

## MC-SCICHE Master of Science (Chemistry)

<b>Year and Campus:</b>	2011 - Parkville
<b>CRICOS Code:</b>	062189B
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Level:</b>	Graduate/Postgraduate
<b>Duration &amp; Credit Points:</b>	200 credit points taken over 24 months full time. This course is available as full or part time.
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<b>Course Overview:</b>	The Master of Science - Chemistry is one of the research training streams of the Master of Science. The research training streams give 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 tools component, as a pathway to PhD study or to the workforce.
<b>Objectives:</b>	The objectives of this course are to: <ul style="list-style-type: none"> <li># develop the process and practice of chemical research;</li> <li># increase the student's knowledge and understanding of chemical science;</li> <li># encourage the development of individual investigative skills, critical thought and the ability to evaluate information and to analyse experimental data.</li> </ul>
<b>Course Structure &amp; Available Subjects:</b>	<p>Students undertaking the Master of Science (Chemistry program) must complete a total of 200 points over the two year full-time (or four year part-time) program, comprising:</p> <p><b>Core discipline subject</b> (12.5 points) <i>Students must take:</i></p> <ul style="list-style-type: none"> <li>• 610-681 Advanced Spectroscopy</li> </ul> <p><b>Elective discipline subjects</b> (all subjects are 12.5 points, total points: 37.5–50) <i>Students must take:</i></p> <ul style="list-style-type: none"> <li>• Two to four of the core Chemistry subjects: 610-682 Chemistry 4A; 610-683 Chemistry 4B; 610-501 Chemistry 5A; 610-502 Chemistry 5B and</li> <li>• Up to 25 points from the Professional Entry MSc core discipline subjects (with the approval of the course coordinator), and/or up to 12.5 points of approved 300-level subjects.</li> </ul> <p><i>Note: Students need not complete Chemistry 4A or 5A prior to enrolling in Chemistry 4B and 5B.</i></p> <p><b>Professional tools</b> (all subjects are 12.5 points, total points: 12.5–25) <i>Students must take one or two Professional Tools subjects from the following list:</i></p> <p>Business Tools</p> <ul style="list-style-type: none"> <li>• 600-614 Business Tools: Money, People and Processes,</li> <li>• 600-622 Business Tools: The Market Environment,</li> </ul> <p>Science Tools</p> <ul style="list-style-type: none"> <li>• 615-668 Critical Analysis in Science;</li> <li>• 615-505 e-Science;</li> <li>• 600-617 Systems Modelling and Simulation;</li> <li>• 600-618 Ethics and Responsibility in Science;</li> <li>• 600-615 Thinking and Reasoning with Data.</li> </ul> <p>Communication Tools</p>

- 600-616 Science in Context;
- 600-619 Scientists, Communication and the Workplace

### Research Project (125 credit points)

The assessment requirements below are applicable to the entire 125 point Research Project:

(1) A preliminary literature survey and research plan (1500 words, up to 5 pages), due at the end of the first semester of study (pass/fail);

(2) A major thesis, page limit of 60 pages (20,000 words) due at the end of the fourth semester of study (90% made up from thesis evaluation (35%), oral examination (viva) on thesis (35%); supervisor's assessment of research performance ((20%) based on attendance, application, initiative, and demonstrated skills));

(3) A project related oral-presentation (up to 30 minutes) given at the end of the fourth semester of study (10%);

(4) Successful completion of a seminar series providing advanced theoretical and/or practical training (pass/fail).

Students enrolled in the Master of Science (Chemistry program) are required to complete a 125 point Research Project. Students may enrol in a combination of Research Project subjects as indicated below (each of which is available in the summer semester, semester one and semester two) over their two years of full-time study or over their four years of part-time study, to ensure they have completed a total of 125 points by the end of their course.

- # 610-671 Research Project - 12.5 points
- # 610-672 Research Project - 25.0 points
- # 610-673 Research Project - 37.5 points
- # 610-675 Research Project - 50.0 points

#### Subject Options:

#### Discipline Core

Subject	Study Period Commencement:	Credit Points:
CHEM90008 Advanced Spectroscopy	Semester 1	12.50

#### Discipline Elective

Subject	Study Period Commencement:	Credit Points:
CHEM90009 Chemical Synthesis & Characterisation 1	Semester 1	12.50
CHEM90010 Advanced Chemical Applications 1	July	12.50
CHEM90017 Chemical Synthesis & Characterisation 2	Semester 1	12.50
CHEM90018 Advanced Chemical Applications 2	July	12.50

#### Professional Tools

Subject	Study Period Commencement:	Credit Points:
BUSA90403 Business Tools: Money People & Processes	Semester 2	12.50
BUSA90471 Business Tools: The Market Environment	Semester 1	12.50
SCIE90009 Critical Analysis in Science	Not offered 2011	12.50
SCIE90007 E-Science	Not offered 2011	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50
SCIE90005 Ethics and Responsibility in Science	Semester 2	12.50
MAST90044 Thinking and Reasoning with Data	Semester 1	12.50
SCIE90004 Science in Context	Not offered 2011	12.50

	SCIE90006 Scientists,Communication & the Workplace	Not offered 2011	12.50
<b>Research Project</b>			
	<b>Subject</b>	<b>Study Period Commencement:</b>	<b>Credit Points:</b>
	CHEM90013 Chemistry Masters Research Project	Summer Term, Semester 1, Semester 2	12.50
	CHEM90014 Chemistry Masters Research Project	Summer Term, Semester 1, Semester 2	25
	CHEM90015 Chemistry Masters Research Project	Summer Term, Semester 1, Semester 2	37.50
	610-675 Chemistry Masters Research Project	Not offered 2011	50.00
<b>Entry Requirements:</b>	Bachelor degree with a major in chemistry or a related discipline with at least an H3 (65%) average in the major or equivalent.		
<b>Core Participation Requirements:</b>	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.		
<b>Further Study:</b>	The Research Training programs offer a pathway to a PhD.		
<b>Graduate Attributes:</b>	Graduates will: have the ability to demonstrate advanced independent critical enquiry, analysis and reflection; have a strong sense of intellectual integrity and the ethics of scholarship; have in-depth knowledge of their specialist discipline(s); reach a high level of achievement in writing, research or project activities, problem-solving and communication; be critical and creative thinkers, with an aptitude for continued self-directed learning; be able to examine critically, synthesise and evaluate knowledge across a broad range of disciplines; have a set of flexible and transferable skills for different types of employment; be able to initiate and implement constructive change in their communities, including professions and workplaces.		
<b>Links to further information:</b>	<a href="http://graduate.science.unimelb.edu.au/programs/msc/chemistry">http://graduate.science.unimelb.edu.au/programs/msc/chemistry</a>		