

505-973 Study Design in Epidemiology

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: May, - Taught on campus. Block
Time Commitment:	Contact Hours: 5 contact days over semester weeks 8 to 12. Total Time Commitment: Students will be expected to undertake additional study averaging 80 hours in total through to end of assessment.
Prerequisites:	505-969 Epidemiology & Analytic Methods I, or equivalent 505-970 Epidemiology & Analytic Methods II, or equivalent or 505-102 Epidemiology and 505-101 Statistics
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
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>
Coordinator:	Prof Dallas English
Contact:	Centre for Molecular, Environmental, Genetic & Analytic Epidemiology School of Population Health
Subject Overview:	This subject covers the main epidemiological study designs in detail. 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, cross-sectional studies and ecological studies including selection of participants, measurement of exposure and outcome and overview of analytical techniques. Causal inference from epidemiological studies will also be covered.
Objectives:	On completion of this subject, students are expected to: <ul style="list-style-type: none"> # Understand the design principles of randomised controlled trials, cluster randomised trials, cohort studies, case-control studies, cross-sectional studies and ecological studies # Understand the relative strengths and weaknesses of each design # Understand how appropriate design, conduct and analysis of studies can minimise the effects of # selection bias, information bias, confounding and chance

	<ul style="list-style-type: none"> # Be able to identify the most appropriate study design to answer a specific research question # Be able to use published guidelines for the reporting of trials and observational studies # Be able to critique the design and analysis of published trials and observational studies # Know the importance of sample size in minimising the play of chance # Be able to calculate sample sizes for simple designs # Understand the factors that affect generalisability (external validity)
Assessment:	One 1500 word assignment due on the third contact day (25%), one assignment of up to 2,500 words (45%) due a few weeks after the teaching block and a 1.5 hour examination (30%) to be held in the University examination period.
Prescribed Texts:	None
Recommended Texts:	<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>
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:	<p>On completion of the subject, students are expected to:</p> <ul style="list-style-type: none"> # Have the critical thinking skills and sufficient understanding of epidemiological frameworks to recognise, describe and appraise research designs # Have an advanced understanding of the language and terminology used in epidemiological research # Develop skills in written communication including the description and appraisal of epidemiological study designs # Have developed effective oral presentation skills # Demonstrate the ability to plan and prioritise tasks set outside the contact period. # Develop inter-professional, team working skills
Links to further information:	http://www.sph.unimelb.edu.au
Notes:	This subject is a group 1 elective in the Master of Public Health.
Related Course(s):	<p>Master of Epidemiology</p> <p>Master of Public Health</p>