' professionals in many sectors of economic activity including agriculture, food, water, energy, health, and natural resource management industries.

Astrophysics specialisation

This specialisation is designed to provide an opportunity to gain knowledge and skills in astrophysics and develop scientific research skills. The program thus provides professional development in science for those in educational or science communication careers, and a specialist foundation of knowledge and skills for subsequent higher degree research.

Environment and Sustainability specialisation

Modern environment and natural resource management requires the integration of social, environmental and economic research within an interdisciplinary planning and policy framework. It also requires a capacity to handle complexity and uncertainty and the application of different methods of analysis and different approaches to governance and community engagement. This coursework Masters program addresses these needs by providing important core studies and flexibility in choice of elective studies that will enhance their skills and knowledge in the broad discipline of environment and sustainability. Adaptation to climate change and sustainability science are emphasised in global and regional contexts in this specialisation.

Mathematics and Statistics specialisation

This specialisation is designed to provide an opportunity for graduates from other than mathematics and statistics programs to gain advanced skills and knowledge in key areas of mathematics and/or statistics which relate to their career needs and the needs of their profession or industry. The aim of this program is therefore to provide students with a broad advanced education in mathematical and/or statistical techniques and essential problem solving skills which will meet their career needs and assist them in their professional development.

Sport and Exercise specialisation

The Master of Science (Sport and Exercise) specialisation aims to provide students with the opportunity to develop and extend their knowledge and skills relevant to health, fitness and sports performance across the lifespan to an advanced level. Students undertaking the program will usually have qualifications in various related disciplines (although any undergraduate degree is acceptable). The program may be used to meet work or professional requirements, allow for program exemptions, or form part of course requirements in other UniSQ postgraduate programs. The program is designed to meet personal achievement goals or provide for career opportunities within the health, sports and fitness industry such as sports coaches, personal trainers, sports development officers or a range of other roles. It also provides a pathway for students to enter into postgraduate programs such as a doctorate.

Program objectives

On completion of the program graduates should be able to:

- Integrate an advanced understanding of a complex body of expert knowledge in a discipline of science.
- Apply established research theories and principles associated with scholarship and/or professional practice within a relevant science discipline.
- Critically analyse, reflect on, and synthesise complex expert information, problems, concepts and theories applicable to a relevant science discipline.

- Interpret and transmit expert knowledge, skills and ideas, both individually and collaboratively, to specialist and non-specialist audiences.
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

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 any area, or equivalent or equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- English Language Proficiency requirements for Category 3.

As well as the following specialisation-specific requirements:

Master of Science (Mathematics and Statistics)

- Knowledge of mathematics at least equivalent to that found in [MAT1102 Algebra and Calculus I](#).

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

Specialisation	Offering		
	On-campus	Online	External
Agricultural Science [@]	Toowoomba [*]		BIO3318 Plant Microbe Interactions includes a highly recommended residential school [^]
Applied Climate Science		Online only	
Astrophysics		Online only	
Environment and Sustainability		Online only	
Mathematics and Statistics ^{#@}	Toowoomba	Online	
Sport and Exercise [@]	Toowoomba or Ipswich		Some courses have mandatory residential schools which will be held at the Ipswich campus.

Footnotes

[@] This specialisation is available to international on-campus students.

^{*} The Agricultural Science specialisation is available at Toowoomba campus only, commencing in either Semester 1 or Semester 2.

[^] Students enrolled externally must be able to attend the residential school at the Toowoomba campus.

[#] The Semester 2 intake will be subject to the approval of the Program Director.

The Master of Science offers 6 specialisations. All specialisations consist of 16 units of courses, of which 8 units must be at Level 6 and/or Level 8. Some specialisations contain only core courses, where others allow approved courses.

The Master of Science consists of two tracks within each specialisation:

- **Research Training Track:** This track consists of 4 of the 16 units providing courses (including capstone experience) on research skills and training: [SCI6101 Science in Practice](#); [SCI6102 Research Skills](#); [SCI6103 Research Fundamentals and Ethics](#) and [STA6200 Statistics for Quantitative Researchers](#)
- **Research Project Track:** This track consists of 4 of the 16 units providing opportunity for students to undertake independent research in two capstone courses: [MSC6001 Research Project I](#) and [MSC6002 Research Project II](#). Normally these research project courses are undertaken in the latter stages of candidature. Students must have approval of the Program Director and a Supervisor prior to undertaking this track and is dependent on the availability of supervisors and resources.

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

Master of Science (Mathematics and Statistics): The Research Training Track courses for this specialisation are [SCI6101 Science in Practice](#), [SCI6103 Research Fundamentals and Ethics](#), [CSC8411 Independent Studies in Computing/Mathematics/Statistics B](#), and [CSC6002 Big Data Management](#)[£]. Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101](#), [SCI6103](#), [CSC8411](#) and/or [CSC6002](#)[£]) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)). Research project courses will normally be undertaken towards the end of the program. The maximum number of courses other than Mathematics/Statistics courses to be credited must not exceed the number of approved courses (3). At the beginning of their candidature students should submit a proposed enrolment pattern to the Program Director for approval. Within this proposal students should have topics and names of any proposed supervisors for the appropriate Level 6 and/or Level 8 courses. A maximum of three approved courses at UniSQ Level 2 or above can be taken from other discipline areas if prior approval has been sought by the student and approved by the Program Director.

Master of Science (Sport and Exercise): Students who have a Bachelor's degree in Sport and Exercise (or similar) may seek up to 4 credits/exemptions and one alternate approved course for the undergraduate level courses.

£ 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

Required time limits

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

Agricultural Science specialisation

This specialisation consists of 16 units of courses which are all available in either on-campus, external or online mode.

Semester 1	Semester 2	Either Semester
AGR8001 Food Security in the 21st Century	AGR8002 Emerging Technologies in Agriculture	
CLI8001 Climate Risk	AGR8003 Critical Issues in Agriculture	
AGR2303 Agronomy	BIO3318 Plant Microbe Interactions	
AGR3303 Agricultural Materials and Post-Harvest Technologies	Approved Elective ^{##}	
AGR4305 Agricultural Soil Mechanics	BIO8201 Biology Foundations	
SCI3302 Work-Integrated-Learning	REN3302 Sustainable Resource Use	
and EITHER the following four courses, which comprise the Research Training Track : [#]		
SCI6103 Research Fundamentals and Ethics	SCI6101 Science in Practice	STA6200 Statistics for Quantitative Researchers
	SCI6102 Research Skills	
OR the following two courses (subject to prior approval), which comprise the Research Project Track :		
MSC6001 Research Project I [*]	MSC6002 Research Project II [*]	

Footnotes

^{##} Recommended Approved Elective is [ENV4106](#), or another Climate or Environment related (Level 4 or above) course.

[#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).

* Two-unit course.

Applied Climate Science specialisation

This specialisation consists of 16 units of courses which are all available in online mode.

Semester 1	Semester 2	Either Semester
CLI8001 Climate Risk	CLI3302 Adaptation to Climate Change	
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability	
CLI8002 Climate, Human and Environmental Health and Disaster Management *	CLI8003 Climate, Food, Water and Energy Security *	
Two Approved Specialisation Courses	Two Approved Specialisation Courses	
and EITHER the following four courses, which comprise the Research Training Track : [#]		
SCI6103 Research Fundamentals and Ethics	SCI6101 Science in Practice	STA6200 Statistics for Quantitative Researchers
	SCI6102 Research Skills	
OR the following two courses (subject to prior approval), which comprise the Research Project Track :		
MSC6001 Research Project I *	MSC6002 Research Project II *	

Footnotes

* Two unit course

Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).

Astrophysics specialisation

This specialisation consists of 16 units of courses which are all available in online mode.

Semester 1	Semester 2	Either Semester
PHY1101 Astronomy 1	PHY1107 Astronomy 2	
PHY8001 Observational Astronomy *	PHY8004 Stellar Astronomy *	
PHY8002 Planetary Science *	PHY8003 Galactic Astronomy and Cosmology *	
Approved Courses x 2 [^]		
and EITHER the following four courses, which comprise the Research Training Track : [#]		
SCI6103 Research Fundamentals and Ethics	SCI6101 Science in Practice	STA6200 Statistics for Quantitative Researchers
	SCI6102 Research Skills	
OR the following two courses (subject to prior approval), which comprise the Research Project Track :		
MSC6001 Research Project I *	MSC6002 Research Project II *	

Footnotes

* Two unit course

[^] Approved courses are for students to take complementary studies in physics, mathematics, statistics or computing. The selection of the approved courses is to be made in consultation with, (and be approved by) the Program Director via usq.support@usq.edu.au.

Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).

Environment and Sustainability specialisation

This specialisation consists of 16 units of courses which are all available in online mode.

Semester 1	Semester 2	Either Semester
REN8101 Environment, Society and Sustainability	REN8202 Conservation for Sustainable Futures	
CLI8204 Global Environmental Systems	REN8203 Sustainability Science	
Approved Course [^]	CLI8205 Climate and Sustainability	
CLI3301 Climate and Environment Risk Assessment	REN3301 Biodiversity and Conservation	
AGR8001 Food Security in the 21st Century	REN3302 Sustainable Resource Use	
ECO8011 Global Issues in Environmental Management and Sustainability	LAW8717 International Environmental Law ^{**}	
and EITHER the following four courses, which comprise the Research Training Track : [#]		
SCI6103 Research Fundamentals and Ethics	SCI6101 Science in Practice	STA6200 Statistics for Quantitative Researchers
	SCI6102 Research Skills	
OR the following two courses (subject to prior approval), which comprise the Research Project Track :		
MSC6001 Research Project I [*]	MSC6002 Research Project II [*]	

Footnotes

[^] Students can choose one of the following approved courses: [SCI3302 Work-Integrated-Learning](#), [CLI8001 Climate Risk](#), [AGR3304 Soil Science](#), [ENV3105 Hydrology](#) or other courses approved by the Program Director.

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

[#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).

^{*} Two unit course

Mathematics and Statistics specialisation

This specialisation consists of 16 units of courses which are all available in online or on-campus mode. Students may seek approval from the Program Director to enrol in courses not listed in this table.

Semester 1	Semester 2	Either Semester
Core Courses: choose at least 9 Core courses and at most 12 Core Courses. At least 4 of the selected courses from Core Courses and Approved Courses must be at Level 6 and/or 8.		
ENM2600 Advanced Engineering Mathematics	MAT2100 Algebra and Calculus II ^{**}	STA6200 Statistics for Quantitative Researchers
MAT2409 High Performance Numerical Computing [†]	MAT2200 Operations Research 1 ^{**}	
STA2301 Distribution Theory	STA2302 Statistical Inference	
MAT3105 Harmony of Partial Differential Equations ^{+**}	MAT3103 Mathematical Modelling and Dynamical Systems ^{+**}	

MAT3201 Operations Research 2 ^{@**†}	MAT3104 Mathematical Modelling in Financial Economics ^{@**}	
STA3300 Experimental Design	STA3301 Statistical Models ^{>}	
MAT8180 Mathematics/Statistics Complementary Studies A [^]	MAT8190 Mathematics/Statistics Complementary Studies B [^]	
CSC8410 Independent Studies in Computing/Mathematics/Statistics A [^]	CSC2410 Computational Thinking with Python	
STA6100 Multivariate Analysis for High-Dimensional Data ^{**}	STA8190 Advanced Statistics B [^]	
STA8180 Advanced Statistics A [^]		
Approved Courses: choose at most 3 Approved Courses. At least 4 of the selected courses from Core Courses AND Approved Courses must be at Level 6 and/or 8.		
EDU8326 Learning Difficulties: Mathematics ^{**}	MAC8901 Issues in Teaching Mathematics ^{**}	SCI3302 Work-Integrated-Learning ^{^^}
and EITHER the following four courses, which comprise the Research Training Track: [#]		
SCI6103 Research Fundamentals and Ethics	CSC8411 Independent Studies in Computing/Mathematics/Statistics B	
SCI6101 Science in Practice	CSC6002 Big Data Management [£]	
OR the following two courses (subject to prior approval), which comprise the Research Project Track:		
MSC6001 Research Project I [*]	MSC6002 Research Project II [*]	

Footnotes

- ^{**} Recommended courses for students wanting to teach mathematics.
[†] Unavailable on-campus at Toowoomba in S1 2023
⁺ The on-campus offering of this course is offered in even years only.
[@] The on-campus offering of this course is offered in odd years only.
[>] Unavailable Semester 2, 2023 Toowoomba On-campus
[^] These courses are topics based courses. Student should select a topic from the course specifications and email the examiner prior to enrolment to receive enrolment approval.
^{^^} Available in S1, S2 and S3
[#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).
[£] 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
^{*} Two unit course

Sport and Exercise specialisation

This specialisation consists of 16 units of courses which are all available in either on-campus, external or online mode.

Semester 1	Semester 2	Either Semester
SES8005 Advanced Exercise Physiology	SES8001 Advanced Biomechanics	
SES8003 Advanced Motor Control and Learning	SES8007 Advanced Exercise Assessment and Delivery	
SES8006 Advanced Exercise Programming and Rehabilitation	SES3206 Strength Training and Conditioning	

SES8008 Advanced Anatomy and Physiology	PSY3250 Sport and Exercise Psychology	
One approved elective course from the list below or as approved by the Program Director	SES2203 Physical Activity and Health	
SES1101 Growth, Development and Lifespan	SES1103 Nutrition and Exercise	
and EITHER the following four courses, which comprise the Research Training Track: [#]		
SCI6103 Research Fundamentals and Ethics	SCI6101 Science in Practice	STA6200 Statistics for Quantitative Researchers
	SCI6102 Research Skills	
OR the following two courses (subject to prior approval), which comprise the Research Project Track:		
MSC6001 Research Project I [*]	MSC6002 Research Project II [*]	

Footnotes

Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001 Research Project I](#) AND [MSC6002 Research Project II](#).

* Two unit course

Approved Course List

Course	Semester(s) offered Toowoomba	Semester(s) offered Springfield	Semester(s) offered Ipswich	Semester(s) offered External	Semester(s) offered Online
SES8299 Advanced Professional Placement	1		1	1	
MGT8033 Leading Organisational Change	1	2			1,2
MBA8000 Applied Business Research and Ethics [#]		1			1,2
MGT8038 Leadership Development					1,2
EDU8400 Mentoring and Coaching					1,2
EDU8606 Lifelong Career Development					1
CSC5020 Foundations of Programming [£]	1,2,3				1,2,3

PUB5001 Introduction to Editing and Publishing					1,3
PCM5000 Practical Editorial Skills					1
HSW8220 Promoting Community Access and Inclusion^{##}					1

Footnotes

The Semester 2 online offering will not be available in 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

HSW8220 is not available ONL in S1 2023

IT requirements

For information technology requirements please refer to the [minimum computing standards](#).

Other program requirements

To qualify for the award of Master of Science (Environment and Sustainability) students must pass 16 units of courses, at least eight of which are to be Level 6 and/or 8 courses listed in the Recommended Enrolment Pattern section. Students who have completed the same courses or similar courses at UniSQ or elsewhere may replace these with additional approved courses with the approval of the Program Director via usq.support@usq.edu.au.

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 completing the Sport and Exercise specialisation: for all modes there will be on-campus and practical attendance requirements for some courses. In order to successfully complete the program students must be able to fulfil any designated practical attendance requirements.

Agricultural Science Specialisation

- [BIO3318 Plant Microbe Interactions](#)

Sport and Exercise Specialisation

- [SES1103 Nutrition and Exercise](#)
- [SES3206 Strength Training and Conditioning](#)
- [SES8001 Advanced Biomechanics](#)
- [SES8003 Advanced Motor Control and Learning](#)
- [SES8005 Advanced Exercise Physiology](#)
- [SES8006 Advanced Exercise Programming and Rehabilitation](#)
- [SES8007 Advanced Exercise Assessment and Delivery](#)
- [SES8008 Advanced Anatomy and Physiology](#)

Articulation

Students completing the [Master of Science](#) research project track would be eligible to apply for articulation to the [Master of Science \(Research\)](#) or [Doctor of Philosophy](#) programs if they meet other requirements for entry into those programs.

Students completing the [Master of Science](#) research training track with the appropriate GPA would be eligible to apply for enrolment in the [Master of Science \(Research\)](#) (Advanced) and then could progress (articulate) to a PhD via that route once they have demonstrated satisfactory progress in a significant research component.

Exit points

Students may exit with [Graduate Diploma of Science](#) specialisation on successful completion of a least 8 courses within the [Master of Science](#) if they have satisfied the requirements of a [Graduate Diploma of Science](#) specialisation. Students may exit with the [Graduate Diploma of Science](#) (General) if they have completed at least 8 courses from one or more of the specialisations of [MSCN](#), and at least 4 of them are at Level 6 and/or 8.

Students may exit with [Graduate Certificate of Science](#) specialisation on successful completion of at least 4 courses within the [Master of Science](#) if they have satisfied the requirements of a [GCSC Graduate Certificate of Science](#) specialisation. Students may exit with the [Graduate Certificate of Science](#) (General) if they have completed at least 4 courses from one or more of the specialisations of [Master of Science](#), and at least 2 of them are at Level 6 and/or 8.

Students in the Sport and Exercise specialisation may exit with the [Graduate Certificate of Sport and Exercise](#) on successful completion of four approved units of study or the [Graduate Diploma of Science](#) (Sport and Exercise) after eight approved units of study.

Credit

Exemptions/credit for all specialisations will be assessed according to [UniSQ procedure](#).

- Up to **four** units of coursework exemptions or credit will be granted if the student has completed courses equivalent to courses offered in the particular MSCN specialisation in either:
 - UniSQ's [Graduate Certificate of Science](#); or
 - A Bachelor's degree in a discipline equivalent to the specialisation; or
 - A Graduate Diploma or Bachelor's Honours Degree qualification in a discipline different from the current area of study.
- Up to **eight** units of coursework credit or exemptions will be granted if the student has completed courses equivalent to courses offered in the particular MSCN specialisation in either:
 - [Graduate Diploma of Science](#) or Bachelor's Honours in a discipline equivalent to the specialisation.

Notes:

- (1) All requests for credits or exemptions need to be sought by the student and approved by the Program Director.
- (2) The Program Director will deem to what extent prior studies are equivalent to the relevant specialisation.

Enrolment

Recommended Enrolment Pattern - Agricultural Science specialisation Full-time (4 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#),

SCI6103 Research Fundamentals and Ethics and/or STA6200 Statistics for Quantitative Researchers) with one or two 2-unit research project courses (MSC6001 Research Project I and MSC6002 Research Project II).

Course	Year of program and 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								
AGR8001 Food Security in the 21st Century	1	1			1	1		
CLI8001 Climate Risk					1	1		
AGR2303 Agronomy	1	1			1	1		
AGR3303 Agricultural Materials and Post-Harvest Technologies	1	1			1	1		
Year 1 Semester 2								
BIO8201 Biology Foundations					1	2		
AGR8003 Critical Issues in Agriculture	1	2			1	2		
BIO3318 Plant Microbe Interactions	1	2	1	2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
Approved Elective	1	2			1	2		
Year 2 Semester 1								
AGR4305 Agricultural Soil Mechanics	2	1			2	1		
SCI3302 Work-Integrated-Learning	2	1,2,3	2	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
Either the following two courses for the Research Training Track								
SCI6103 Research Fundamentals and Ethics [#]	2	1			2	1		Pre-requisite: Students must be enrolled in one of the fol lowing programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
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
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6001 Research Project I [*]	2	1,2			2	1,2		Pre-requisite: Students must be enrolled in one of the fol lowing Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program co ordinator
Year 2 Semester 2								
AGR8002 Emerging Technologies in Agriculture	2	2			2	2		
REN3302 Sustainable Resource Use	2	2			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		
Either the following two courses for the Research Training Track								
SCI6101 Science in Practice [#]					2	2		
SCI6102 Research Skills [#]					2	2		
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6002 Research Project II [*]	2	1,2			2	1,2		Pre-requisite: MSC8001 or MSC6001

Footnotes

- # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
< If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
* Two unit course

Recommended Enrolment Pattern - Agricultural Science specialisation Part-time (8 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

Course	Year of program and 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								
AGR8001 Food Security in the 21st Century	1	1			1	1		
CLI8001 Climate Risk					1	1		
BIO8201 Biology Foundations					1	2		
AGR8003 Critical Issues in Agriculture	1	2			1	2		
Year 2								
AGR2303 Agronomy	2	1			2	1		
AGR3303 Agricultural Materials and Post-Harvest Technologies	2	1			2	1		
BIO3318 Plant Microbe Interactions	2	2	2	2			HR	Pre-requisite: BIO1101 or S tudents must be enrolled in one of the following Program s: BATM or BENV or GCSC or GDSI or MSCN
Approved Elective	2	2			2	2		
Year 3								
AGR4305 Agricultural Soil Mechanics	3	1			3	1		
SCI3302 Work-Integrated-Learning	3	1,2,3	3	1,2,3				Pre-requisite: Completion of 2nd year (or 2 years full time study in a relevant area)
AGR8002 Emerging Technologies in Agriculture	3	2			3	2		
REN3302 Sustainable Resource Use	3	2			3	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		
Year 4 Semester 1 - either the following two courses for the Research Training Track								
SCI6103 Research Fundamentals and Ethics [#]	4	1			4	1		Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
STA6200 Statistics for Quantitative Researchers ^{<#}	4	1			4	1,2		Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6001 Research Project I [*]	4	1			4	1		Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 4 Semester 2- either the following two courses for the Research Training Track								
SCI6101 Science in Practice [#]					4	2		
SCI6102 Research Skills [#]					4	2		
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6002 Research Project II [*]	4	2			4	2		Pre-requisite: MSC8001 or MSC6001

Footnotes

- # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
< If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
* Two unit course

Recommended Enrolment Pattern - Applied Climate Science specialisation Full-time (4 Semesters, S1 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1 Semester 1							
CLI8001 Climate Risk					1	1	
CLI8204 Global Environmental Systems					1	1	

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	
Either the following two courses for the Research Training Track							
STA6200 Statistics for Quantitative Researchers ^{<#}	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
SCI6103 Research Fundamentals and Ethics [#]	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 1 Semester 2							
CLI3302 Adaptation to Climate Change					1	2	
CLI8205 Climate and Sustainability					1	2	
Approved Specialisation Course ⁺					1	2	
Approved Specialisation Course ⁺					1	2	
Year 2 Semester 1							
CLI8002 Climate, Human and Environmental Health and Disaster Management [*]					2	1	
Approved Specialisation Course ⁺					2	1	
Approved Specialisation Course ⁺					2	1	
Year 2 Semester 2							
CLI8003 Climate, Food, Water and Energy Security [*]					2	2	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice [#]					2	1,2	
SCI6102 Research Skills [#]					2	1,2	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II [*]	2	2			2	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

- < If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
* Two unit course
+ Approved Specialisation Courses — courses complementary to the specialisation approved by the Program Director

Recommended Enrolment Pattern - Applied Climate Science specialisation Part-time (8 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#),

SCI6103 Research Fundamentals and Ethics and/or STA6200 Statistics for Quantitative Researchers) with one or two 2-unit research project courses (MSC6001 Research Project I and MSC6002 Research Project II).

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	
Year 1							
CLI8001 Climate Risk					1	1	
CLI8204 Global Environmental Systems					1	1	
CLI8205 Climate and Sustainability					1	2	
Approved Specialisation Course ⁺					1	2	
Year 2							
Either the following two courses for the Research Training Track							
SCI6103 Research Fundamentals and Ethics [#]	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
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
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
CLI3302 Adaptation to Climate Change					2	2	
Approved Specialisation Course ⁺					2	2	
Year 3							
CLI8002 Climate, Human and Environmental Health and Disaster Management [*]					3	1	
CLI8003 Climate, Food, Water and Energy Security [*]					3	2	
Year 4							
Approved Specialisation Course ⁺					4	1	
Approved Specialisation Course ⁺					4	1	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice [#]					4	2	
SCI6102 Research Skills [#]					4	2	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II [*]	4	2			4	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

⁺ Approved Specialisation Courses — courses complementary to the specialisation approved by the Program Director

[#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).

[<] If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.

* Two unit course

Recommended Enrolment Pattern - Astrophysics specialisation Full-time (4 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1 Semester 1							
PHY1101 Astronomy 1					1	1	
Approved Course ^	1	1			1	1	
PHY8001 Observational Astronomy *					1	1	
Year 1 Semester 2							
PHY1107 Astronomy 2					1	2	
Approved Course ^	1	2			1	2	
PHY8004 Stellar Astronomy *					1	2	
Year 2 Semester 1							
PHY8002 Planetary Science *					2	1	
Either the following two courses for the Research Training Track							
STA6200 Statistics for Quantitative Researchers<#	2	1			2	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
SCI6103 Research Fundamentals and Ethics#	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I *	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 2 Semester 2							
PHY8003 Galactic Astronomy and Cosmology *					2	2	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice#					2	2	
SCI6102 Research Skills#					2	2	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	2	2			2	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

- ^ This approved course is for students to take complementary studies in physics, mathematics, statistics or computing. Choice of the approved courses should be made in consultation with, and be approved by the Program Director via usq.support@usq.edu.au.
- * Two unit course
- < If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
- # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).

Recommended Enrolment Pattern - Astrophysics specialisation Part-time (8 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1, Semester 1							
PHY1101 Astronomy 1					1	1	
Approved Course [^]	1	1			1	1	
Year 1, Semester 2							
PHY1107 Astronomy 2					1	2	
Approved Course [^]	1	2			1	2	
Year 2, Semester 1							
PHY8001 Observational Astronomy [*]					2	1	
Year 2, Semester 2							
PHY8004 Stellar Astronomy [*]					2	2	
Year 3, Semester 1							
Either the following two courses for the Research Training Track							
STA6200 Statistics for Quantitative Researchers ^{<#}	3	1			3	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
SCI6103 Research Fundamentals and Ethics [#]	3	1			3	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	3	1			3	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 3, Semester 2							
PHY8003 Galactic Astronomy and Cosmology [*]					3	2	
Year 4, Semester 1							
PHY8002 Planetary Science [*]					4	1	

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	
Year 4, Semester 2							
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice [#]					4	2	
SCI6102 Research Skills [#]					4	2	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II [*]	4	2			4	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

- [^] This approved course is for students to take complementary studies in physics, mathematics, statistics or computing. Choice of the approved courses should be made in consultation with, and be approved by the Program Director via usq.support@usq.edu.au.
- ^{*} Two unit course
- [<] If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
- [#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).

Recommended Enrolment Pattern - Environment and Sustainability specialisation Full-time (4 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1 Semester 1							
REN8101 Environment, Society and Sustainability					1	1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
CLI8204 Global Environmental Systems					1	1	
Either the following two courses for the Research Training Track							
STA6200 Statistics for Quantitative Researchers ^{<#}	1	1			1	1,2	Enrolment is not permitted in STA6200 if S TA2300 or STA1003 or STA1004 has been previously completed
SCI6103 Research Fundamentals and Ethics [#]	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or M SCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I [*]	1	1			1	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or M COP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator

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	
Year 1 Semester 2							
REN3301 Biodiversity and Conservation	1	2			1	2	
REN3302 Sustainable Resource Use	1	2			1	2	
REN8202 Conservation for Sustainable Futures					1	2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
LAW8717 International Environmental Law **					1	2	Pre-requisite: LAW5111 or Students must be enrolled in one of the following Programs: LLBH or LLMC
Year 2 Semester 1							
CLI3301 Climate and Environment Risk Assessment					2	1	
Approved Course ^					2	1	
AGR8001 Food Security in the 21st Century	2	1			2	1	
ECO8011 Global Issues in Environmental Management and Sustainability					2	1	
Year 2 Semester 2							
CLI8205 Climate and Sustainability					2	2	
REN8203 Sustainability Science					2	2	Pre-requisite: REN8101 or REN8202 or REN3302 or REN3301 or CLI8204 or CLI8205 or ECO8011
Either the following two courses for the Research Training Track							
SCI6102 Research Skills #					2	2	
SCI6101 Science in Practice #					2	2	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	2	2			2	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

- < If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
- # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
- * Two unit course
- ** Course is offered in the interim trimester layer, please consult for interim trimester dates.
- ^ Students can choose one of the following approved courses: [SCI3302 Work-Integrated-Learning](#), [CLI8001 Climate Risk](#), [AGR3304 Soil Science](#), [ENV3105 Hydrology](#) or other approved course approved by the Program Director.

Recommended Enrolment Pattern - Environment and Sustainability specialisation Part-time (8 Semesters, S1 or S2 entry)

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1, Semester 1							
REN8101 Environment, Society and Sustainability					1	1	Enrolment is not permitted in REN8101 if REN1201 has been previously completed.

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	
CLI8204 Global Environmental Systems					1	1	
Year 1, Semester 2							
REN8202 Conservation for Sustainable Futures					1	2	Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
LAW8717 International Environmental Law **					1	2	Pre-requisite: LAW5111 or Students must be enrolled in one of the following Programs: LLBH or LLMC
Year 2, Semester 1							
Either the following two courses for the Research Training Track							
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
SCI6103 Research Fundamentals and Ethics #	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I *	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 2, Semester 2							
CLI8205 Climate and Sustainability					2	2	
REN3302 Sustainable Resource Use	2	2			2	2	
Year 3, Semester 1							
CLI3301 Climate and Environment Risk Assessment					3	1	
Approved Course ^					2	1	
Year 3, Semester 2							
REN3301 Biodiversity and Conservation	3	2			3	2	
REN8203 Sustainability Science					3	2	Pre-requisite: REN8101 or REN8202 or REN3302 or REN3301 or CLI8204 or CLI8205 or ECO8011
Year 4, Semester 1							
AGR8001 Food Security in the 21st Century	4	1			4	1	
ECO8011 Global Issues in Environmental Management and Sustainability					4	1	
Year 4, Semester 2							
Either the following two courses for the Research Training Track							
SCI6102 Research Skills #					4	2	
SCI6101 Science in Practice #					4	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	
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II *	4	2			4	2	Pre-requisite: MSC8001 or MSC6001

Footnotes

- ** Course is offered in the interim trimester layer, please consult for interim trimester dates.
 < If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
 # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
 * Two unit course
 ^ Students can choose one of the following approved courses: [SCI3302 Work-Integrated-Learning](#), [CLI8001 Climate Risk](#), [AGR3304 Soil Science](#), [ENV3105 Hydrology](#) or other approved course approved by the Program Director.

Recommended Enrolment Pattern - Mathematics and Statistics specialisation Full-time (4 Semesters, S1 entry)

Students are required to submit a proposed enrolment pattern to the Program Director for approval if it differs from the one below.

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6103 Research Fundamentals and Ethics](#), [CSC8411 Independent Studies in Computing/Mathematics/Statistics B](#) or [CSC6002 Big Data Management](#)^f) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

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	
Year 1 Semester 1							
STA6200 Statistics for Quantitative Researchers ^{<}	1	1			1	1,2	Enrolment is not permitted in STA6200 if STA2300 or STA1003 or STA1004 has been previously completed
ENM2600 Advanced Engineering Mathematics [§]	1	1			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
MAT3201 Operations Research 2 ^{+†}	1	1			1	1	Pre-requisite: MAT1200 or MAT2200 or Students must be enrolled in one of the following Programs: MSCN or GDSI
STA6100 Multivariate Analysis for High-Dimensional Data ⁺	1	1			1	1	Pre-requisite or Co-requisite: STA8170 or STA6200 or STA2300 or STA1003 Enrolment is not permitted in STA6100 if STA3200 has been previously completed
Year 1 Semester 2							
STA8190 Advanced Statistics B [^]					1	2	
CSC2410 Computational Thinking with Python	1	2			1	2	
MAT2200 Operations Research 1 ⁺	1	2			1	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.
MAT3103 Mathematical Modelling and Dynamical Systems ^{+@}	1	2			1	2	Pre-requisite: MAT2100 or MAT2500 or ENM2600

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	
Year 2 Semester 1							
Approved Course	2	1			2	1	
Approved Course	2	1			2	1	
Either the following two courses for the Research Training Track							
SCI6101 Science in Practice [#]					2	1	
SCI6103 Research Fundamentals and Ethics [#]	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6001 Research Project I ⁺⁺	2	1			2	1	Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 2 Semester 2							
Approved Course	2	2			2	2	
Approved Course	2	2			2	2	
Either the following two courses for the Research Training Track							
CSC8411 Independent Studies in Computing/Mathematics/Statistics B [#]	2	2			2	2	Pre-requisite: Students must be enrolled in one of the following Programs: MSCN or MCTN
CSC6002 Big Data Management ^{£#}	2	2			2	2,3	Pre-requisite or Co-requisite: (CSC1401 or CSC5020) and (STA2300 or STA1003 or STA8170 or STA6200) or equivalent program and statistical knowledge and skills or students are enrolled in MCYS
or the following course for the Research Project Track (if approved instead of Research Training Track)							
MSC6002 Research Project II ⁺⁺	2	2			2	2	Pre-requisite: MSC8001 or MSC6001
Approved Courses: choose four of the following (at least one has to be at Level 6 and/or 8)							
STA2301 Distribution Theory	2	1			2	1	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT1102 or ENM1600)
STA3300 Experimental Design	2	1			2	1	Pre-requisite: STA2300 or STA1003 or equivalent or approval of examiner
STA8180 Advanced Statistics A [^]					2	1	
MAT2409 High Performance Numerical Computing [†]	2	1			2	1	Pre-requisite: (CSC2410 or CSC1401) and (MAT1102 or ENM1600) or Students must be enrolled in one of the following Programs: MPIT or MCOT or MCTE
MAT3105 Harmony of Partial Differential Equations ^{+@}	2	1			2	1	Pre-requisite: ENM2600 or MAT2100 or MAT2500
MAT8180 Mathematics/Statistics Complementary Studies A [^]	2	1			2	1	
STA2302 Statistical Inference					2	2	Pre-requisite: STA2301

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	
STA3301 Statistical Models ^{>}	2	2			2	2	Pre-requisite: STA3300 or approval of examiner or Students must have completed STA8170 or STA6200 and be enrolled in one of the following Programs: GCSC or GDSI or MSCN or MADS or MSCR or DPHD.
MAT8190 Mathematics/Statistics Complementary Studies B [^]	2	2			2	2	
MAT3104 Mathematical Modelling in Financial Economics ^{+*}	2	2			2	2	Pre-requisite: (STA2300 or STA1003 or equivalent) and (MAT2100 or MAT2500 or ENM2600)

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
- < If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.
- § Unavailable online in S3 2023
- + Recommended courses for students wanting to teach mathematics.
- * The on-campus offering of this course is offered in odd years only.
- † Unavailable on-campus at Toowoomba in S1 2023
- ^ This is a topics based course. Students should select a topic from the course specification and email the examiner prior to enrolment to receive enrolment approval.
- @ The on-campus offering of this course is offered in even years only.
- # Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).
- ++ Two unit course
- > Unavailable Semester 2, 2023 Toowoomba On-campus

Recommended Enrolment Pattern - Sport and Exercise specialisation Full-time (4 Semesters) S1 or S2 entry

Students may, with approval of the Program Director and acceptance by an appropriate supervisor, elect to replace two or four units of research training courses ([SCI6101 Science in Practice](#), [SCI6102 Research Skills](#), [SCI6103 Research Fundamentals and Ethics](#) and/or [STA6200 Statistics for Quantitative Researchers](#)) with one or two 2-unit research project courses ([MSC6001 Research Project I](#) and [MSC6002 Research Project II](#)).

Course	Year of program and 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								
SES8005 Advanced Exercise Physiology [^]	1	1	1	1			M	
SES8003 Advanced Motor Control and Learning [^]	1	1	1	1			M	
SES8006 Advanced Exercise Programming and Rehabilitation [^]	1	1	1	1			M	
SES8008 Advanced Anatomy and Physiology [^]	1	1	1	1			M	
Year 1, Semester 2								
SES8007 Advanced Exercise Assessment and Delivery [^]	1	2	1	2			M	
PSY3250 Sport and Exercise Psychology					1	2		Pre-requisite: PSY1010 or S tudents must be enrolled in one of the following program s: GDSI or MSCN
SES8001 Advanced Biomechanics [^]	1	2	1	2			M	
SES3206 Strength Training and Conditioning [^]	1	2	1	2			M	Pre-requisite: SES2103 and SES2104

Course	Year of program and 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, Semester 1								
One elective course from the approved course list above or as approved by the Program Director								
SES1101 Growth, Development and Lifespan	2	1			2	1		
Either the following two courses for the Research Training Track								
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
SCI6103 Research Fundamentals and Ethics [#]	2	1			2	1		Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6001 Research Project I [*]	2	1			2	1		Pre-requisite: Students must be enrolled in one of the following Programs: MCTN or MCOP or MCTE or MSCN or MCCO or MADS or have the approval of their program coordinator
Year 2, Semester 2								
SES2203 Physical Activity and Health	2	2			2	2		
SES1103 Nutrition and Exercise	2	2	2	2			M	
Either the following two courses for the Research Training Track								
SCI6102 Research Skills [#]					2	2		
SCI6101 Science in Practice [#]					2	2		
or the following course for the Research Project Track (if approved instead of Research Training Track)								
MSC6002 Research Project II [*]	2	2			2	2		Pre-requisite: MSC8001 or MSC6001

Footnotes

[^] The on-campus offering of this course is only available at the Ipswich campus.

[<] If STA2300 has been completed previously, contact the Program Director to choose an alternative course to STA6200.

[#] Instead of the Research Training Track, students may seek permission to do the Research Project Track and replace these courses with [MSC6001](#) (2 units) and [MSC6002](#) (2 units).

^{*} Two unit course

Master of Sustainability Science (MSSC) - MSustSci

This program is offered only to continuing students. No new admissions will be accepted after the S1 2013 intake. Students who are interested in this area should consider the [Master of Science \(Environment & Sustainability\)](#).

	External*
Start:	No new admissions
Campus:	Toowoomba
Fees:	Domestic full fee paying place International full fee paying place
Standard duration:	1 year full-time, 4 years part-time maximum
Program articulation:	From:

Footnotes

* Students can start in Semester 3 in an approved elective.

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

This coursework Masters program aims to provide environmental and resource managers and other professionals with appropriate formal instruction to enhance their skills and knowledge in the emerging discipline of sustainability science.

Program objectives

On completion of the program graduates will be able to:

- understand and apply the principles and approaches of sustainability
- integrate the scientific foundations for sustainable development through environmental, social and economic disciplines
- critically analyse multi-disciplinary information and data to provide informed decision-making in relation to resource management
- understand global environmental systems and their influence on sustainable practices
- critically assess emerging approaches to policy development and institutional arrangements to support sustainability
- identify and establish strong links between science, effective community engagement and sound policy
- demonstrate, through the breadth of their studies, an advanced understanding of issues, concepts and applications of sustainability science in environment and natural resource management
- manage complex decision-making in the face of risk and uncertainty
- advance their professional standing by incorporating contemporary scientific approaches to sustainable development.

Admission requirements

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

Applicants must hold a three-year Bachelor's degree from an Australian University or equivalent.

A formal process of Accreditation of Prior Learning (APL) will be used to assess applicants without Bachelor degrees, who wish to gain entry to the program on the basis of equivalent experience or qualifications. Applicants should contact the Faculty of Health, Engineering and Sciences if they wish to be assessed for admission on this basis.

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 program contains five compulsory courses of one unit each and three elective courses. At least four units of courses in the program must be level 8. With the approval of the Faculty of Health, Engineering and Sciences, students may apply to vary their program on the basis of prior study.

Program completion requirements

To qualify for the award of Master of Sustainability Science, a candidate must complete eight courses as indicated within four years of first admission to the program.

Candidates who have completed the same or similar courses at UniSQ or similar courses at another institution may, with the approval of the Faculty of Health, Engineering and Sciences, apply to vary their program on the basis of prior study.

Core Courses - students must complete the following five courses:	
REN8101 Environment, Society and Sustainability	Semester 1
ECO8012	Semester 2
POL3013 Sustainability and Politics	Semester 1
REN8202 Conservation for Sustainable Futures	Semester 2
CLI8204 Global Environmental Systems	Semester 1
Elective Courses - students must complete three units of elective courses chosen from the following:	

REN3301 Biodiversity and Conservation	Semester 2
REN3302 Sustainable Resource Use	Semester 2
GIS1402 Geographic Information Systems	Semester 2
GIS2405 Spatial Analysis and Modelling	Semester 2
LAW1101	Semesters 1, 2 and 3
LAW2107 Environmental Law	Semester 1
FIN5003	Semesters 1 and 3
MGT8021 Project Sustainability Management	Semester 1
MGT8033 Leading Organisational Change	Semester 1
POL2000	Semester 1
PRL2001	Semester 2
PRL2002 Community Consultation and Engagement	Semester 1
AGR3304 Soil Science	Semester 1
or other course(s) subject to approval by Faculty of Health, Engineering and Sciences	

Required time limits

Students have a maximum of 4 years to complete this program.

IT requirements

For information technology requirements please refer to the [minimum computing standards](#).

Articulation

Postgraduate Certificate of Sustainability Science students may articulate to the Master of Sustainability Science with further completion of [CLI8204](#) and three other elective courses, as required by this program.

Students must advise the Faculty in writing (sciences.support@usq.edu.au) of their intention to articulate and this must occur prior to graduation from the PCSS. If a student is articulating to the higher degree, they will apply to that higher degree and will only graduate from that higher degree.

Exit points

Students may exit with the Postgraduate Certificate of Sustainability Science on successful completion of the four compulsory courses as required by that program.

Credit

No exemptions will be granted towards this award. Candidates who have completed the same or similar courses at UniSQ or similar courses at another institution may, with the approval of the Faculty of Health, Engineering and Sciences, apply to vary their program on the basis of prior study.

Course transfers

Transfer of credit for completed UniSQ courses from incomplete programs to the Master of Sustainability Science program will be allowed in accordance with UniSQ regulations provided the courses in question are compatible with the requirements for the Master of Sustainability Science.

Recommended enrolment pattern - Part-time

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	
REN8101 Environment, Society and Sustainability			1	1			Enrolment is not permitted in REN8101 if REN1201 has been previously completed.

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	
REN8202 Conservation for Sustainable Futures			1	2			Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
ECO8012			1	2		2	
POL3013 Sustainability and Politics			1	1	1	1	
CLI8204 Global Environmental Systems			2	1			
and three of the following courses:							
REN3301 Biodiversity and Conservation	2	2	2	2			
REN3302 Sustainable Resource Use	2	2	2	2			
AGR3304 Soil Science	2	1	2	1			
LAW1101			2	1			
FIN5003		1		1,3		1,3	
MGT8021 Project Sustainability Management			2	1	2	1	
MGT8033 Leading Organisational Change			2	1			
POL2000			2	1			
PRL2002 Community Consultation and Engagement			2	1			
GIS1402 Geographic Information Systems			2	1			
GIS2405 Spatial Analysis and Modelling			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)
PRL2001			2	2			
or other course(s) subject to approval by the Faculty of Health, Engineering and Sciences.							

Footnotes

* Springfield campus only

Recommended enrolment pattern - Full-time

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	
REN8101 Environment, Society and Sustainability			1	1			Enrolment is not permitted in REN8101 if REN1201 has been previously completed.
POL3013 Sustainability and Politics			1	1			
REN8202 Conservation for Sustainable Futures			1	2			Enrolment is not permitted in REN8202 if REN2200 has been previously completed.
ECO8012			1	2	1	2	
CLI8204 Global Environmental Systems			1	1			
and three of the following courses:							
REN3301 Biodiversity and Conservation	1	2	1	2			
REN3302 Sustainable Resource Use	1	2	1	2			
LAW1101			1	1			
FIN5003	1	1	1	1,3			
MGT8021 Project Sustainability Management			1	1	1	1	
MGT8033 Leading Organisational Change			1	1			
POL2000			1	1			
PRL2002 Community Consultation and Engagement			1	1			
GIS1402 Geographic Information Systems			1	1			

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	
GIS2405 Spatial Analysis and Modelling			1	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)
PRL2001			1	2			
AGR3304 Soil Science	1	1	1	1			
or other course(s) subject to approval by the Faculty of Health, Engineering and Sciences.							

Footnotes

* Springfield campus only

Research programs

Master of Science (Research) (MSCR) - MSCR

CRICOS code (International applicants): 070618G

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:	Ipswich, 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:	1.5 years full-time, 3 years part-time maximum	

Notes:

The Applied specialisation is not available to International on-campus students at the Ipswich campus.

Footnotes

[^] The Applied and Advanced specialisations are available externally and on-campus in Toowoomba and Ipswich. The Psychology Research specialisation is available on-campus in Ipswich and externally.

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 usq.support@usq.edu.au

Professional accreditation

The Master of Science (Research) Psychology Research specialisation is accredited by the Australian Psychology Accreditation Council (APAC).

Program aims

This program 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.

Applied Research specialisation

The specialisation is designed to provide students with a combination of coursework and related research which will provide and enhance student knowledge across a range of science based disciplines.

Psychology Research specialisation

This specialisation is designed to provide students with extended psychology research training which will provide and enhance student knowledge in psychology research and professional psychology practices.

Advanced Research specialisation

This specialisation is designed to provide students who have already undertaken substantial prior studies in a relevant area with the opportunity to focus on a significant research project in a related area.

Transfer between specialisations within this program is not possible.

Program objectives

General 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.

Specialisation Objectives

Applied Research specialisation

On successful completion of this program a graduate should be able to:

- apply extended knowledge, skills and research expertise in a specified field of scientific research building upon their three year degree
- plan and execute a substantial applied research project in their chosen discipline area.

Psychology Research specialisation

On successful completion of this program a student should be able to:

- apply extended knowledge, skills, and research expertise in the discipline of psychology
- clearly articulate the ethical and social responsibilities of psychology practice and research
- identify, interpret and critically evaluate major issues in contemporary psychological theory and research
- apply high levels of proficiency in psychology research including research planning and implementation, analysis, interpretation and evaluation of research results, and the presentation and communication of research findings to both specialist and non-specialist audiences.

Advanced Research specialisation

On successful completion of this program a graduate should be able to:

- extend and develop the research expertise and techniques of students entering the specialisation with a four year degree or equivalent
- plan and execute a substantial advanced research project in their chosen discipline area
- apply thorough research skills to be eligible to transfer (if desired) to a doctoral program from this 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:

Application for Admission

The degree is centred on a research project, supervised by a principal and an associate supervisor. It is therefore essential that intending candidates clarify their topic for research and seek an academic staff member able to provide principal supervision. Application forms and advice on procedures for enrolment may be obtained from the Faculty of Health, Engineering and Sciences. Intending candidates are advised to allow several months for discussion with potential supervisors and for consideration of the application prior to the commencement of candidature.

Intending applicants must consult the Faculty of Health, Engineering and Sciences before they apply. Applicants must then submit a [Direct Entry application](#) form together with other information as specified by the Faculty of Health, Engineering and Sciences. The applicants must receive approval from the Faculty of Health, Engineering and Sciences for the proposed study plan, and may also be required to attend an interview with the Faculty of Health, Engineering and Sciences prior to confirmation of acceptance.

Admission Criteria

Master of Science (Research) (Applied Research)

To be eligible for admission to the Master of Science (Research) (Applied Research), applicants must satisfy the following requirements:

- completion of a three-year Australian university bachelor degree in the area of the related field of study with a GPA of 5.0 out of 7.0 for the last 2 full years of the degree or above, or equivalent

or

- equivalent qualification and work experience in the related field of study as determined by the program coordinator

and

- acceptance will be subject to the availability of, and endorsement by, a UniSQ supervisor.
- English Language Proficiency requirements for Category 3.

Master of Science (Research) (Psychology Research)

To be eligible for admission to the Master of Science (Research) (Psychology Research), applicants must satisfy the following requirements:

- completion of a program of study approved by the Australian Psychology Accreditation Council (APAC) as constituting the first three years (or equivalent) of study in psychology within the last three years and
- achieved a GPA of 5.0 out of 7.0 or above in the psychology courses in an APAC accredited undergraduate program

and

- acceptance will be subject to the availability of, and endorsement by, a UniSQ supervisor.

- English Language Proficiency requirements for Category 3.

Master of Science (Research) (Advanced Research)

To be eligible for admission to the Master of Science (Research) (Advanced Research), applicants must satisfy the following requirements:

- completion of a four-year Australian university bachelor degree in the area of the related field of study with a GPA of 5.0 out of 7.0 for the last 2 full years of the degree, or above, or equivalent

or

- completion of a 1.5 year Australian university Masters degree in a relevant discipline with a GPA of 5.0 out of 7.0 or above, or equivalent

or

- equivalent qualification and work experience in the related field of study as determined by the program coordinator

and

- acceptance will be subject to the availability of, and endorsement by, a UniSQ supervisor.
- 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

Applied Research specialisation

There are 12 units in the program. There are four coursework units which will include a research training course. 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 course will consist of SCI8103 Research in the Sciences or [HSC8050 Research Methodology for the Human Sciences](#) or ENG8001 or equivalent (as approved by the Program Director).

The remaining 8-unit research project will be undertaken in consultation with an approved supervisor. The first research project course [SCI9012 Master of Science Research Project B](#) is evaluated by a progress report and a thesis proposal.

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.

The thesis topic may be drawn, depending on availability, from the areas of:

- Agricultural Science
- Applied Climate Science
- Astronomy
- Biology
- Computer Science
- Counselling
- Data Science
- Environmental Science
- Mathematics
- Midwifery
- Nursing
- Physical Sciences
- Psychology
- Spatial Science
- Sport and Exercise
- Statistics

Psychology Research specialisation

There are 12 units in the program. There are four compulsory Level 4 psychology coursework units.

The remaining 8-unit research project will be undertaken in consultation with an approved supervisor. The first research project course [SCI9017 Master of Science Psychology Research Project](#) is evaluated by a progress report and a thesis proposal.

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.

Advanced Research specialisation

Candidates will be expected to conduct their studies in areas of science research that reflect the expertise of current staff in the Faculty of Health, Engineering and Sciences. Most research active staff are also members of a UniSQ Research Centre. Details of current research programs and potential supervisors can be found on the [Research](#) webpage.

The emphasis of the program will be on developing the appropriate knowledge and skills to undertake independent research and professional practice. Accordingly, a major component of the program will be a supervised research project.

There are 12 units in the program. There is one unit of coursework research training, one postgraduate elective (coursework or research training as approved by the Program Director) and 10 units of independent research. Progress in the research courses is monitored via research reports co-ordinated by the Office of Research and Higher Degrees. In addition, two of the research project courses ([SCI9012 Master of Science Research Project B](#) and [SCI9013 Master of Science Research Project C](#) are formally evaluated. [SCI9012 Master of Science Research Project B](#) is evaluated by a progress report and a thesis proposal. In the case of [SCI9013 Master of Science Research Project C](#), this is evaluated by a progress seminar and progress report.

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.

The research training course will consist of SCI8103 Research in the Sciences or [HSC8050 Research Methodology for the Human Sciences](#) or ENG8001 or equivalent (as approved by the Program Director).

The thesis topic may be drawn, depending on availability, from the areas of:

- Agricultural Science
- Applied Climate Science
- Astronomy
- Biology
- Computer Science
- Counselling
- Data Science
- Environmental Science
- Mathematics
- Midwifery
- Nursing
- Physical Sciences
- Psychology
- Spatial Science
- Sport and Exercise
- Statistics

Required time limits

Students have a maximum of 2 years (full-time) or 4 years (part-time) to complete this program.

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](#).

Psychology Research:

- [SCI9017 Master of Science Psychology Research Project](#)

Please refer to the [Residential School Schedule](#).

Applied Research and Advanced Research:

Elective course options within the Applied Research and Advanced Research specialisations may have residential schools and students should seek confirmation of the requirements when selecting their electives.

Exit points

Students enrolled in the Applied Research specialisation, who have successfully completed four coursework units and wish to exit without completing the program, may seek, with approval of the Program Director, to exit via the [Graduate Certificate of Science](#). Students must successfully complete this specialisation prior to application for entry to the PhD program.

Students enrolled in the Psychology Research specialisation must successfully complete this specialisation prior to application for entry to the PhD.

Doctorate transfer

Students enrolled in the Master of Science (Research) Advanced Research specialisation, who wish to transfer without completing the program, may on the basis of outstanding performance, seek to transfer to the [Doctor of Philosophy](#), [Doctor of Applied Science](#) or [Doctor of Health](#). To be considered for acceptance into either of the above programs, students must have achieved all of the following:

- Completed at least 8 units within the Master of Science (Research) Advanced Research specialisation.
- A GPA of at least 6 achieved from chosen research methodology course, approved elective course and [SCI9013 Master of Science Research Project C](#) (with a minimum A grade in SCI9013).
- Research Confirmation of Candidature approved at PhD level by the Office of Research Graduate Studies.
- Excellent research progress to be presented at the completion of 8 units, to be assessed by a Faculty review panel.

Credit

There will be no Credit or Exemptions for research project units in any specialisation of this program. Exemption for up to 4 units of relevant coursework undertaken as part of a Masters program may be approved within the Master of Science (Research) (Applied Research). Exemption for 1 unit of relevant coursework undertaken as part of a Masters program may be approved within the Master of Science (Research) (Advanced Research). There will normally be no Credit or Exemptions for the compulsory coursework units in the Psychology Research specialisation.

Recommended enrolment pattern - Applied Research specialisation (full-time)

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	
Year 1							
SCI6103 Research Fundamentals and Ethics	1	1,2			1	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDS or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.

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							
HSC8050 Research Methodology for the Human Sciences					1	1,2	
or							
ENG8001 &		1,2,3				1,2	
Approved Course 1 **	1	1	1	1			
Approved Course 2 **	1	1	1	1			
Approved Course 3 **	1	1	1	1			
SCI9012 Master of Science Research Project B *~	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9014 Master of Science Research Project D *~	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 2							
SCI9014 Master of Science Research Project D *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9015 Master of Science Research Project E *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- & Required for Spatial Science students and must be completed satisfactorily during the first semester of study. Students who have previously completed [SCI4405 Research Practice and Ethics](#) or [HSC8050 Research Methodology for the Human Sciences](#) or an equivalent course elsewhere, will be required to undertake an alternative course selected in consultation with the Program Director.
- ** Approved courses may not be available on campus at Ipswich. Courses will normally be at level 4 or above and are selected in consultation with the project supervisor and approval of the Program Director. Sport and Exercise: the recommended coursework courses are [SES8006 Advanced Exercise Programming and Rehabilitation](#) (The on-campus offer will not run in 2020), [SES8007 Advanced Exercise Assessment and Delivery](#) (compulsory residential school for external students) and [SES8008 Advanced Anatomy and Physiology](#) (compulsory residential school for external students), however an alternate course from within a relevant Science or Health and Wellbeing discipline, selected in consultation with the project supervisor, may be approved by the Program Director.
- * Two units of credit
- ~ Pass/Fail Course

Recommended enrolment pattern - Applied Research specialisation (part-time)

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	
Year 1							
SCI6103 Research Fundamentals and Ethics	1	1,2			1	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or							
HSC8050 Research Methodology for the Human Sciences					1	1,2	
or							
ENG8001 &		1,2,3				1,2	
Approved Course 1 **	1	1	1	1		1	

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	
Semester 2							
Approved Course 2 **	1	2	1	2		2	
Approved Course 3 **	1	2	1	2		2	
Year 2							
SCI9012 Master of Science Research Project B *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Semester 2							
SCI9014 Master of Science Research Project D *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 3							
SCI9014 Master of Science Research Project D *~	3	1,2	3	1, 2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Semester 2							
SCI9014 Master of Science Research Project D *~	3	1,2	3	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- & Required for Spatial Science students and must be completed satisfactorily during the first semester of study. Students who have previously completed [SCI4405 Research Practice and Ethics](#) or [HSC8050 Research Methodology for the Human Sciences](#) or an equivalent course elsewhere, will be required to undertake an alternative course selected in consultation with the Program Director.
- ** Approved courses may not be available on campus at Ipswich. Courses will normally be at level 4 or above and are selected in consultation with the project supervisor and approval of the Program Director. Sport and Exercise: the recommended coursework courses are [SES8006 Advanced Exercise Programming and Rehabilitation](#), [SES8007 Advanced Exercise Assessment and Delivery](#) (compulsory residential school for external students) and [SES8008 Advanced Anatomy and Physiology](#) (compulsory residential school for external students), however an alternate course from within a relevant Science or Health and Wellbeing discipline, selected in consultation with the project supervisor, may be approved by the Program Director.
- * Two units of credit
- ~ Pass/Fail course

Recommended enrolment pattern - Psychology Research specialisation (full-time)

For students who wish to start the program in Semester 2, please contact the Psychology specialisation coordinator for a recommended enrolment pattern.

The Psychology Research specialisation may be studied externally, however mandatory attendance at the scheduled block on-campus workshops will be required on-campus in Toowoomba and/or Ipswich during the first year of the program. The number of days required at each block on-campus workshop will depend on enrolment mode. There are 8 compulsory courses (worth 12 units). The courses are as follows.

Course	Year of program and 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								
PSY4020 Ethical and Professional Practice	1	1			1	1	M	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			1	1	M	Pre-requisite: Students must be enrolled in one of the following Programs: BSCH

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
								(12302 Psychology) or BSHP or MRES (19112 Psychology). BPSH students need to apply for manual enrolment in this course.
SCI9017 Master of Science Psychology Research Project ⁺ *	1	1,2	1	1,2			R	
PSY4070 Assessment and Interview Skills	1	2			1	2	M	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.
SCI9014 Master of Science Research Project D ^{~*}	1	1,2	1	1,2				Pre-requisite: Student must be enrolled in the following Program: MSCR
PSY4040 Psychological Interventions	1	2			1	2	M	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.
Year 2								
SCI9014 Master of Science Research Project D ^{*~}	2	1,2	2	1,2				Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9015 Master of Science Research Project E ^{*~}	2	1,2	2	1,2				Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- + Graded course
- * Two unit course
- ~ Pass/Fail course

Recommended enrolment pattern - Psychology Research specialisation (part-time)

The Psychology Research specialisation may be studied externally, however mandatory attendance at the scheduled block on-campus workshops will be required on-campus in Toowoomba during the first year of the program. The number of days required at each block on-campus workshop will depend on enrolment mode. There are 8 compulsory courses (worth 12 units). The courses are as follows.

Course	Year of program and semester in which course is normally studied						Residential school	Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
PSY4020 Ethical and Professional Practice	1	1			1	1	M	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			1	1	M	Pre-requisite: Students must be enrolled in one of the fol

Course	Year of program and 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: BSCH (12302 Psychology) or BSHP or MRES (19112 Psychology). BPSH students need to apply for manual enrolment in this course.
PSY4070 Assessment and Interview Skills	1	2			1	2	M	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			1	2	M	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.
Year 2								
SCI9017 Master of Science Psychology Research Project ⁺ *	2	1,2	2	1,2			R	
SCI9014 Master of Science Research Project D ^{~*}	2	2	2	2				Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 3								
SCI9014 Master of Science Research Project D ^{*~}	3	1	3	1		1		Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9014 Master of Science Research Project D ^{*~}	3	2	3	2				Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- + Graded course
* Two unit course
~ Pass/Fail course

Recommended enrolment pattern - Advanced Research specialisation (full-time)

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	
Year 1, Semester 1							
SCI6103 Research Fundamentals and Ethics	1	1,2			1	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.

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							
HSC8050 Research Methodology for the Human Sciences					1	1,2	
or							
ENG8001 &		1,2,3				1,2	
or							
Equivalent approved by the Program Director							
Approved Course **	1	1,2	1	1,2			
SCI9012 Master of Science Research Project B *~	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 1, Semester 2							
SCI9013 Master of Science Research Project C *	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9014 Master of Science Research Project D *~	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 2							
SCI9014 Master of Science Research Project D *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9015 Master of Science Research Project E *~	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- & Required for Spatial Science students and must be completed satisfactorily during the first semester of study. Students who have previously completed [HSC8050 Research Methodology for the Human Sciences](#) or an equivalent course elsewhere, will be required to undertake an alternative course selected in consultation with the Program Director.
- ** Approved courses may not be available on campus at Ipswich. Courses will normally be at level 8 or above and are selected in consultation with the project supervisor and approval of the Program Director. Sport and Exercise students who have already met the research methods/training requirements may choose an approved course and are recommended to choose from [SES8006 Advanced Exercise Programming and Rehabilitation](#), [SES8007 Advanced Exercise Assessment and Delivery](#) (compulsory residential school for external students) and [SES8008 Advanced Anatomy and Physiology](#) (compulsory residential school for external students), however an alternate course from within a relevant Science or Health and Wellbeing discipline, selected in consultation with the project supervisor, may be approved by the Program Director.
- * Two units of credit
- ~ Pass/Fail course

Recommended enrolment pattern - Advanced Research specialisation (part-time)

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	
Year 1							
SCI6103 Research Fundamentals and Ethics	1	1,2			1	1,2	Pre-requisite: Students must be enrolled in one of the following programs: MSCN or MSCR or MCTN or MADS or GCSC or GDSI or DPHD or its equivalent. Enrolment is not permitted in SCI6103 if SCI4405 has been previously completed.
or							
HSC8050 Research Methodology for the Human Sciences					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	
or							
ENG8001 ^{&}		1,2,3				1,2	
or							
Equivalent approved by the Program Director							
Approved Course ^{**}	1	1,2	1	1,2			
SCI9012 Master of Science Research Project B ^{*~}	1	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 2							
SCI9014 Master of Science Research Project D ^{*~}	2	1,2	2	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9013 Master of Science Research Project C [*]	2	1,2	1	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
Year 3							
SCI9014 Master of Science Research Project D ^{*~}	3	1,2	3	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR
SCI9014 Master of Science Research Project D ^{*~}	3	1,2	3	1,2			Pre-requisite: Student must be enrolled in the following Program: MSCR

Footnotes

- & Required for Spatial Science students and must be completed satisfactorily during the first semester of study. Students who have previously completed [HSC8050 Research Methodology for the Human Sciences](#) or an equivalent course elsewhere, will be required to undertake an alternative course selected in consultation with the Program Director.
- ** Approved courses may not be available on campus at Ipswich. Courses will normally be at level 8 or above and are selected in consultation with the project supervisor and approval of the Program Director. Sport and Exercise students who have already met the research methods/training requirements may choose an approved course and are recommended to choose from [SES8006 Advanced Exercise Programming and Rehabilitation](#), [SES8007 Advanced Exercise Assessment and Delivery](#) (compulsory residential school for external students) and [SES8008 Advanced Anatomy and Physiology](#) (compulsory residential school for external students), however an alternate course from within a relevant Science or Health and Wellbeing discipline, selected in consultation with the project supervisor, may be approved by the Program Director.
- * Two units of credit
- ~ Pass/Fail course

Doctor of Applied Science (DASC) - DASC

This program is offered only to continuing students. No new admissions will be accepted. Students who are interested in this study area should [contact us](#).

	External*
Start:	No new admissions
Campus:	
Fees:	Domestic full fee paying place International full fee paying place Research Training Program (RTP) - Fees Offset scheme
Standard duration:	Full-time candidates normally complete in 3 years. Part-time candidates normally complete in 6 years.

Footnotes

* This program is offered in Distance/External mode only, however students may choose to enrol in the on-campus or external offerings of courses where available.

Contact us

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

Program aims

Provide science graduates with advanced professional development that makes a significant, original contribution to science in the context of professional practice.

Program objectives

Graduates will demonstrate:

- (1) A systematic and critical understanding of a complex scientific field with specialised research skills for the advancement of professional scientific practice;
- (2) A systematic and critical understanding of a substantial and complex body of knowledge at the frontier of science;
- (3) Specialised cognitive, technical and research skills to independently and systematically
 - critically evaluate relevant professional scientific literature
 - implement required scientific research methodologies
 - disseminate new results and insights to scientific peers and
 - generate original knowledge and understanding to make a substantial contribution to science;
- (4) Autonomy, professional judgement, adaptability and responsibility as an expert practitioner in science.

Admission requirements

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

- Completion of a relevant Australian university Bachelor degree with First Class Honours or Second Class Honours (Division A), or equivalent
Or

Completion of an Australian university Masters degree (with a research component), or other qualifications equivalent to First Class or 2A Honours.

- 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 units of academic coursework courses and 16 units of independent research.

Note that as part of their coursework students will normally complete MSC8001 and MSC8002 to gain research experience, but if the student can demonstrate substantial prior research experience (such as through the

completion of a relevant honours degree) the Program Coordinator may approve replacement of MSC8001 and MSC8002 with approved courses. Students who wish to apply for exemptions/credit based on the [UniSQ Credit and Exemption Procedure](#) should seek advice from the Program Coordinator via [Contact UniSQ](#).

Program completion requirements

The award of a Doctor of Applied Science requires the successful completion of:

- all eight coursework courses
- an external examination of the student's thesis.

Required time limits

Full-time candidates normally complete in 3 years. Part-time candidates will normally complete the program within 6 years of part-time study.

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.

Exit points

Candidates who complete the eight units of coursework only may satisfy the requirements for the [Graduate Diploma of Science](#).

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 [courses specifications](#) 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 - full-time

Candidates must complete 8 units of coursework and 16 units of research project courses as specified below.

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 Work - Students must complete 8 units coursework as follows. These courses can be taken via either part-time or full-time program enrolment.							
Before enrolling in any courses, candidates should read the section entitled Enrolment Requirements. Students must complete their coursework units before enrolling in the research units (i.e. RES9503).							
Replacement of MSC8001 and MSC8002 with electives requires the approval of the Program Coordinator. If MSC8001 and MSC8002 are taken it is recommended that SCI6101 is co-requisite for MSC8001 and							

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	
SCI6102 is a co-requisite for MSC8002. Both MSC8001 and MSC8002 (if taken) should be completed prior to RES9501 or RES9503.							
SCI6101 Science in Practice *					1	1,2	
MSC8001 #	1	1,2			1	1,2	
Or							
Level 8 elective (subject to approval) *	1	1	1	1			
Level 8 elective (subject to approval) *	1	1,2	1	1,2			
SCI6102 Research Skills *					1	1,2	
MSC8002 #	1	1,2			1	1,2	
Level 8 elective (subject to approval) *	1	1,2	1	1,2			
Research Work - Students must also complete 16 units of Doctoral research units as follows:							
RES9503 Doctoral Research Project 4 (High cost) §†			2,3	1,2			Pre-requisite: Student must be enrolled in one of the following Programs: MPHD or D PHD or DOHH or DASC

Footnotes

- * One unit
Two units
§ Four units
† Students re-enrol in this course each semester.

Recommended enrolment pattern - part-time

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 Work - Students must complete 8 units coursework as follows. These courses can be taken via either part-time or full-time program enrolment.							
Before enrolling in any courses, candidates should read the section entitled Enrolment Requirements. Students must complete their coursework units before enrolling in the research units (i.e. RES9501).							
It is recommended that SCI6101 is co-requisite for MSC8001 and SCI6102 Research Skills is a co-requisite for MSC8002. Both MSC8001 and MSC8002 should be completed prior to RES9501 or RES9503 .							
SCI6101 Science in Practice *					1	1,2	
SCI6102 Research Skills *					1	1,2	
Level 8 elective (subject to approval) *	1,2	1,2	1,2	1,2			
Level 8 elective (subject to approval) *	1,2	1,2	1,2	1,2			
MSC8001 #	2	1,2			2	1,2	
Or							
Level 8 elective (subject to approval) *	2	1,2	2	1,2			
MSC8002 #	2	1,2			2	1,2	
Or							
Level 8 elective (subject to approval) *	2	1,2	2	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	
Research Work - Students must also complete 16 units of Doctoral research units as follows:							
RES9501 Doctoral Research Project 2 (High cost) ^{†§}			3–6	1,2			Pre-requisite: Student must be enrolled in one of the following Programs: DPHD or DOHH or DASC

Footnotes

- * One unit
- # Two units
- ^ Depending on the study area taken these courses may be replaced by other courses approved by the Program Coordinator.
- † Students re-enrol in this course each semester.
- § Four units

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 three-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.