

505-970 Epidemiology & Analytic Methods 2

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: April, - Taught on campus. Block
Time Commitment:	Contact Hours: 4 hours/wk (weeks 7-12) Total Time Commitment: Students will be expected to undertake additional tasks, reading and preparation equivalent to a total additional time commitment of 80 to 90 hours.
Prerequisites:	505969 Epidemiology & Analytic Methods 1
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><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></p>
Coordinator:	Dr Anne Cust
Contact:	Centre for Molecular, Environmental, Genetic & Analytic Epidemiology School of Population Health
Subject Overview:	This subject consolidates the basic principles covered in "Epidemiology and Analytic Methods I" and develops a more substantial understanding of epidemiological research, and in particular of the key concepts of confounding, information bias, stratification and statistical inference. Students are introduced to analytic methods for comparison of two means and two proportions, to stratified analysis to control confounding and tests for effect modification using the Stata statistical software package.
Objectives:	<p>On completion of this subject, students are expected to:</p> <ul style="list-style-type: none"> # Be able to calculate, apply and interpret the fundamental measures of association used in epidemiology # Understand what confounding is and how to assess its presence # Be able to perform stratified analyses for the control of confounding # Know when and why standardisation is used and how to perform it # Understand what effect modification is and how to assess its presence # Be able to compute and interpret p-values and confidence intervals for comparing means and proportions # Understand how information bias arises and its effect on study validity # Be able to adjust measures of association for measurement error # Be able to use Stata for the manipulation and analysis of epidemiological datasets

Assessment:	One assignment of up to 1500 words (25%) due in week 9 or 10, a second assignment of up to 2,500 words (45%) due a few weeks after the end of coursework and a 1.5 hour examination (30%) to be held in the University examination period.
Prescribed Texts:	Webb P, Bain C & S Pirozzo Essential Epidemiology. Cambridge University Press: 2005, and BR Kirkwood and JAC Sterne, Essential Medical Statistics Second Edition, Blackwell Science, 2003
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 this subject, students are expected to:</p> <ul style="list-style-type: none"> # Develop basic problem solving and analytical skills # Develop the epidemiological frameworks to recognise and describe research methods # Become familiar with the language and terminology used in epidemiology # Develop skills in written communication including basic methods for statistical summary and description of epidemiological data # Develop the ability to plan and prioritise reading and assessment tasks <p>Special computer skills required: Students are expected to have experience using the Stata statistical package for data managements and basic descriptive statistics.</p>
Links to further information:	http://www.sph.unimelb.edu.au
Notes:	This subject, taken in conjunction with 505-969 Epidemiology and Analytic Methods I, replaces 505-101 and 505-102 as a core subject for the MPH Epidemiology and Biostatistics stream.
Related Course(s):	Master of Epidemiology Master of Public Health