

## Master of Spatial Science Technology (MSST) - MSpScTech

CRICOS code (International applicants): 062730G

	On-campus	Distance education
<b>Semester intake:</b>	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
<b>Campus:</b>	Toowoomba	-
<b>Fees:</b>	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
<b>Standard duration:</b>	1.5 years full-time, 3 years part-time. International students should complete this program within the CRICOS duration which is 1.5 years.	
<b>Program articulation:</b>	From: <a href="#">Graduate Diploma of Spatial Science Technology</a> ; <a href="#">Graduate Certificate in Spatial Science Technology</a> ; <a href="#">Graduate Diploma of Geomatic Studies</a>	

### Contact us

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

### Program focus

This postgraduate degree produces graduates who are skilled in spatial science investigations, evaluation and synthesis. It allows students to enhance their knowledge of a particular surveying or spatial science information discipline area for application, research or management purposes.

### Professional accreditation

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

### 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 (8 units) is augmented by a research project component (4 units). This allows students to enhance and extend their knowledge of a particular GIS or surveying discipline area. 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, information technology, agriculture and forestry, arts, and business, can apply to this program.

Students who successfully complete the [Master of Spatial Science Technology](#) will be able to demonstrate an ability to:

- critically evaluate knowledge from the literature and other information sources relevant to spatial science fields;

- analyse technological trends, and current and advanced technologies in the spatial science area and related disciplines, such as sustainable development, information systems, and technology management;
- apply knowledge and skills in spatial science;
- undertake research into spatial science issues and applications.

## Admission requirements

To be eligible for admission to the program candidates must possess a three or four-year undergraduate degree, or equivalent, in an approved discipline. Overseas candidates must possess a degree in an approved discipline recognised by the National Office of Overseas Skills Recognition (NOOSR) as awarding degrees that are comparable to the education level of an Australian bachelor degree.

Candidates for admission must have demonstrated a high level of academic performance and International applicants must also comply with the University requirements for competency in written and spoken English.

## How to apply

### Domestic students

[Application for postgraduate programs](#) may be made directly to USQ.

### International students

This program is offered to international students. An international student is a person who is not an Australian or New Zealand citizen and not an Australian permanent resident. Please refer to [USQ International](#) for information about entry requirements, visa arrangements and how to apply.

## 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](#).

Permanent Humanitarian Visa holders, Permanent Resident visa holders and New Zealand citizens who reside outside Australia pay full tuition fees.

Domestic full fee paying students may be eligible to defer their fees through a Government loan called [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 Spatial Science Technology](#) is comprised of 12 units of study as indicated in the following tables. It involves a minimum of either three (3) terms of full-time study or six (6) terms of part-time study.

A student can choose from one of the two major fields of study: GIS or surveying. The program is flexible, and depending on their previous undergraduate degree and current interests, allows a student to choose courses from a) GIS and surveying courses, and b) related disciplines and application areas, such as sustainable

development, information systems, and technology management. All students must complete a four unit research project and a pre-requisite course on research methods.

### Major studies objectives

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

- Geographic Information Systems
- Surveying.

A Transdisciplinary Engineering option is also available for students wishing to enhance their knowledge across a range of engineering disciplines.

### IT requirements

Students should refer to the section entitled Access to Information Technology Facilities in the General Faculty and Program Information section of this Handbook.

### Exemptions

Candidates for admission to the [Master of Spatial Science Technology](#) program are eligible to seek exemptions, in accordance with University regulations. The maximum number of exemptions permitted will be six (6) units. Studies used as the basis for claims for exemptions will normally have been completed within a period of five years prior to the date of application for exemptions and will not have been credited to another award. For students articulating from the [GCST Graduate Certificate in Spatial Science Technology](#) or the [GDST Graduate Diploma of Spatial Science Technology](#) will need to check their selection of courses in these programs to ensure that maximum exemptions are available.

### Enrolment

The Master of Spatial Science Technology consists of 12 units of study as indicated in the following recommended enrolment patterns for each major study area. Each candidate must follow a specific schedule based on the candidate's major study (i.e. GIS or surveying).

The recommended enrolment pattern below is designed to cover a four-semester period for on-campus students. However, the program may be completed within three semesters.

Each student must complete the following:

- Four (4) courses from Schedule A (GIS and Surveying courses)
- Three (3) courses from Schedule B (related disciplines and application areas)
- all courses in Schedule C (research methods and project dissertation).

A student with 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 Head of Discipline. 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 Major recommended enrolment pattern

Major study: Geographic Information Systems (Major study Code: 15926)							
Course	Year of program and semester in which course is normally studied					Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (WEB)		
	Year	Sem	Year	Sem	Year		
<b>Schedule A: Students must complete four courses**</b>							
<a href="#">SVY3202 Photogrammetry and Remote Sensing</a>		1		1			
<a href="#">GIS3404 Geographic Data Visualisation</a>		1		1			
<a href="#">GIS1402 Geographic Information Systems</a>		1		1			
<a href="#">GIS3405 Spatial Analysis and Modelling</a>		2		2			
<a href="#">GIS3406 Remote Sensing and Image Processing</a>		2		2			
<a href="#">GIS4407 Web Based Geographic Information System</a>		2		2		Pre-requisite: <a href="#">GIS1402</a> or S students must be enrolled in one of the following Programs: GCGS or GDST or MSST or GCNS or GCST or GDNS or MENS	
<a href="#">SVY1110 Introduction to Global Positioning System</a>		2		2			
<b>Schedule B: Students must complete three courses</b>							
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1		1			
<a href="#">ENG8101 Technological Impact and its Management</a>		1		1			
<a href="#">ENV4204 Environmental Technology</a>		1		1		Pre-requisite: <a href="#">MAT1100</a> or <a href="#">MAT1500</a> or Students must be enrolled in one of the following programs: GCEN or GDET or METC or MENS or GCNS or GDNS or MSST	
<a href="#">SVY4309 Practice Management for Spatial Scientists</a>		1		1			
<a href="#">SVY4203 Urban and Regional Planning</a>		1		1			
<a href="#">SVY3200 Land Administration</a>		2		2			
<a href="#">SVY3201 Sustainable Urban Design and Development</a>		2		2			
<a href="#">CIS8010 Information Systems Project Management</a>		2		2			
<a href="#">LAW2107 Environmental Law</a>		1,2		1,2			
<a href="#">CIS8000 Global Information Systems Strategy</a>		1		1			
<a href="#">ENG8103 Management of Technological Risk</a>		2		2			
<b>Schedule C: Students must complete both courses</b>							
<a href="#">ENG8001 Engineering and Surveying Research Methodology*</a>	1	1, 2		1, 2		1, 2	
<a href="#">ENG8002 Project and Dissertation</a>	1	1,2		1, 2		Pre-requisite: <a href="#">ENG8001</a>	4 units

### Footnotes

\*\* A student with 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 Head of Discipline.

\* Best enrolled in Semester 1 of first year to satisfy ENG8002 Project and Dissertation pre-requisite.

## Surveying Major recommended enrolment pattern

Major study: Surveying (Major Study Code: 15927)							Enrolment requirements	Comments
Course	Year of program and semester in which course is normally studied							
	On-campus (ONC)		External (EXT)		Online (WEB)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule A: Students must complete four courses**</b>								
<a href="#">SVY3304 Cadastral Surveying</a>		2		2			Pre-requisite: ( <a href="#">SVY1102</a> and <a href="#">SVY1104</a> ) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS	
<a href="#">SVY3202 Photogrammetry and Remote Sensing</a>		1		1				
<a href="#">SVY1104 Survey Computations A</a>		2		2		2	Pre-requisite: <a href="#">SVY1102</a> or <a href="#">SVY1500</a> or Students must be enrolled in one of the following Programs: GCST or GDST	
<a href="#">SVY1110 Introduction to Global Positioning System</a>		2		2				
<a href="#">SVY2106 Geodetic Surveying A</a>		1		1			Pre-requisite: <a href="#">SVY1110</a> or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS	
<a href="#">SVY2105 Survey Computations B</a>		2		2			Pre-requisite: <a href="#">SVY2106</a> or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS	
<a href="#">SVY3107 Geodetic Surveying B</a>		2		2			Pre-requisite: <a href="#">SVY1110</a> or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MENS	
<b>Schedule B: Students must complete three courses</b>								
<a href="#">SVY3200 Land Administration</a>		2		2				
<a href="#">SVY4304 Land and Cadastral Law</a>		2		2				
<a href="#">ENG8104 Asset Management in an Engineering Environment</a>		1		1				
<a href="#">ENG8101 Technological Impact and its Management</a>		1		1				
<a href="#">SVY3201 Sustainable Urban Design and Development</a>		2		2				
<a href="#">SVY4309 Practice Management for Spatial Scientists</a>		1		1				
<a href="#">SVY4203 Urban and Regional Planning</a>		1		1				
<a href="#">ENG8103 Management of Technological Risk</a>		2		2				
<a href="#">ECO8012 Tools and Techniques for Sustainable Development</a>				2		2		

Major study: Surveying (Major Study Code: 15927)								
Course	Year of program and semester in which course is normally studied						Enrolment requirements	Comments
	On-campus (ONC)		External (EXT)		Online (WEB)			
	Year	Sem	Year	Sem	Year	Sem		
<b>Schedule C: Students must complete both courses</b>								
<a href="#">ENG8001 Engineering and Surveying Research Methodology*</a>	1	1, 2		1, 2		1, 2		
<a href="#">ENG8002 Project and Dissertation</a>	1	1,2		1, 2			Pre-requisite: <a href="#">ENG8001</a> 4 units	

**Footnotes**

- \*\* A student with 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 Head of Discipline.
- \* Best enrolled in Semester 1 of first year to satisfy [ENG8002](#) pre-requisite.