MC-SCICMP Master of Science (Computer Science)

Year and Campus:	2015 - Parkville
CRICOS Code:	062189B
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Graduate/Postgraduate
Duration & Credit Points:	200 credit points taken over 24 months full time. This course is available as full or part time.
Coordinator:	Dr Aaron Harwood Email: comp-mssc-coord@unimelb.edu.au
Contact:	Melbourne Graduate School of Science Faculty of Science The University of Melbourne Victoria 3010 Tel: + 61 3 8344 6128 Fax: +61 3 8344 3351 Web: **http://graduate.science.unimelb.edu.au/ (http://graduate.science.unimelb.edu.au/)** **Future Student Enquiries (https://enquiry.app.unimelb.edu.au/?cc=MC-SCICMP&fn=MGSS)**
Course Overview:	The Master of Science (Computer Science) is a research training stream of the Master of Science. The Master of Science gives students the opportunity to undertake a substantive research project in a field of choice as well as a broad range of coursework subjects including a professional skills component, as a pathway to PhD study or to the workforce.
Learning Outcomes:	Upon completion, a graduate of the Master of Science (Computer Science) should: # Have a broad grounding across the breadth of advanced Computer Science; # Have specialist knowledge in (at least) one of knowledge systems, programming languages and distributed computing, or in an applications area in information systems, mathematics/ statistics, spatial information science or linguistics; # Have attained research maturity, including the ability to independently carry out a research survey, and plan, execute, interpret and report on a computational experiment.
Course Structure & Available Subjects:	All students must complete 200 pts including: # Discipline Core subjects (50 points); # Discipline Elective subjects (at least 37.5 points); # Professional Skills subjects (12.5 - 25 points); # Research Project (75 points). With permission of the Course Coordinator, a total of up to 50 pts of study may be taken from one of the following: The Department of Mathematics and Statistics, the Geomatics discipline within the Department of Infrastructure Engineering, the Department of Electrical and Electronic Engineering, or the Department of Linguistics and Applied Linguistics, provided that department is willing to accept the student's enrolment.
Subject Options:	**Discipline Core** Students must take the following subjects:

Subject	Study Period Commencement:	Credit Points:
COMP90049 Knowledge Technologies	Semester 1, Semester 2	12.50
COMP90048 Declarative Programming	Semester 2	12.50

COMP90015 Distributed Systems	Semester 1, Semester 2	12.50
COMP90044 Research Methods	Semester 2	12.50

Students who have taken any of these subjects or equivalent as part of their undergraduate studies are exempt from taking those subjects, and will be required to make up an equivalent number of subject points from the pool of Discipline Elective subjects. Students will normally take Research Methods in their second or third semester of enrolment, concurrent with or subsequent to the commencement of their Research Project.

Discipline Electives

Students are required to select either 50 or 62.5 points of discipline elective subjects, from:

Subject	Study Period Commencement:	Credit Points:
COMP90014 Algorithms for Functional Genomics	Semester 2	12.50
COMP90016 Computational Genomics	Semester 1	12.50
COMP90017 Sensor Networks and Applications	Not offered 2015	12.50
COMP90018 Mobile Computing Systems Programming	Semester 2	12.50
COMP90020 Distributed Algorithms	Semester 1	12.50
COMP90024 Cluster and Cloud Computing	Semester 1	12.50
COMP90025 Parallel and Multicore Computing	Semester 2	12.50
COMP90042 Web Search and Text Analysis	Semester 1	12.50
COMP90043 Cryptography and Security	Semester 2	12.50
COMP90045 Programming Language Implementation	Not offered 2015	12.50
COMP90046 Constraint Programming	Semester 2	12.50
COMP90050 Advanced Database Systems	Semester 1	12.50
COMP90051 Statistical Machine Learning	Semester 2	12.50
COMP90053 Program Analysis and Transformation	Not offered 2015	12.50
COMP90054 Software Agents	Semester 2	12.50
COMP90057 Advanced Theoretical Computer Science	Semester 2	12.5

Or additional non-project postgraduate subjects that complement students' research projects, where approved by the course coordinator.

Professional Skills

Students must take one to two subjects from the following:

Subject	Study Period Commencement:	Credit Points:
MAST90044 Thinking and Reasoning with Data	Semester 1	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50
MAST90007 Statistics for Research Workers	July	12.50
SCIE90012 Science Communication	Not offered 2015	12.50
SCIE90013 Communication for Research Scientists	Semester 1	12.50

EDUC90839 Science in Schools	Semester 1, Semester 2	12.5

*Students who enrol in ENGR90021 Engineering Communication must take 12.5 pts only of Professional Skills subjects, and may not take SCIE90012 Science Communication.

Research Project

Students are required to undertake a 75 pt Research Project, normally to commence in the second semester of their course, in the research theme where they have focused their discipline elective subject selection. The Research Project will be carried out under the supervision of academics in the Department of Computing and Information Systems. Students will gain research experience in Computer Science by completing a thesis of approximately 25,000 words (contributing 90% of the grade for the Research Project subject) and giving an oral presentation of their project work prior to submission of the thesis (contributing the remaining 10% of the Research Project grade). The thesis will be examined internally within the Department of Computing and Information Systems.

The research project will be taken over three consecutive semesters and will begin on the Monday of the second semester of enrolment (semester 1 or 2) and continue until the end of the final semester of research project enrolment. The research project work continues over summer and winter breaks, minus recreation leave of 4 weeks per year
For how long and at what time within the enrolment the actual period of leave is to be taken needs to be negotiated with a student's supervisor.
The thesis will be due for submission at the end of the formal examination period of the final semester of research project enrolment (usually fourth semester) if an earlier date is not specified.

Students may enrol in a combination of research project subjects and coursework subjects as long as once the Research Project is commenced, the consecutive enrolment requirement is met and to ensure they have completed a total of 75 points for the research project by the end of their course.
You should consult your supervisor to discuss an appropriate study plan prior to enrolling in your subjects online through the Student Portal. In particular, it is important that you agree an appropriate combination of research project points and coursework point enrolment each semester. Students may need to enrol in a subject of the same credit point value more than once which is why there are multiple *Computer Science Research Project* subjects of the same points value.

Subject	Study Period Commencement:	Credit Points:
COMP60004 Computer Science Research Project	Semester 1, Semester 2	12.50
COMP60003 Computer Science Research Project	Semester 1, Semester 2	25
COMP60002 Computer Science Research Project	Semester 1, Semester 2	37.50
COMP60001 Computer Science Research Project	Semester 1, Semester 2	50

Entry Requirements:

In order to be considered for entry, applicants must have completed:

• an undergraduate degree in a discipline appropriate to the stream of the Master of Science into which entry is sought, with a weighted average mark of at least H3 (65%) in the best 50 points in appropriate discipline studies at third year; and

• appropriate prerequisite studies for the stream into which entry is sought

For stream specific requirements please **click here (http://science.unimelb.edu.au/available-stream-requirements%20)** .

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Meeting these requirements does not guarantee selection.

In ranking applications, the Selection Committee will consider prior academic performance.

The Selection Committee may seek further information to clarify any aspect of an application in accordance with the **Admission and Selection into Course Policy (http://policy.unimelb.edu.au/MPF1035)** .

Applicants are required to satisfy the university's **English language requirements for postgraduate courses (http://www.policy.unimelb.edu.au/schedules/MPF1035-**

	ScheduleA.pdf) . For those applicants seeking to meet these requirements by one of the standard tests approved by the Academic Board, performance band 6.5 is required. - **Notes:** • Quotas may be applied to the degree as a whole, or to an individual stream, and preference may be given to applicants with evidence of appropriate preparation or potential to undertake research. • Entry into a stream of the Master of Science is subject to the capacity of the department(s) or schools(s) offering the program stream to provide adequate supervision in a research project appropriate to the interests and preparation of the individual student and may be subject to the agreement of a member of academic staff to supervise the project module.
Core Participation Requirements:	The Master of Science (Computer Science) welcomes applications from students with disabilities. It is University and degree policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the degree. The Master of Science (Computer Science) requires all students to enrol in subjects where they will require: a) The ability to comprehend complex science and technology related information;b) The ability to clearly and independently communicate a knowledge and application of science, and technology principles and practices during assessment tasks;c) The ability to actively and safely contribute in clinical, laboratory, and fieldwork/excursion activities. Students must possess behavioural and social attributes that enable them to participate in a complex learning environment. Students are required to take responsibility for their own participation and learning. They also contribute to the learning of other students in collaborative learning environments, demonstrating interpersonal skills and an understanding of the needs of other students. Assessment may include the outcomes of tasks completed in collaboration with other students. There may be additional inherent academic requirements for some subjects, and these requirements are listed within the description of the requirements for each of these subjects. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the relevant Subject Coordinator and the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/
Further Study:	The Master of Science offers a pathway to a PhD.
Graduate Attributes:	The Melbourne Experience enables our graduates to become: Academically excellent Knowledgeable across disciplines Leaders in communities Attuned to cultural diversity Active global citizens
Links to further information:	http://graduate.science.unimelb.edu.au