

# POPH90146 Study Design in Epidemiology

<b>Credit Points:</b>	12.50																		
<b>Level:</b>	9 (Graduate/Postgraduate)																		
<b>Dates &amp; Locations:</b>	This subject is not offered in 2013. Block																		
<b>Time Commitment:</b>	Contact Hours: 30 hours: Subject runs from week 5 - 12 Total Time Commitment: 120 hours																		
<b>Prerequisites:</b>	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>POPH90014 Epidemiology</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>POPH90013 Biostatistics</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> <p>(both concurrently)</p> <p>OR</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>POPH90142 Epidemiology &amp; Analytic Methods 1</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>POPH90143 Epidemiology &amp; Analytic Methods 2</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	POPH90014 Epidemiology	Not offered 2013	12.50	POPH90013 Biostatistics	Not offered 2013	12.50	Subject	Study Period Commencement:	Credit Points:	POPH90142 Epidemiology & Analytic Methods 1	Not offered 2013	12.50	POPH90143 Epidemiology & Analytic Methods 2	Not offered 2013	12.50
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<b>Corequisites:</b>	None																		
<b>Recommended Background Knowledge:</b>	Students are expected to be familiar with the statistical package Stata																		
<b>Non Allowed Subjects:</b>	None																		
<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>	<p>Centre for Molecular, Environmental, Genetic and Analytic (MEGA) Epidemiology                      Melbourne School of Population Health                      Tel: +61 3 8344 0671                      Email: epi-info@unimelb.edu.au</p> <p>OR</p> <p>Academic Programs Office                      Melbourne School of Population Health                      Tel: +61 3 8344 9339                      Fax: +61 3 8344 0824                      Email: sph-gradinfo@unimelb.edu.au</p>																		
<b>Subject Overview:</b>	<p>This subject is a core subject within the Master of Epidemiology and the Master of Science (Epidemiology) and an elective within the Master of Public Health.</p> <p>In this subject a comprehensive examination of the main epidemiological study designs is undertaken. Methodological issues in study design will be illustrated using practical examples and critical appraisal. The following designs will be covered: trials, cohort studies, case-control studies and ecological studies. For these types of studies, issues relevant to designing new studies and appraising reported studies will be explored: choice of design, selection of participants, measurement of exposures and outcomes, effect modification, overview of analytical techniques and power calculations. Causal diagrams as a unifying means for identifying confounding and selection bias and interpreting associations will also be covered.</p>																		

<b>Objectives:</b>	<p>At the completion of this subject students should be able to:</p> <ul style="list-style-type: none"> <li># Design epidemiological studies with appropriate regard to choosing an appropriate design to answer a specific research question, minimising bias, achieving adequate sample size and feasibility</li> <li># Compare the relative strengths and weaknesses of the common epidemiological study designs</li> <li># Use causal diagrams to assist in distinguishing causal relations from non-causal associations and to plan statistical analyses</li> <li># Use published guidelines for the reporting of trials and observational studies to assist with designing and appraising studies</li> <li># Critically appraise epidemiological literature</li> <li># Calculate sample sizes for the most common types of epidemiological studies</li> <li># Differentiate internal and external validity and explain how achieving high internal validity might compromise external validity and vice versa</li> <li># Compare different methods of measurement used in epidemiological studies</li> </ul>
<b>Assessment:</b>	<p>Group preparation of questions on assigned weekly reading (approximately 300 words per group of 5 students) (10%) 500 word group summaries of responses to questions based on assigned weekly reading (10%) One 1000 word assignment, due in week 9 (20%) One 1500 word assignment, due in the first week of the examination period (30%) 1.5 hour open-book examination, held during the examination period (30%)</p>
<b>Prescribed Texts:</b>	None
<b>Recommended Texts:</b>	<p>Rothman KJ, Greenland S, Lash TL. Modern Epidemiology. (3rd edition) Lippincott-Raven: Philadelphia 2008</p> <p>Kelsey JL, Whittemore AS, Evans AS, Thompson WD. Methods in observational epidemiology. (2nd edition) Oxford: New York 1996</p> <p>Elwood M. Critical appraisal of epidemiological studies and clinical trials. (3rd edition) Oxford, Oxford 2007</p> <p>Kirkwood BR, Sterne JAC. Essential medical statistics. (2nd edition) Blackwell Science: Melbourne 2003</p> <p>Webb P, Bain C, Pirozzo S. Essential epidemiology. Cambridge: Melbourne 2005</p>
<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>At the completion of this subject, students will have developed skills in :</p> <ul style="list-style-type: none"> <li># Critical thinking and analysis</li> <li># Initiative, autonomy and organization</li> <li># Finding, evaluating and using relevant information</li> <li># Oral communication</li> <li># Working with others and in teams</li> </ul>
<b>Links to further information:</b>	<a href="http://www.sph.unimelb.edu.au">http://www.sph.unimelb.edu.au</a>
<b>Notes:</b>	
<b>Related Course(s):</b>	<p>Master of Epidemiology  Master of Public Health  Master of Science (Epidemiology)</p>
<b>Related Majors/Minors/Specialisations:</b>	<p>Epidemiology and Biostatistics  Gender and Women's Health  Health Economics and Economic Evaluation</p>

Public Health  
Sexual Health