

## MC-SCIBIO Master of Science (BioSciences)

<b>Year and Campus:</b>	2016 - Parkville																	
<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.																	
<b>Coordinator:</b>	Dr John Golz School of BioSciences																	
<b>Contact:</b>	<p>Currently enrolled students:</p> <ul style="list-style-type: none"> <li># General information: <a href="https://ask.unimelb.edu.au">https://ask.unimelb.edu.au</a> (<a href="https://ask.unimelb.edu.au">https://ask.unimelb.edu.au</a>)</li> <li># <b>Contact Stop 1</b> (<a href="http://students.unimelb.edu.au/stop1">http://students.unimelb.edu.au/stop1</a>)</li> </ul> <p>Future students:</p> <ul style="list-style-type: none"> <li># Further information: <a href="http://science.unimelb.edu.au/">http://science.unimelb.edu.au/</a> (<a href="http://science.unimelb.edu.au/">http://science.unimelb.edu.au/</a>)</li> </ul>																	
<b>Course Overview:</b>	<p>The Master of Science (Biosciences) gives students the opportunity to undertake a substantive research project in one of the discipline areas available within the School of Biosciences: Ecology, Evolution and Environmental Science; Genetics, Genomics and Development; Plant Science.</p> <p>The program offers students the flexibility to develop their own interests by selection from a broad range of coursework subjects, including core discipline study and a professional skills component that provides high-level training in the areas of communication, business and science application. The Masters of Science (Biosciences) is a pathway to PhD study or to the workforce.</p>																	
<b>Learning Outcomes:</b>	<p>At the completion of this course, students should have gained:</p> <ul style="list-style-type: none"> <li># a detailed understanding of selected contemporary issues in biological sciences and the kinds of data generated by biological research programs;</li> <li># the ability to critically evaluate and synthesise complex information, problems, concepts and theories in the biological sciences;</li> <li># skills in planning, conducting and managing a laboratory or field-based research project, including effective skills in data collection, analysis and interpretation;</li> <li># the ability to communicate scientific concepts and results in oral and written form to specialist and non-specialist audiences.</li> </ul>																	
<b>Course Structure &amp; Available Subjects:</b>	<p>Students must complete 200 points including:</p> <ul style="list-style-type: none"> <li># Discipline Core subjects (25 pts)</li> <li># Discipline Elective subjects (25 – 37.5 pts)</li> <li># Professional Skill subjects (12.5 - 25 pts)</li> <li># Research Project, undertaken consecutively in sequence (125 pts)</li> </ul>																	
<b>Subject Options:</b>	<p><b>Discipline Core subjects (25 pts)</b></p> <p>One of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOL90002 Biometry</td> <td>June</td> <td>12.5</td> </tr> <tr> <td>MAST90044 Thinking and Reasoning with Data</td> <td>Semester 1</td> <td>12.5</td> </tr> </tbody> </table> <p>and one of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	BIOL90002 Biometry	June	12.5	MAST90044 Thinking and Reasoning with Data	Semester 1	12.5	Subject	Study Period Commencement:	Credit Points:			
Subject	Study Period Commencement:	Credit Points:																
BIOL90002 Biometry	June	12.5																
MAST90044 Thinking and Reasoning with Data	Semester 1	12.5																
Subject	Study Period Commencement:	Credit Points:																

ZOOL90007 Graduate Seminar in Ecology & Evolution	Semester 1	12.5
PHYS90008 Advanced Seminars in Physiology	Semester 1	12.5
GENE90020 Current Topics In Developmental Genetics	Semester 1	12.5
EVSC90019 Graduate Seminar: Environmental Science	Semester 2	12.5

### Discipline Elective subjects (25 – 37.5 pts)

Students will complete 25-37.5 pts of Discipline Elective subjects as approved by course coordinator.

A student may complete a third-year level subject if no suitable alternative is available at the graduate level. Students wishing to take a second-year subject or more than one third-year subject will need the approval of the MSc Coordinators and the Associate Dean.

### Professional Skills subjects (12.5 - 25 pts)

Students must complete:

Subject	Study Period Commencement:	Credit Points:
SCIE90013 Communication for Research Scientists	Semester 1	12.5

And may also complete one of:

Subject	Study Period Commencement:	Credit Points:
SCIE90012 Science Communication	Semester 2	12.5
MAST90045 Systems Modelling and Simulation	Semester 1	12.5
SCIE90005 Ethics and Responsibility in Science	Semester 1	12.5
BUSA90403 Business Tools: Money People & Processes	September	12.5
EDUC90839 Science in Schools	Semester 1, Semester 2	12.5
SCIE90017 Science and Technology Internship	Summer Term, Semester 1, Semester 2	12.5

### Research Project (125 pts undertaken consecutively in sequence)

The Research Project involves laboratory or field-based experimental research in an area of Ecology and Evolutionary Biology, Genetics, Genomics and Developmental Biology, and Plant Biology. The research projects cover a broad range of research from molecular to population and evolutionary biology in micro-organisms, insects, plants and animals.

The project will be based in the laboratory of an academic staff member in the School of BioSciences or an approved external supervisor, depending on the particular research project. The research project aims to develop a range of experimental and technical skills, a capacity to set goals and to design and plan experiments.

The project will be taken over four consecutive semesters and will begin on the Monday of semester of entry (semesters 1 or 2) and continue for up to 88 weeks until the end of the fourth semester, minus recreation leave of between 4 and 8 weeks (22 weeks per semester over the four semesters).

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 Research Project will be due for submission by the end of the formal examination period of the fourth semester of enrolment if an earlier date is not specified.

Students will first enrol in BioScience Research Projects A, and then progress through to B, C and D. Students may only progress through BioScience Research Project subjects upon successful completion of the earlier project component.

### BioSciences Research Project A

Subject	Study Period Commencement:	Credit Points:
BIOL90004 BioSciences Research Project A	Semester 1, Semester 2	12.5
BIOL90005 BioSciences Research Project A	Semester 1, Semester 2	25
BIOL90006 BioSciences Research Project A	Semester 1, Semester 2	37.5
BIOL90007 BioSciences Research Project A	Semester 1, Semester 2	50

### BioSciences Research Project B

Subject	Study Period Commencement:	Credit Points:
BIOL90008 BioSciences Research Project B	Semester 1, Semester 2	12.5
BIOL90009 BioSciences Research Project B	Semester 1, Semester 2	25
BIOL90010 BioSciences Research Project B	Semester 1, Semester 2	37.5
BIOL90011 BioSciences Research Project B	Semester 1, Semester 2	50

### BioSciences Research Project C

Subject	Study Period Commencement:	Credit Points:
BIOL90012 BioSciences Research Project C	Semester 1, Semester 2	12.5
BIOL90013 BioSciences Research Project C	Semester 1, Semester 2	25
BIOL90014 BioSciences Research Project C	Semester 1, Semester 2	37.5
BIOL90015 BioSciences Research Project C	Semester 1, Semester 2	50

### BioSciences Research Project C

Subject	Study Period Commencement:	Credit Points:
BIOL90016 BioSciences Research Project D	Semester 1, Semester 2	12.5
BIOL90017 BioSciences Research Project D	Semester 1, Semester 2	25
BIOL90018 BioSciences Research Project D	Semester 1, Semester 2	37.5
BIOL90019 BioSciences Research Project D	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 \(http://science.unimelb.edu.au/available-stream-requirements\)](http://science.unimelb.edu.au/available-stream-requirements) .

-

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 Academic Board [rules \(http://about.unimelb.edu.au/academicboard/resolutions\)](http://about.unimelb.edu.au/academicboard/resolutions) on the use of selection instruments.

	<p>Applicants are required to satisfy the university's <b>English language requirements for postgraduate courses</b> (<a href="http://www.policy.unimelb.edu.au/schedules/MPF1035-ScheduleA.pdf">http://www.policy.unimelb.edu.au/schedules/MPF1035-ScheduleA.pdf</a>) . 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.</p> <p>-</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li># 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.</li> <li># 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.</li> </ul>
<p><b>Core Participation Requirements:</b></p>	<p>&lt;p&gt;For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.&lt;/p&gt; &lt;p&gt;It is University 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 University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<p><b>Graduate Attributes:</b></p>	<p>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; and be able to initiate and implement constructive change in their communities, including professions and workplaces.</p>
<p><b>Generic Skills:</b></p>	<ul style="list-style-type: none"> <li># The ability to interact in a cross-cultural environment</li> <li># The ability to develop time and project management skills</li> <li># The ability to exercise critical judgement and operate in both a team environment and/or with a high level of personal autonomy and accountability</li> <li># the ability to exercise independent thinking and high-level problem solving skills</li> </ul>
<p><b>Links to further information:</b></p>	<p><a href="http://science.unimelb.edu.au/">http://science.unimelb.edu.au/</a></p>