Master of Spatial Science Technology (MSPT) - MSpScTech

CRICOS code (International applicants): 093265E

	On-campus	Online
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:	2 years full-time, 4 years part-time. International students should complete this program within the CRICOS duration which is 2 years.	
Program articulation:	From: Graduate Certificate of Spatial Science Technology; Graduate Diploma of Spatial Science Technology	

Contact us

Future students	Future International students	Current students
Ask a question Freecall (within Australia):1800 269 500 Phone (from outside Australia): +61 7 4631 5315 Email: study@usq.edu.au	Ask a question Phone: +61 7 4631 5543 international@usq.edu.au	Ask a question Freecall (within Australia): 1800 007 252 Phone (from outside Australia): +61 7 4631 2285 Email usq.support@usq.edu.au

Professional accreditation

The Master of Spatial Science Technology is not accredited by any professional bodies other than the University of Southern Queensland.

Program aims

The Master of Spatial Science Technology program aims to produce graduates who are skilled in spatial science investigations, evaluation and synthesis. The program allows students to enhance their knowledge of a particular surveying or spatial science information discipline area for theoretical application, research and professional practice.

Program objectives

The Master of Spatial Science Technology is a graduate level program in the fields of geographic information systems (GIS) and surveying. A coursework component (10 units) is augmented by a research project component (6 units). This allows students to enhance and extend their knowledge of a particular GIS or surveying specialisation. Since spatial science is inherently a confluence of knowledge from various disciplines, a candidate from a non-spatial science background, such as biological and physical sciences, engineering, mathematics and statistics, information technology, agriculture and forestry, arts, and business, can apply to this program.
Students who successfully complete the Master of Spatial Science Technology should be able to:

- critically evaluate knowledge from the literature and other information sources relevant to spatial science fields;
- systematically apply advanced, specialised knowledge within spatial science;

- employ a range of cognitive skills to review, analyse and synthesise knowledge to identify innovative solutions to complex discipline specific problems in spatial science;
- independently plan, implement, interpret, analyse and evaluate research outcomes by ethical means and application of evidence based practices.

Australian Qualifications Framework

The Australian Qualifications Framework (AQF) is a single national, comprehensive system of qualifications offered by higher education institutions (including universities), vocational education and training institutions and secondary schools. Each AQF qualification has a set of descriptors which define the type and complexity of knowledge, skills and application of knowledge and skills that a graduate who has been awarded that qualification has attained, and the typical volume of learning associated with that qualification type.

This program is at AQF Qualification Level 09. Graduates at this level will have specialised knowledge and skills for research, and/or professional practice and/or further learning.

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

Admission requirements

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

- Completion of an Australian university three or four year Bachelor degree in a discipline approved by the Faculty of Health, Engineering and Sciences, or equivalent.
- English Language Proficiency requirements for Category 3.

All students are required to satisfy the applicable English language requirements.

If students do not meet the English language requirements they may apply to study a University-approved English language program. On successful completion of the English language program, students may be admitted to an award program.

Program fees

Commonwealth supported place

A Commonwealth supported place is where the Australian Government makes a contribution towards the cost of a students' higher education and students pay a student contribution amount, which varies depending on the courses undertaken. Students are able to calculate the fees for a particular course via the Course Fee Finder.

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

Domestic full fee paying place

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

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

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

International full fee paying place

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

Program structure

The Master of Spatial Science Technology consists of 16 units of study comprising of one 8-unit specialisation, 2 units of approved courses and 6 units of Research.

Required time limits

Students have a maximum of 6 years to complete this program

Specialisation

The specialisation study provides students with knowledge and skills in a specific discipline. The two specialisation study areas in the Master of Spatial Science Technology are:

- Geographic Information Systems
- Surveying.

IT requirements

Access to an up-to-date computer is necessary. On-campus students can access appropriately equipped laboratories, but should consider acquisition of their own computer. External students should be able to access a computer with the following minimum standards as advised by the University. All students should have access to email and the Internet via a computer running the latest versions of Internet web browsers such as Internet Explorer or Firefox. The University has a wireless network for on-campus students' computers. In order to take advantage of this facility and further enhance their on-campus learning environment, students should consider purchasing a notebook/laptop computer with wireless connectivity. A notebook/laptop may be required for some courses.

Articulation

Students who have completed the Master of Spatial Science Technology are able to apply for entry to the Doctor of Philosophy.

Exit points

Students who have completed four courses in the program may satisfy the requirements for the GCST Graduate Certificate of Spatial Science Technology and therefore may apply to exit this program with a GCST Graduate Certificate of Spatial Science Technology.

Students who have completed eight courses in the program may satisfy the requirements for the GDST Graduate Diploma of Spatial Science Technology and therefore may apply to exit this program with a GDST Graduate Diploma of Spatial Science Technology.

Credit

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

Enrolment

The Master of Spatial Science Technology consists of 16 units of study as indicated in the following recommended enrolment patterns for each specialisation study area. Each candidate must follow a specific schedule based on the candidate’s specialisation study (i.e. GIS or Surveying).
The recommended enrolment pattern below is designed to cover a four-semester period for on-campus students. Each student must complete the following:

- eight (8) courses from Schedule A (GIS or Surveying specialisation courses)
- two (2) courses from Schedule B (related discipline and further application areas)
- all courses in Schedule C (research methods and project).

A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required and thus will need to complete more courses from Group B, with the approval of the

program coordinator. All students in this program must select or formulate a research dissertation topic that focuses on spatial sciences (i.e. GIS, remote sensing, surveying, GPS, spatial science education, etc.) and/or their applications.

Geographic Information Systems specialisation recommended enrolment pattern

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

Specialisation: Geographic Information Systems (Specialisation study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete all eight courses[**]								
ENG8104 Asset Management in an Engineering Environment	2	1				1		
MGT8070 Property Development	1					1		
SVY3202 Photogrammetry and Remote Sensing	1	1				1		
GIS3407 GIS Programming and Visualisation	2	1				1	Pre-requisite: GIS1402 and CSC1401 or Students must be enrolled in one of the fol lowing Programs: GDST or MSST or GCST or MENS or MSPT	
GIS1402 Geographic Information Systems	1	1				1,3		
GIS3405 Spatial Analysis and Modelling	1	2				2		
GIS3406 Remote Sensing and Image Processing	1	2				2		
GIS3008 Applications of GIS and Remote Sensing	1	2				2	Pre-requisite: GIS1402 and GIS3406 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT	
Schedule B: Students must complete two courses from the following list								
CSC1401 Foundation Programming		1,2				1,2,3		
SVY1110 Introduction to Global Positioning System		2				2		
ENG8101 Technological Impact and its Management		1				1		
GIS4407 Web Based Geographic Information System		2				2	Pre-requisite: GIS1402 or S tudents must be enrolled in one of the following Program s: GCST or GDST or MSST or MSPT or GCNS or GDNS or MENS	
SVY4309 Practice Management for Spatial Scientists		1				1		
URP4002 Urban and Regional Planning Theory[#]		1				1	Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM	
SVY3302 Property Valuation and Development		2				2		

Specialisation: Geographic Information Systems (Specialisation study Code: 15926)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
URP3201 Sustainable Urban Design and Development		2				2		
CIS5310 ICT Project Management						2	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.	
CIS8000 Global Information Systems Strategy		1,2				1,2		
CSC8001 Introduction to Data Science and Visualisation		2				2		
Schedule C: Students must complete all courses in Schedule C								
ENG8001 Engineering Research Methods*	1	1, 2,3				1, 2		
ENG8411 Masters Engineering Research Project A	2	1,2				1	Pre-requisite: ENG8001 and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
ENG8414 Masters Engineering Research Project D^	2	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

Not available in on-campus mode in 2020.

* Best enrolled in first year to satisfy ENG8411 Masters Engineering Research Project A and ENG8414 Masters Engineering Research Project D pre-requisite.

^ Part-time students wishing to undertake ENG8414 Masters Research Project D over two semesters should contact the examiner before enrolling in the course

Surveying specialisation recommended enrolment pattern

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

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
Schedule A: Students must complete all eight courses**								
ENG8104 Asset Management in an Engineering Environment	2	1				1		
MGT8070 Property Development	2					1		
SVY3304 Cadastral Surveying (Queensland)	1	2				2	Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3202 Photogrammetry and Remote Sensing	1	1				1		
SVY1104 Survey Computations A	1	2				2	Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the fol lowing Programs: GCST or GDST or MSPT	

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
SVY1110 Introduction to Global Positioning System	1	2				2		
SVY2106 Geodetic Surveying A	1	1				1	Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
SVY3107 Geodetic Surveying B	1	2				2	Pre-requisite: SVY1110 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS	
Schedule B: Students must complete two courses from the following list								
SVY2105 Survey Computations B		1				1	Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSST or MENS	
SVY3302 Property Valuation and Development		2				2		
SVY4304 Land and Cadastral Law		2				2		
SVY2302 Mine Surveying		1				1	Pre-requisite: SVY1104 or S tudents must be enrolled in one of the following Program s: GCNS or GCST or GDNS or GDST or MSPT	
ENG8101 Technological Impact and its Management		1				1		
URP3201 Sustainable Urban Design and Development		2				2		
SVY3400 Advanced Surveying		2				2	Pre-requisite: (SVY2106 and SVY2105) or Students must be enrolled in one of the fol lowing Programs: GCNS or GCST or GDNS or GDST or MSPT or MENS	
SVY4309 Practice Management for Spatial Scientists		1				1		
URP4002 Urban and Regional Planning Theory[#]		1				1	Pre-requisite: URP1001 or URP3201 or Students must be enrolled in one of the fol lowing Programs: GDST or MSPT or GCNS or GDNS or MENS or GCBU or MPPM	
MGT8072 Property Ownership Management						2		
SVY2303 Construction Surveying		2				2	Pre-requisite: SVY1104	
Schedule C: Students must complete all courses in Schedule C								
ENG8001 Engineering Research Methods[*]	1	1, 2,3				1, 2		

Specialisation: Surveying (Specialisation Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (ONL)			
	Year	Sem	Year	Sem	Year	Sem		
ENG8411 Masters Engineering Research Project A	2	1,2				1	Pre-requisite: ENG8001 and normally have a GPA greater than 3.5 and completed 50% of the courses in the program	
ENG8414 Masters Engineering Research Project D^	2	1,2				1,2	Pre-requisite: ENG8411	4 units

Footnotes

** A student with a previous undergraduate degree in the spatial sciences may opt to select fewer courses in Group A than required (and thus will need more courses from Group B), upon approval by the Faculty of Health, Engineering and Sciences.

Not available in on-campus mode in 2020.

* Best enrolled in first year to satisfy ENG8411 Masters Engineering Research Project A and ENG8414 Masters Engineering Research Project D pre-requisite.

^ Part-time students wishing to undertake ENG8414 Masters Research Project D over two semesters should contact the examiner before enrolling in the course