

POPH90146 Study Design in Epidemiology

Credit Points:	12.50																		
Level:	9 (Graduate/Postgraduate)																		
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: March, Parkville - Taught on campus. Block																		
Time Commitment:	Contact Hours: 30 hours: Subject runs from week 5 - 12. First session will be 2 hours, remaining sessions 4 hours. Total Time Commitment: 120 hours																		
Prerequisites:	<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>Semester 1</td> <td>12.50</td> </tr> <tr> <td>POPH90013 Biostatistics</td> <td>Semester 1</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 & Analytic Methods 1</td> <td>Not offered 2012</td> <td>12.50</td> </tr> <tr> <td>POPH90143 Epidemiology & Analytic Methods 2</td> <td>Not offered 2012</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	POPH90014 Epidemiology	Semester 1	12.50	POPH90013 Biostatistics	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	POPH90142 Epidemiology & Analytic Methods 1	Not offered 2012	12.50	POPH90143 Epidemiology & Analytic Methods 2	Not offered 2012	12.50
Subject	Study Period Commencement:	Credit Points:																	
POPH90014 Epidemiology	Semester 1	12.50																	
POPH90013 Biostatistics	Semester 1	12.50																	
Subject	Study Period Commencement:	Credit Points:																	
POPH90142 Epidemiology & Analytic Methods 1	Not offered 2012	12.50																	
POPH90143 Epidemiology & Analytic Methods 2	Not offered 2012	12.50																	
Corequisites:	None																		
Recommended Background Knowledge:	Students are expected to be familiar with the statistical package Stata																		
Non Allowed Subjects:	None																		
Core Participation Requirements:	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.																		
Coordinator:	Prof Dallas English																		
Contact:	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 OR Academic Programs Office Melbourne School of Population Health Tel: +61 3 8344 9339 Fax: +61 3 8344 0824 Email: sph-gradinfo@unimelb.edu.au																		
Subject Overview:	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.																		

	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.
Objectives:	At the completion of this subject students should be able to: <ul style="list-style-type: none"> # 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 # Compare the relative strengths and weaknesses of the common epidemiological study designs # Use causal diagrams to assist in distinguishing causal relations from non-causal associations and to plan statistical analyses # Use published guidelines for the reporting of trials and observational studies to assist with designing and appraising studies # Critically appraise epidemiological literature # Calculate sample sizes for the most common types of epidemiological studies # Differentiate internal and external validity and explain how achieving high internal validity might compromise external validity and vice versa # Compare different methods of measurement used in epidemiological studies
Assessment:	Short written group summary of responses to questions based on assigned weekly reading and a group preparation of questions on assigned reading on one occasion during semester (approximately 500 words per group of 5 students each week) to be completed from week 6 to week 12 (20%); One 1000 word assignment due in week 9 (20%); One 1500 word assignment due in the first week of the examination period (30%); One 1.5 hour examination (administered by the School) held during the last week of the examination period (30%).
Prescribed Texts:	None
Recommended Texts:	Rothman KJ, Greenland S, Lash TL. Modern Epidemiology. (3rd edition) Lippincott-Raven: Philadelphia 2008 Kelsey JL, Whittemore AS, Evans AS, Thompson WD. Methods in observational epidemiology. (2nd edition) Oxford: New York 1996 Elwood M. Critical appraisal of epidemiological studies and clinical trials. (3rd edition) Oxford, Oxford 2007 Kirkwood BR, Sterne JAC. Essential medical statistics. (2nd edition) Blackwell Science: Melbourne 2003 Webb P, Bain C, Pirozzo S. Essential epidemiology. Cambridge: Melbourne 2005
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	At the completion of this subject, students will have developed skills in : <ul style="list-style-type: none"> # Critical thinking and analysis # Initiative, autonomy and organization # Finding, evaluating and using relevant information # Oral communication # Working with others and in teams
Links to further information:	http://www.sph.unimelb.edu.au

Notes:	
Related Course(s):	Master of Epidemiology Master of Public Health Master of Science (Epidemiology)
Related Majors/Minors/ Specialisations:	Epidemiology and Biostatistics Gender & Women's Health Health Economics & Economic Evaluation Public Health Sexual Health