

Master of Information Technology (MCTN) - MCTN

CRICOS code (International applicants): 083407A

	On-campus	Online
Start:	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, 6 years maximum	
Program articulation:	From: Graduate Diploma of Information Technology	

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: study@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

Professional accreditation

This program is accredited at professional level by the [Australian Computer Society](#) (ACS) and, through the Seoul Accord, is recognised in other countries. The Seoul Accord is a multi-lateral agreement that allows ACS accreditation to be recognised globally. This means that graduates from this program will have their degree recognised by the other countries who are members of the Accord.

Program aims

The Master of Information Technology aims to provide students from any discipline with the opportunity to enhance their current knowledge or upgrade their professional qualifications. Through the selection of specialisations, students will be able to further develop and extend their skills by choosing from Software development, Network Engineering, or Computing Technology specialisations. This program equips students with the technical expertise and knowledge to become effective IT professionals by applying critical thinking and analytical skills required to adapt to an ever-changing technological environment.

Program objectives

At the completion of this program, graduates should be able to:

- Incorporate concepts of professionalism, cultural awareness and ethical practice within the IT work environment
- Effectively communicate (both written and verbally) and employ appropriate interpersonal skills
- Discover and analyse requirements and devise specification for software systems or secure networks
- Independently or in teams, design and implement IT systems and/or computer networks to support business environments

- Evaluate and apply methods for planning and managing large software or network projects
- Employ appropriate tools and construct technical environments for different computing platforms
- Apply autonomous learning and leadership skills in a technology context.

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 year Bachelor degree in any area, or equivalent
Or
A minimum of five years' professional work experience equivalent to a qualification at AQF Level 7.
- English Language Proficiency requirements for Category 2.

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 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, via distance education/online. Students are able to calculate the fees for a particular course via the [Course Fee Schedules](#).

Program structure

The program consists of 16 units comprised of:

- two (2) core courses
- two (2) approved courses (postgraduate CIS or CSC coded courses)
- one eight (8) unit specialisation
- four (4) elective course (Postgraduate courses)

Required time limits

Students have a maximum of 6 years to complete the program.

Core courses

Courses	Online	Toowoomba	Springfield
CSC5020 Foundations of Programming	1,2	1,2	
CIS5310 IS/ICT Project Management	1,2,3	1	1

Software Development specialisation

Courses	Online	Toowoomba	Springfield
CSC5090 Foundations of IT Systems Administration	1,2	1,2	
CSC8710 Software Design and Modelling	2	2	
CSC8720 Programming Algorithms	1,2	1,2	
CSC8740 Client-side Web Technology	1,2	1,2	
CSC8450 Relational Database Systems *	1	1	
CSC8460 Advanced Programming Languages *	2	2	
CSC8470 Server-side Web Technology *	2	2	2
CSC8600 Advanced ICT Professional Project	1,2	1,2	

Footnotes

* being introduced in 2022

Network Engineering specialisation

Courses	Online	Toowoomba	Springfield
CSC5050 Networking Foundations	1,2	1,2	
CSC8510 Internetworking	1,2	1,2	
CSC8520 Securing Networks	1,2	1,2	1
CSC8540 Routing and Switching *	1,2	1	
CSC8360 Wireless Networking *	2	2	
CSC8370 Network Security Management	2	2	
CSC8380 Designing Networks *	2	2	
CSC8600 Advanced ICT Professional Project	1,2	1,2	

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Computing Technology specialisation

Courses	Online	Toowoomba	Springfield
CSC5050 Networking Foundations	1,2	1,2	
CSC5090 Foundations of IT Systems Administration	1,2	1,2	
CSC8520 Securing Networks	1,2	1,2	1
CSC8740 Client-side Web Technology	1,2	1,2	
CSC8370 Network Security Management	2	2	
CSC8450 Relational Database Systems *	1		
CSC8470 Server-side Web Technology *	2	2	2
CSC8600 Advanced ICT Professional Project	1,2	1,2	

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Research Courses

Students wishing to pursue a PhD are encouraged to complete the below courses as their electives.

Courses	Online	Toowoomba	Springfield
MSC8001 Research Project I *	1,2	1,2	
MSC8002 Research Project II *	1,2	1,2	

Footnotes

* 2 unit course

Electives/Approved courses

Approved Courses: Students may complete any USQ postgraduate level CIS or CSC coded course for their 2 approved courses. Elective Courses: Students may complete any USQ postgraduate level course for their 4 elective courses.

IT requirements

All students are required to have access to the Internet and to a personal computer running Microsoft Windows and Linux. The School provides assistance with installing Linux for students who may not have done so before.

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.

Compliance with these recommendations will ensure students receive the computing help needed if experiencing problems. Software is specified on a course-by-course basis and, in some instances, it is provided with the textbook required for the course. The use of Macintosh computers may require the installation of virtualisation software and guest OSes.

Articulation

Upon successful completion of the [GDTI Graduate Diploma of Information Technology](#), students may transfer into the Master of Information Technology (MCTN) with up to a maximum of eight units of credit in accordance

with the MCTN requirements. The [GCSC Graduate Certificate of Science \(Computing\)](#) forms a pathway to the GDTI and the MCTN with credit in accordance to the USQ Credit and Exemption Procedure.

Students may apply to enrol in the USQ [Doctor of Philosophy \(PhD\)](#) program upon completion of the Master of Information Technology, if [MSC8001](#) and [MSC8002](#) have been completed as part of the program.

Acceptance into the PhD program will depend on the results achieved in the MCTN, and especially the results achieved in the research specialisation.

Exit points

Students enrolled in the MCTN program who wish to exit without completing the program may be awarded:

- the [GDTI Graduate Diploma of Information Technology](#) or the [GCSC Graduate Certificate of Science \(Computing\)](#) if they have met the program requirements.

Credit

Candidates for admission to the Master of Information Technology program are eligible to seek credit, in accordance with University regulations. The maximum number of credits permitted will be eight (8) units listed in the Program Structure. Studies used as the basis for claims for credit will normally have been completed within a period of five years prior to the date of application for credit.

Students seeking Skills Accreditation, or other accreditations from professional bodies such as the Australia Computer Society, should seek advice from the professional bodies before they apply for credits or exemptions.

Students who have completed an Information Technology degree at an Australian University, or equivalent, may apply for up to 4 units of credit for level 5000 courses.

Software Development - recommended enrolment pattern - Semester 1 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 1							
CSC5020 Foundations of Programming	1	1			1	1	
CIS5310 IS/ICT Project Management	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5090 Foundations of IT Systems Administration	1	1			1	1	
Approved or Elective course	1	1			1	1	
Year 1, Semester 2							
CSC8720 Programming Algorithms	1	2			1	2	Pre-requisite: CSC5020
CSC8740 Client-side Web Technology	1	2			1	2	Pre-requisite: CSC5020 and CSC5090
CSC8710 Software Design and Modelling	1	2			1	2	
Approved or Elective course	1	2			1	2	
Year 2, Semester 1							
CSC8450 Relational Database Systems *	2	1			2	1	Pre-requisite: CSC5090
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8460 Advanced Programming Languages *	2	2			2	2	Pre-requisite: CSC5020

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
CSC8470 Server-side Web Technology *	2	2			2	2	Pre-requisite: CSC8740
CSC8600 Advanced ICT Professional Project	2	2			2	2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	2	2			2	2	

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Software Development - recommended enrolment pattern - Semester 2 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 2							
CSC5020 Foundations of Programming	1	2			1	2	
CIS5310 IS/ICT Project Management					1	2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5090 Foundations of IT Systems Administration	1	2			1	2	
CSC8710 Software Design and Modelling	1	2			1	2	
Year 2, Semester 1							
CSC8740 Client-side Web Technology	2	1			2	1	Pre-requisite: CSC5020 and CSC5090
CSC8450 Relational Database Systems *	2	1			2	1	Pre-requisite: CSC5090
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8720 Programming Algorithms	2	2			2	2	Pre-requisite: CSC5020
CSC8460 Advanced Programming Languages *	2	2			2	2	Pre-requisite: CSC5020
CSC8470 Server-side Web Technology *	2	2			2	2	Pre-requisite: CSC8740
Approved or Elective course	2	2			2	2	
Year 3, Semester 1							
CSC8600 Advanced ICT Professional Project	3	1			3	1	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	3	1			3	1	
Approved or Elective course	3	1			3	1	
Approved or Elective course	3	1			3	1	

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Network Engineering - recommended enrolment pattern - Semester 1 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 1							
CSC5020 Foundations of Programming	1	1			1	1	
CIS5310 IS/ICT Project Management	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5050 Networking Foundations	1	1			1	1	
CSC8520 Securing Networks	1	1			1	1	Co-requisite: CSC5050 or CSC8100
Year 1, Semester 2							
CSC8510 Internetworking	1	2			1	2	Co-requisite: CSC5050
CSC8370 Network Security Management	1	2			1	2	Pre-requisite: CSC8520
Approved or Elective course	1	2			1	2	
Approved or Elective course	1	2			1	2	
Year 2, Semester 1							
CSC8540 Routing and Switching *	2	1			2	1	Pre-requisite: CSC8510
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8360 Wireless Networking *	2	2			2	2	Pre-requisite: CSC8540
CSC8380 Designing Networks *	2	2			2	2	Pre-requisite: CSC8540
CSC8600 Advanced ICT Professional Project	2	2			2	2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	2	2			2	2	

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Network Engineering - recommended enrolment pattern - Semester 2 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 2							
CSC5020 Foundations of Programming	1	2			1	2	
CIS5310 IS/ICT Project Management					1	2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5050 Networking Foundations	1	2			1	2	
CSC8510 Internetworking	1	2			1	2	Co-requisite: CSC5050
Year 2, Semester 1							
CSC8520 Securing Networks	2	1			2	1	Co-requisite: CSC5050 or CSC8100

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
CSC8540 Routing and Switching *	2	1			2	1	Pre-requisite: CSC8510
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8360 Wireless Networking *	2	2			2	2	Pre-requisite: CSC8540
CSC8370 Network Security Management	2	2			2	2	Pre-requisite: CSC8520
CSC8380 Designing Networks *	2	2			2	2	Pre-requisite: CSC8540
Approved or Elective course	2	2			2	2	
Year 3, Semester 1							
CSC8600 Advanced ICT Professional Project	3	1			3	1	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	3	1			3	1	
Approved or Elective course	3	1			3	1	
Approved or Elective course	3	1			3	1	

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Computing Technology - recommended enrolment pattern - Semester 1 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 1							
CSC5020 Foundations of Programming	1	1			1	1	
CIS5310 IS/ICT Project Management	1	1			1	1,2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5050 Networking Foundations	1	1			1	1	
CSC5090 Foundations of IT Systems Administration	1	1			1	1	
Year 1, Semester 2							
CSC8520 Securing Networks	1	2			1	2	Co-requisite: CSC5050 or CSC8100
CSC8740 Client-side Web Technology	1	2			1	2	Pre-requisite: CSC5020 and CSC5090
Approved or Elective course	1	2			1	2	
Approved or Elective course	1	2			1	2	
Year 2, Semester 1							
CSC8450 Relational Database Systems *	2	1			2	1	Pre-requisite: CSC5090
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8370 Network Security Management	2	2			2	2	Pre-requisite: CSC8520
CSC8470 Server-side Web Technology *	2	2			2	2	Pre-requisite: CSC8740

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
CSC8600 Advanced ICT Professional Project	2	2			2	2	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	2	2			2	2	

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Computing Technology - recommended enrolment pattern - Semester 2 entry

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.

Course	Year of program and semester in which course is normally studied						Enrolment requirements
	On-campus (ONC)		External (EXT)		Online (ONL)		
	Year	Sem	Year	Sem	Year	Sem	
Year 1, Semester 2							
CSC5020 Foundations of Programming	1	2			1	2	
CIS5310 IS/ICT Project Management					1	2,3	Enrolment is not permitted in CIS5310 if CIS8010 has been previously completed.
CSC5050 Networking Foundations	1	2			1	2	
CSC5090 Foundations of IT Systems Administration	1	2			1	2	
Year 2, Semester 1							
CSC8520 Securing Networks	2	1			2	1	Co-requisite: CSC5050 or CSC8100
CSC8740 Client-side Web Technology	2	1			2	1	Pre-requisite: CSC5020 and CSC5090
Approved or Elective course	2	1			2	1	
Approved or Elective course	2	1			2	1	
Year 2, Semester 2							
CSC8370 Network Security Management	2	2			2	2	Pre-requisite: CSC8520
CSC8470 Server-side Web Technology *	2	2			2	2	Pre-requisite: CSC8740
Approved or Elective course	2	2			2	2	
Approved or Elective course	2	2			2	2	
Year 3, Semester 1							
CSC8450 Relational Database Systems *	3	1			3	1	Pre-requisite: CSC5090
CSC8600 Advanced ICT Professional Project	3	1			3	1	Pre-requisite: CIS5310 and Students must have successfully completed 12 units prior to enrolment in this course
Approved or Elective course	3	1			3	1	
Approved or Elective course	3	1			3	1	

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