

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

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 [Master of Spatial Science Technology](#).

|                              | On-campus   | External  |
|------------------------------|---|---|
| <b>Start:</b>                | No new admissions   | No new admissions   |
| <b>Campus:</b>               | Toowoomba   |   |
| <b>Fees:</b>                 | Commonwealth supported place<br>Domestic full fee paying place<br>International full fee paying place                                       | Commonwealth supported place<br>Domestic full fee paying place<br>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 of Spatial Science Technology</a> ; |   |

### Contact us

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| <b>Current students</b>  |
| <a href="#">Ask a question</a><br>Freecall (within Australia): 1800 007 252<br>Phone (from outside Australia): +61 7 4631 2285<br>Email <a href="mailto:usq.support@usq.edu.au">usq.support@usq.edu.au</a> |

### 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, applicants must satisfy the following requirements:

possesses 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.

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 student's 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 [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

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.

## Credit

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

## 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 Faculty of Health, Engineering and Sciences. 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 (ONL) |     |  |          |
|   | Year   | Sem | Year           | Sem | Year         | Sem |  |          |
| Schedule A: Students must complete four courses**                     |  |     |                |     |              |     |  |          |
| SVY3202 Photogrammetry and Remote Sensing                             |  | 1   |                | 1   |              |     |  |          |
| GIS3407 GIS Programming and Visualisation                             |  | 1   |                | 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 |          |
| GIS1402 Geographic Information Systems                                |  | 1   |                | 1,3 |              |     |  |          |
| GIS2405 Spatial Analysis and Modelling                                |  | 2   |                | 2   |              |     |  |          |
| GIS3406 Remote Sensing and Image Processing                           |  | 2   |                | 2   |              |     |  |          |

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|---|--|------|----------------|------|--------------|------|--|----------|
| 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  |  |          |
| <a href="#">GIS2407 Web Based Geographic Information System</a>       |  | 2    |                | 2    |              |      | Pre-requisite: <a href="#">GIS1402</a> or S<br>tudents must be enrolled in<br>one of the following Program<br>s: GCST or GDST or MSST<br>or MSPT or GCNS or GDNS<br>or MENS  |          |
| <a href="#">SVY1110 Introduction to Global Positioning System</a>     |  | 2    |                | 2    |              |      |  |          |
| <b>Schedule B: Students must complete three courses</b>               |  |      |                |      |              |      |  |          |
| ENG8104   |  | 1    |                | 1    |              |      |  |          |
| ENG8101   |  | 1    |                | 1    |              |      |  |          |
| <a href="#">ENV4204 Environmental Technology</a>                      |  | 1    |                | 1    |              |      | Pre-requisite: <a href="#">ENV2105</a> or<br>Students must be enrolled in<br>one of the following Program<br>s: PDEV or GCEN or METC<br>or MEPR or GCNS or GDNS<br>or MENS   |          |
| <a href="#">SVY4309 Practice Management for Spatial Scientists</a>    |  | 1    |                | 1    |              |      |  |          |
| SVY3200 Land Administration   |  | 2    |                | 2    |              |      |  |          |
| <a href="#">URP3201 Sustainable Urban Design and Development</a>      |  | 2    |                | 2    |              |      |  |          |
| CIS8010   |  | 2    |                | 2    |              |      |  |          |
| <a href="#">LAW2107 Environmental Law</a> ^                           |  | 1    |                |      |              | 1    | Pre-requisite: <a href="#">LAW1501</a> or<br><a href="#">LAW1101</a> or <a href="#">LAW1500</a> or<br><a href="#">ENG2002</a> or <a href="#">REN1201</a> or<br>(Students enrolled in BEDU<br>(Legal Studies) or BLAW or<br>LLBP or BALW or BCLW or<br>BZLW - Pre-requisite:<br><a href="#">LAW1111</a> ) |          |
| CIS8000 Global Information Systems Strategy                           |  | 1    |                | 1    |              |      |  |          |
| ENG8103   |  | 2    |                | 2    |              |      |  |          |
| <b>Schedule C: Students must complete both courses</b>                |  |      |                |      |              |      |  |          |
| ENG8001 *   | 1  | 1, 2 |                | 1, 2 |              | 1, 2 |  |          |
| <a href="#">ENG8414 Masters Engineering Research Project D</a> ^^     | 1  | 1,2  |                |      |              | 1,2  | Pre-requisite: <a href="#">ENG8411</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 Faculty of Health, Engineering and Sciences.
- <sup>^</sup> Springfield campus only
- <sup>\*</sup> Best enrolled in Semester 1 of first year to satisfy ENG8002 Project and Dissertation pre-requisite.
- <sup>^^</sup> Permission to enrol in this course must be obtained from the Program Coordinator.

## Surveying Major recommended enrolment pattern

| 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 (ONL) |      |  |          |  |
|  | Year   | Sem  | Year           | Sem  | Year         | Sem  |  |          |  |
| Schedule A: Students must complete four courses**  |  |      |                |      |              |      |  |          |  |
| SVY3304 Cadastral Surveying (Queensland)           |  | 2    |                | 2    |              |      | Pre-requisite: (SVY1102 and SVY1104) or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS |          |  |
| SVY3202 Photogrammetry and Remote Sensing          |  | 1    |                | 1    |              |      |  |          |  |
| SVY1104 Survey Computations A                      |  | 2    |                | 2    |              | 2    | Pre-requisite: SVY1102 or SVY1500 or Students must be enrolled in one of the following Programs: GCST or GDST or MSPT                                    |          |  |
| SVY1110 Introduction to Global Positioning System  |  | 2    |                | 2    |              |      |  |          |  |
| SVY2106 Geodetic Surveying A                       |  | 1    |                | 1    |              |      | Pre-requisite: SVY1110 and SVY1102 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS   |          |  |
| SVY2105 Survey Computations B                      |  | 1    |                |      |              | 1    | Pre-requisite: ENM1600 and SVY2106 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT or MENS   |          |  |
| SVY3107 Geodetic Surveying B                       |  | 2    |                | 2    |              |      | Pre-requisite: SVY1110 and SVY2105 or Students must be enrolled in one of the following Programs: GCNS or GCST or GDNS or GDST or MSST or MSPT           |          |  |
| Schedule B: Students must complete three courses   |  |      |                |      |              |      |  |          |  |
| SVY3200 Land Administration                        |  | 2    |                | 2    |              |      |  |          |  |
| SVY4304 Land and Cadastral Law                     |  | 2    |                | 2    |              |      |  |          |  |
| ENG8104  |  | 1    |                | 1    |              |      |  |          |  |
| ENG8101  |  | 1    |                | 1    |              |      |  |          |  |
| URP3201 Sustainable Urban Design and Development   |  | 2    |                | 2    |              |      |  |          |  |
| SVY4309 Practice Management for Spatial Scientists |  | 1    |                | 1    |              |      |  |          |  |
| ENG8103  |  | 2    |                | 2    |              |      |  |          |  |
| ECO8012  |  |      |                | 2    |              | 2    |  |          |  |
| Schedule C: Students must complete both courses    |  |      |                |      |              |      |  |          |  |
| ENG8001 *  | 1  | 1, 2 |                | 1, 2 |              | 1, 2 |  |          |  |
| ENG8414 Masters Engineering Research Project D ^^  | 1  | 1,2  |                |      |              | 1,2  | Pre-requisite: ENG8411   | 4 units  |  |

**Footnotes**

- \*\* A student with previous undergraduate degree in the spatial sciences may to 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.
- \* Best enrolled in Semester 1 of first year to satisfy ENG8002 pre-requisite.
- ^^ Permission to enrol in this course must be obtained from the Program Coordinator.