

# POP90014 Introduction to Epidemiology

| <b>Credit Points:</b>                      | 12.50  |                |                            |                |  |                  |       |  |                  |       |
|--|--|----------------|----------------------------|----------------|--|------------------|-------|--|------------------|-------|
| <b>Level:</b>                              | 9 (Graduate/Postgraduate)  |                |                            |                |  |                  |       |  |                  |       |
| <b>Dates &amp; Locations:</b>              | This subject is not offered in 2014. Classroom   |                |                            |                |  |                  |       |  |                  |       |
| <b>Time Commitment:</b>                    | Contact Hours: 24 hours: 2 hours per week for 12 weeks. Total Time Commitment: 120 hours   |                |                            |                |  |                  |       |  |                  |       |
| <b>Prerequisites:</b>                      | None   |                |                            |                |  |                  |       |  |                  |       |
| <b>Corequisites:</b>                       | None   |                |                            |                |  |                  |       |  |                  |       |
| <b>Recommended Background Knowledge:</b>   | None   |                |                            |                |  |                  |       |  |                  |       |
| <b>Non Allowed Subjects:</b>               | - <table border="1" data-bbox="387 712 1485 913"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>POP90142 Epidemiology &amp; Analytic Methods 1</td> <td>Not offered 2014</td> <td>12.50</td> </tr> <tr> <td>POP90143 Epidemiology &amp; Analytic Methods 2</td> <td>Not offered 2014</td> <td>12.50</td> </tr> </tbody> </table>   | Subject        | Study Period Commencement: | Credit Points: | POP90142 Epidemiology & Analytic Methods 1 | Not offered 2014 | 12.50 | POP90143 Epidemiology & Analytic Methods 2 | Not offered 2014 | 12.50 |
| Subject                                    | Study Period Commencement:   | Credit Points: |                            |                |  |                  |       |  |                  |       |
| POP90142 Epidemiology & Analytic Methods 1 | Not offered 2014   | 12.50          |                            |                |  |                  |       |  |                  |       |
| POP90143 Epidemiology & Analytic Methods 2 | Not offered 2014   | 12.50          |                            |                |  |                  |       |  |                  |       |
| <b>Core Participation Requirements:</b>    | For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website.   |                |                            |                |  |                  |       |  |                  |       |
| <b>Contact:</b>                            | <b><a href="mailto:melissar@unimelb.edu.au">melissar@unimelb.edu.au</a> (mailto:melissar@unimelb.edu.au)</b><br>OR<br>Academic Programs Office<br>Melbourne School of Population and Global Health<br>Tel: +61 3 8344 9339<br>Fax: +61 3 8344 0824<br>Email: <b><a href="mailto:sph-gradinfo@unimelb.edu.au">sph-gradinfo@unimelb.edu.au</a> (mailto:sph-gradinfo@unimelb.edu.au)</b>  |                |                            |                |  |                  |       |  |                  |       |
| <b>Subject Overview:</b>                   | <p>This subject is a core subject within the Master of Public Health, the Master of Epidemiology and the Master of Science (Epidemiology). Students should enrol in this subject early in their program of study.</p> <p>Epidemiology is the discipline of studying the distribution and determinants of disease in populations and is a fundamental science of public health. It plays major roles in the development and evaluation of the policy and practice of public health and health care. The subject covers measures of disease frequency, measures of association between disease and potential risk factors and measures of the impact of specific risk factors. The common experimental and observational study designs, and systematic reviews, and their relative strengths and weaknesses are discussed. The implications of common types of bias (selection bias, information bias, and confounding) are discussed, as are methods to minimise them. Causal inference is considered within a framework of critical appraisal of epidemiological evidence. The validity and performance of screening and diagnostic tests are considered. Current infectious diseases will also be examined by considering the principles of infectious disease transmission. Surveillance systems and the data produced from these systems will be analysed and examined in the framework of the public health decisions that are made on the basis these data.</p> |                |                            |                |  |                  |       |  |                  |       |
| <b>Learning Outcomes:</b>                  | At the completion of this subject, students are expected to be able to:<br># Calculate and interpret measures of disease frequency, association and impact.  |                |                            |                |  |                  |       |  |                  |       |

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|   | <ul style="list-style-type: none"> <li># Recognise confounding and the common forms of bias in epidemiological studies and discuss means to minimise their effects.</li> <li># Recognise the roles, strengths, weaknesses and ethical conduct of randomised controlled trials, systematic reviews and the common observational designs.</li> <li># Perform a basic critical appraisal of an epidemiological study.</li> <li># Calculate and interpret measures of screening and diagnostic test.</li> <li># Assess whether associations are likely to be causal or non-causal</li> <li># Describe the basic principles in infectious disease transmission and apply these to diseases of global public health concern</li> <li># Describe and compare the different types of surveillance systems. Locate and interpret the routine data collected in these systems.</li> </ul> |
| <b>Assessment:</b>                            | Two short-answer assignments of 750 words each, due in weeks 3 and 6 (15% each) One long answer assignment of 1200 words due in week 12 (23%) One group (3 students) assignment of 2500 words due in week 9 (17%) A 1.5 hour open-book examination to be held during the examination period (30%)   |
| <b>Prescribed Texts:</b>                      | Webb P, Bain C Essential Epidemiology, 2nd edition. Cambridge University Press 2010   |
| <b>Recommended Texts:</b>                     | None  |
| <b>Breadth Options:</b>                       | This subject is not available as a breadth subject.   |
| <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>Generic Skills:</b>                        | <p>Upon completion of this subject, students will have developed skills in:</p> <ul style="list-style-type: none"> <li>• Critical thinking and analysis</li> <li>• Finding, evaluating and using relevant information</li> <li>• Problem-solving</li> <li>• Written communication</li> <li>• Using computers</li> </ul>   |
| <b>Links to further information:</b>          | <a href="http://www.sph.unimelb.edu.au">http://www.sph.unimelb.edu.au</a>   |
| <b>Related Course(s):</b>                     | <p>Master of Adolescent Health &amp; Welfare<br/> Master of Adolescent Health &amp; Wellbeing<br/> Master of Epidemiology<br/> Master of Public Health<br/> Master of Science (Epidemiology)</p>  |
| <b>Related Majors/Minors/Specialisations:</b> | <p>Development<br/> Doctor of Medicine<br/> Energy Efficiency Modelling and Implementation<br/> Energy Efficiency Modelling and Implementation<br/> Epidemiology and Biostatistics<br/> Gender and Women's Health<br/> Global Health<br/> Health Economics and Economic Evaluation<br/> Health Program Evaluation<br/> Health Social Sciences<br/> Indigenous Health<br/> Integrated Water Catchment Management<br/> Integrated Water Catchment Management<br/> Primary Care<br/> Public Health<br/> Public Health<br/> Sexual Health<br/> Tailored Specialisation<br/> Tailored Specialisation<br/> Waste Management<br/> Waste Management</p>   |