

MC-SCIECO Master of Science (Ecosystem Science)

Year and Campus:	2016 - Parkville								
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 Stephen Livesley School of Ecosystem and Forest Sciences								
Contact:	<p>Currently enrolled students:</p> <ul style="list-style-type: none"> # General information: https://ask.unimelb.edu.au (https://ask.unimelb.edu.au) # Contact Stop 1 (http://students.unimelb.edu.au/stop1) <p>Future students:</p> <ul style="list-style-type: none"> # Further information: http://courses.science.unimelb.edu.au/study/degrees/master-of-science-ecosystem-science/overview (http://courses.science.unimelb.edu.au/study/degrees/master-of-science-ecosystem-science/overview) 								
Course Overview:	<p>The Master of Science (Ecosystem Science) is a stream of the Master of Science, which is a coursework degree that incorporates a substantial research project. This degree gives students the opportunity to undertake independent research in one or more fields of their choice within ecosystem science, plus a range of coursework subjects including a professional skills component, as a pathway to PhD study or the workforce.</p> <p>This degree provides students with essential skills, knowledge and research training through a 125-point research project in one of the discipline areas represented in the School of Ecosystem and Forest Sciences: these include conservation biology, ecology, ecophysiology, environmental psychology, environmental and landscape management, forest science, genetics, horticulture, hydrology and soil science.</p> <p>The Master of Science (Ecosystem Science) offers students the flexibility to develop their own interests by selecting from a wide range of coursework subjects, including discipline core subjects and a professional skills module that provides high-level training in the areas of science communication, data analysis and modelling, ethics and/or leadership in science.</p>								
Learning Outcomes:	<p>On successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> # Conduct independent research in one or more fields of ecosystem science; # Review and critically assess the scientific literature; # Formulate and evaluate hypotheses; # Design and conduct laboratory, field and/or social studies as appropriate to the field(s) of the research project; # Analyse and interpret data; # Clearly communicate scientific results in written and oral presentations to both specialist and non-specialist audiences. 								
Course Structure & Available Subjects:	<p>Students must complete a total of 200 credit points, comprised of:</p> <ul style="list-style-type: none"> # Discipline Core subjects (25 pts) # Discipline Elective subjects (25 pts) # Professional Skills subjects (25 pts) # Research Project undertaken consecutively in sequence (125 pts) 								
Subject Options:	<p>Discipline Core (25 points)</p> <p>One of:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Subject</th> <th style="width: 15%;">Study Period Commencement:</th> <th style="width: 15%;">Credit Points:</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:			
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AGRI90075 Research Methods For Life Sciences	Semester 1	12.5
MAST90008 Research Philosophies & Statistics	Semester 1	12.5
NRMT90003 Social Research Methods	Semester 1	12.5
BIOL90002 Biometry	June	12.5
MAST90007 Statistics for Research Workers	July	12.5

and one of

Subject	Study Period Commencement:	Credit Points:
EVSC90019 Graduate Seminar: Environmental Science	Semester 2	12.5
ZOOL90007 Graduate Seminar in Ecology & Evolution	Semester 1	12.5

Discipline Electives (25 points)

Students will select 25 points of discipline elective subjects appropriate to their research project, in consultation with their supervisor. These electives can be chosen from the level 9 subjects listed [here](#) ([../view/current/%21MC-SCIECO-SPC%2B1000](#)) .

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 (25 points)

Students will select two professional skills subjects (25 points). These may include:

Subject	Study Period Commencement:	Credit Points:
SCIE90013 Communication for Research Scientists	Semester 1	12.5
SCIE90012 Science Communication	Semester 2	12.5
SCIE90005 Ethics and Responsibility in Science	Semester 1	12.5
MAST90045 Systems Modelling and Simulation	Semester 1	12.5
EVSC90020 Environmental Modelling	Semester 1	12.5
EDUC90839 Science in Schools	Semester 1, Semester 2	12.5
MGMT90171 Leadership in Science	Semester 1	12.5

Research Project (125 points)

This project provides students with the opportunity to design and conduct independent research in one or more disciplines within the broad field of ecosystem science. Students will also develop skills in critically evaluating new knowledge within one or more scientific paradigms.

Specific research projects will depend upon the availability of appropriate expertise, but may address questions in conservation biology, ecology, ecophysiology, environmental psychology, environmental and landscape management, forest science, genetics, horticulture, hydrology and/or soil science.

Students will take responsibility for their own research project, including the design and management of field and/or laboratory experiments, where appropriate; collection, analysis and interpretation of data; and communication of research findings through oral and written presentations.

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 Research Project In Ecosystem Science A, and then progress through to B, C and D. Students may only progress through Research Project In Ecosystem Science subjects upon successful completion of the earlier project component.

Subject	Study Period Commencement:	Credit Points:
EVSC90027 Research Project In Ecosystem Science A	Semester 1, Semester 2	25
EVSC90028 Research Project In Ecosystem Science B	Semester 1, Semester 2	25
EVSC90029 Research Project In Ecosystem Science C	Semester 1, Semester 2	25
EVSC90030 Research Project In Ecosystem Science 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) .

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

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

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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:

<p>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.</p> <p>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: http://services.unimelb.edu.au/disability</p>

Graduate Attributes:

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.
Generic Skills:	<ul style="list-style-type: none"># The ability to manage time and projects# The ability to think independently and exercise high-level problem solving skills;# The ability to exercise critical judgement and operate in both a team environment and/or with a high level of personal autonomy and accountability# The ability to interact in a cross-cultural and interdisciplinary research environment
Links to further information:	http://ecosystemforest.unimelb.edu.au/