Master of Science (MSCC) - MSc

CRICOS code (International applicants): 072518G

	On-campus*	Distance education#
Semester intake:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Toowoomba	-
Fees:	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
Standard duration:	1 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.

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: studysci@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

Climate Adaptation major

This eight unit program provides graduates with knowledge of selected basic concepts and skills associated with the area of climate adaptation. The program aims to produce graduates who are equipped with the essential scientific knowledge in this field and an appreciation of the latest literature and technologies.

Biotechnology major

This eight unit program provides graduates with knowledge of selected basic concepts and skills associated with the area of biotechnology . The program aims to produce graduates who are equipped with the essential scientific knowledge in this field and an appreciation of the latest literature and technologies.

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 build 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 an understanding of how scientific knowledge integrates with diverse socio-economic and political systems in order to achieve sustainable economic prosperity.

Biotechnology major

The major is designed to provide graduates from life sciences programs with advanced knowledge in the various applications of biotechnology in agriculture, bioinformatics, industrial production, pharmaceuticals and research. Candidates will also undertake training in investigative techniques. The program will provide a sound basis for candidates wishing to undertake further advanced research studies, as well as preparing them for scientific research and/or educational roles within biotechnology-related industries.

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 Program Coordinator 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 Program Coordinator as some variation to the Recommended Enrolment Pattern may be required.

International Applicants

International applicants must have also met the University's English language requirements or hav

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 the Program Coordinator.

Table 1: On-campus Students

Footnotes

~ Laboratory or residential school components
BIO8416, BIO8104 and SCI4403