

# POPH90142 Epidemiology & Analytic Methods 1

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2010, Parkville This subject commences in the following study period/s: March, Parkville - Taught on campus. Block
<b>Time Commitment:</b>	Contact Hours: 4 hours/wk over semester weeks1 to 6. 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.
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	None
<b>Coordinator:</b>	Prof Dallas English
<b>Contact:</b>	Centre for Molecular, Environmental, Genetic and Analytic (MEGA) Epidemiology 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
<b>Subject Overview:</b>	This subject provides an introduction to epidemiological and biostatistical concepts and methods, and their application in the assessment and management of health issues in a range of clinical and population-based settings. Methods are taught in an applied context to enhance core skills and develop an awareness of current issues in epidemiological research and practice. Subject content includes an introduction to disease causation and measures of population health, including disease burden and the distribution of disease determinants. This subject also introduces basic demography, including population structure and sampling methods, and introduces students to epidemiological research study designs. Key skills covered include how to set up datasets, tabulate, graph and explore health data and carry out basic descriptive analyses using the Stata statistical software package.
<b>Objectives:</b>	On completion of this subject, students are expected to: <ul style="list-style-type: none"> <li># Understand the principles of epidemiology</li> <li># Be familiar with the major study designs used in Epidemiology</li> <li># Understand the measures of frequency and association used in epidemiology</li> <li># Critically appraise measures of exposure and disease occurrence</li> <li># Be familiar with the concepts of bias and confounding</li> <li># Apply descriptive statistical methods</li> <li># Understand the concept of sampling variability and how it underpins statistical inference in the form of estimation (using confidence intervals)</li> <li># Competently interpret and report measures of disease distribution</li> </ul>

	<ul style="list-style-type: none"> <li># Be familiar with spreadsheets and basic methods for statistical summary and description of epidemiological data computed by hand and using Stata</li> <li># Summarise and interpret measures of disease distribution, effect and association</li> <li># Compute and interpret confidence intervals for means and proportions</li> </ul>
<b>Assessment:</b>	One assignment of up to 2000 words (30%) due week 5 One assignment of up to 2500 words (70%) due a few weeks after the end of coursework
<b>Prescribed Texts:</b>	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.
<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>	On completion of this subject, students are expected to: <ul style="list-style-type: none"> <li># Develop basic descriptive analytical skills</li> <li># Begin to develop the epidemiological frameworks to recognise and describe research methods</li> <li># Become familiar with the language and terminology used in epidemiology</li> <li># Develop skills in writing reports on health data</li> <li># Develop the ability to plan and prioritise reading and assessment tasks</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>	This subject, taken in conjunction with 505-970 Epidemiology and Analytic Methods II, replaces 505-101 and 505-102 as a core subject for the MPH Epidemiology and Biostatistics stream.
<b>Related Course(s):</b>	Master of Adolescent Health & Welfare Master of Environment Master of Environment Master of Epidemiology Master of Science (Epidemiology) Postgraduate Certificate in Environment Postgraduate Diploma in Environment
<b>Related Majors/Minors/Specialisations:</b>	Development Education Energy Efficiency Modelling and Implementation Energy Studies Epidemiology and Biostatistics Integrated Water Catchment Management Public Health Waste Management Women's Health