

## MC-SCIEPI Master of Science (Epidemiology)

<b>Year and Campus:</b>	2014 - 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.											
<b>Coordinator:</b>	Prof. Dallas English Email: <a href="mailto:d.english@unimelb.edu.au">d.english@unimelb.edu.au</a>											
<b>Contact:</b>	<p><b>Melbourne Graduate School of Science</b>  Faculty of Science  The University of Melbourne</p> <p>Tel: + 61 3 8344 6128  Fax: +61 3 8344 3351  Web: <a href="http://graduate.science.unimelb.edu.au">http://graduate.science.unimelb.edu.au</a> (<a href="http://graduate.science.unimelb.edu.au/">http://graduate.science.unimelb.edu.au/</a>)</p>											
<b>Course Overview:</b>	<p>The Master of Science (Epidemiology) is a coursework masters degree incorporating a substantial research project.</p> <p>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.</p>											
<b>Learning Outcomes:</b>	<p>On completion of this course, graduates are expected to have:</p> <ul style="list-style-type: none"> <li># a critical approach to the appraisal of research work;</li> <li># the skills to identify and prioritise issues in health research and practice;</li> <li># the capacity to apply epidemiological and biostatistical theory and methods in practice including the demonstrated ability to: <ul style="list-style-type: none"> <li>- Identify health issues and formulate research questions</li> <li>- Locate, synthesise and critically appraise epidemiological data, systems and research</li> <li>- Design and appraise epidemiological studies</li> <li>- Summarise and report epidemiological data</li> <li>- Apply standard methods of statistical analysis used in epidemiology</li> <li>- Interpret and apply the findings of epidemiological studies</li> <li>- Prepare grant applications and manuscripts and deliver effective oral presentations, and</li> </ul> </li> <li># developed business and communication skills that are relevant to the workplace.</li> </ul>											
<b>Course Structure &amp; Available Subjects:</b>	<p>Students undertaking the Master of Science - Epidemiology program will complete 200 points comprising:</p> <ul style="list-style-type: none"> <li># Discipline Core subjects (75 points);</li> <li># Discipline Elective subjects (25-50 points);</li> <li># Professional Skills subjects (25-50 points); and</li> <li># a Research Project (50 points).</li> </ul>											
<b>Subject Options:</b>	<p><b>Discipline Core subjects</b></p> <p>Students must take:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Subject</th> <th style="width: 20%;">Study Period Commencement:</th> <th style="width: 20%;">Credit Points:</th> </tr> </thead> <tbody> <tr> <td>POPH90014 Introduction to Epidemiology</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>POPH90013 Biostatistics</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	POPH90014 Introduction to Epidemiology	Semester 1	12.50	POPH90013 Biostatistics	Semester 1	12.50
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POPH90014 Introduction to Epidemiology	Semester 1	12.50										
POPH90013 Biostatistics	Semester 1	12.50										

POPH90144 Linear & Logistic Regression	July	12.50
POPH90145 Survival Analysis & Regression for Rates	September	12.50
POPH90242 Observational Epidemiology	July	12.50
POPH90243 Clinical Epidemiology	April	12.50

### Discipline Elective subjects

Students must complete two to four of the following subjects:

Subject	Study Period Commencement:	Credit Points:
POPH90112 Infectious Disease Epidemiology	Semester 1	12.50
POPH90111 Genetic Epidemiology	Semester 2	12.50
VETS50006 Epidemiology of Epidemics	April	12.50

### Other approved subjects.

Students may select approved subjects from those within the **Master of Public Health <https://handbook.unimelb.edu.au/view/2012/244CW> (../view/2012/244CW)** which includes subjects on health economics, health program evaluation, international health, sexual health, social science and women's health.

Students without a background in biology may select up to two approved relevant biology subjects.

### Professional Skills subjects

Students must take between two and four subjects from:

#### Business Skills

Subject	Study Period Commencement:	Credit Points:
BUSA90403 Business Tools: Money People & Processes	September	12.50
BUSA90471 Business Tools: The Market Environment	Semester 1	12.50

#### Communication Skills

Subject	Study Period Commencement:	Credit Points:
SCIE90012 Science Communication	Semester 2	12.50
SCIE90013 Communication for Research Scientists	Semester 1	12.50

#### Science skills

Subject	Study Period Commencement:	Credit Points:
SCIE90005 Ethics and Responsibility in Science	Semester 1	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50

### Epidemiology Research Project

Students will gain research experience in Epidemiology by completing a 50 point Research Project comprising:

- # a research proposal and protocol;
- # a scientific manuscript based on an analysis of an existing dataset or a meta analysis of existing studies; and
- # two oral presentations.

The research project will be taken over two consecutive semesters and will begin on the Monday of the third semester of course enrolment (semesters 1 or 2) (indicative for 2013: March 4 and July 29) 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 first oral presentation will occur at the end of the first semester of enrolment in the research project, with the first written component due at the end of the formal examination period of that semester. The second presentation will occur at the end of the final semester of research project enrolment (usually fourth semester), with the second written component due at the end of the formal examination period for that 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 50 points for the research project by the end of their course.

Students may need to enrol in a subject of the same credit point value more than once which is why there are multiple *Epidemiology Research Project* subjects of the same points value.

Subject	Study Period Commencement:	Credit Points:
POPH90214 Epidemiology Research Project	Semester 1, Semester 2	12.50
POPH90215 Epidemiology Research Project	Semester 1, Semester 2	25
POPH90216 Epidemiology Research Project	Semester 1, Semester 2	37.50

**Entry Requirements:**

An undergraduate degree with a major in any science discipline, with at least an H3 (65%) in the major, or equivalent.

Quotas may be applied and preference may be given to applicants with evidence of appropriate preparation or potential to undertake research. Entry is subject to the capacity of a department to provide adequate supervision in, and resources for, 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. Selection is not automatic and, in particular, is subject to competition.

**Core Participation Requirements:**

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 course are encouraged to discuss this with the relevant course coordinator and the Disability Liaison Unit.

**Further Study:**

The Master of Science offers a pathway to a PhD.

**Graduate Attributes:**

A) Knowledge Graduates of the Master of Science (Epidemiology) Degree will have acquired: 1. a body of knowledge that includes the understanding of recent developments in the discipline of Epidemiology 2. knowledge of research principles and methods applicable to the field of Epidemiology B) Skills Graduates of the Master of Science (Epidemiology) will have developed: 1. cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and scholarship 2. cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice 3. cognitive, technical and creative skills to generate and evaluate complex ideas and concepts at an abstract level 4. communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and scientific professional decisions to specialist and non-specialist audiences 5. technical and communication skills to design, evaluate, implement, analyse, theorise about developments that contribute to scientific professional practice or scholarship C) Application of knowledge and skills Graduates of the Master of Science (Epidemiology) will demonstrate the application of knowledge & skills: 1. with creativity and initiative to new situations in professional scientific practice and/or for further learning 2. with high level personal autonomy and accountability 3. to plan and execute a substantial research-based project

**Links to further  
information:**

<http://graduate.science.unimelb.edu.au/>