

Master of Science .. (MSCC) - MSc

CRICOS code (International applicants): 072518G

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 \(Environment & Sustainability\)](#).

	On-campus*	External#
Semester intake:	No new admissions	No new admissions
Campus:	Toowoomba	-
Fees:	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
Standard duration:	1 year full-time, 4 years part-time maximum	

Footnotes

* The Climate Adaptation major is available to on-campus and distance education students, but only 4 courses are offered on-campus. Therefore, this major is not suitable for international students who wish to study on-campus.

The Biotechnology major is only available on-campus for domestic and international students. However no new enrolments will be considered after Semester 1, 2013 (last enrolment available is for S1, 2013).

Contact us

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

Program aims

The aim of the Master of Science program is to produce graduates that are equipped with essential scientific knowledge and an appreciation of the latest literature and technologies.

Climate Adaptation major

The major is designed to provide students with the knowledge, skills and capabilities to respond by working within their professions to the challenges and opportunities that arise from global and regional climate changes. This includes a thorough appreciation of the impact of climatic changes and variability on natural and human systems such as the built environment, agricultural production systems, regional, national, and global economies. Adapting and mitigating the impacts of climatic changes and variability is one of the most important and complex issues society is dealing with. It requires the skills and raises awareness of the importance to work across a range of professional disciplines and communicates

Program objectives

On completion of the program graduates will be able to:

- demonstrate an advanced understanding in their chosen major
- conduct scholarly investigations into applications and methodologies in their chosen field
- provide scientific literature reports
- apply the specialist knowledge and skills acquired in their major.

Major Objectives

Climate Adaptation Major

On completion of this major students will be able to:

- demonstrate an in-depth understanding of global environmental changes
- describe the functioning of the global climate system
- apply the principles of sustainable development across a range of professions
- assess the risks of climatic changes and climate variability
- evaluate opportunities that may arise from environmental and climate changes
- provide scientific literature reports;
- express and communicate scientific knowledge and concepts across a range of professions
- display a thorough understanding of the impact of climate change and variability upon natural and human systems
- contribute within their profession to sustainable natural resource management and sustained economic growth.

Biotechnology Major

On completion of this major students will be able to:

- demonstrate an advanced understanding of biotechnology
- conduct scholarly enquiries into biotechnological applications and methodologies
- critically apply the principles of biotechnology to problem solving
- interact with professionals in a range of disciplines to apply biotechnological tools in an appropriate and ethical manner
- demonstrate an understanding of regulations governing the use and application of biotechnologies
- demonstrate oral and written communication skills appropriate to a professional biotechnologist
- demonstrate advanced competency in laboratory techniques and in the use of instrumentation relevant to biotechnologies (this objective is only applicable for those students who choose courses with laboratory-based components).

Admission requirements

Master of Science (Climate Adaptation)

To be considered for entry, 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.

Master of Science (Biotechnology)

Applicants may be admitted to the Master of Science (Biotechnology) if they hold a minimum of a three-year Bachelor Degree from an Australian University in an area of the life sciences or an equivalent qualification from a recognised university elsewhere. USQ graduates from the Bachelor of Science or Biomedical Science

programs should consult the Faculty of Health, Engineering and Sciences as some variation to the Recommended Enrolment Pattern may be required.

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

If you do not meet the English language requirements you may apply to study a University-approved [English language program](#). On successful completion of the English language program, you 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 your higher education and you as a student pay a [student contribution amount](#), which varies depending on the courses undertaken. You are able to calculate the fees for a particular course via the [Course Fee Finder](#). Commonwealth Supported students may be eligible to defer their fees through a Government loan called [HECS-HELP](#).

Domestic full fee paying place

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

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

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

International full fee paying place

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

Program structure

The Master of Science program consists of eight courses. Students must successfully complete a minimum of four level 8 courses.

Climate Adaptation Major

The program consists of eight core courses which are all available in external mode.

Semester 1 Core Courses	Semester 2 Core Courses
CLI1110 Weather and Climate	CLI2201 Climate Change and Variability
CLI3301 Climate and Environment Risk Assessment	CLI3302 Adaptation to Climate Change
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability
REN8101 Environment, Society and Sustainability	REN8202 Conservation for Sustainable Futures

Biotechnology Major

The program will consist of eight courses. Different combinations of courses offer specialisations in molecular biology, bioinformatics, agricultural biotechnology and pharmaceutical development. Changes to recommended enrolment patterns **must** be approved by you.

Semester 1	Semester 2	Either Semester
BIO8414 +	BIO8412 Biotechnology in Sustainable Systems+	BIO8416
SCI4405 Research Practice and Ethics	BIO8415 +	BIO8104 Special Study in Biomedical Science
BIO2107 Cell and Molecular Biology 1	BIO8105 +	SCI4403 Special Study in Science
	BIO8211 Bioinformatics	Elective from the Faculty of Arts, Business Education and Law
	BIO3206 Medical Microbiology and Immunology 3	Other course approved by Faculty of Health, Engineering and Sciences

Footnotes

+ This course is not offered in 2016

Required time limits

Students have a minimum of 1 year and a maximum of 4 years to complete this program.

IT requirements

Students should visit the USQ [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.

Other program requirements

To qualify for the award of Master of Science (Biotechnology) a candidate must complete a total of eight units of study as prescribed above within four years of admission to the program.

Exit points

Students in the Climate Adaptation major may exit with the Graduate Certificate of Science on successful completion of four units of study. Alternatively, students who have completed four units that include [CLI3302 Adaptation to Climate Change](#) may exit with the Graduate Certificate of Climate Change Adaptation.

Students in the Biotechnology major may exit with the Graduate Certificate of Science on successful completion of four units of study.

Credit

No exemptions will be granted towards this award. Candidates who have completed the same or similar courses at USQ 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.

Enrolment

Recommended Enrolment Pattern - Climate Adaptation Major Full-time (2 Semesters, S1 or S2 commencement)

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

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Recommended Enrolment Pattern - Biotechnology Major Part-time (4 Semesters, S1 or 2 commencement)

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