PUBH 7002 ANALYTIC APPROACHES IN EPIDEMIOLOGY

Credit Points 10

Legacy Code 401175

Coordinator Andrew Page (https://directory.westernsydney.edu.au/search/name/Andrew Page/)

Description This subject extends the basic principles of epidemiology introduced in 401076 'Introduction to Epidemiology' and equips students with practical analytical skills to design and conduct epidemiological studies. The subject considers the principle models of causation and analytical approaches to epidemiological study design and analysis. Students will use causal diagrams and evidence from the literature to develop analytic strategies for specific study designs, develop practical skills in calculating and interpreting measures of association and effect modification, and be introduced to principles and strategies for quantitative bias analysis.

School Medicine

Discipline Epidemiology

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 7 subject

Pre-requisite(s) PUBH 7016 OR
PUBH 7015

Restrictions

Students must be enrolled in a postgraduate program.

Assumed Knowledge

Introductory skills in epidemiology, including measures of disease frequency and association, epidemiologic study designs, and principles of bias and confounding.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Describe the principle models of causation in epidemiology
2. Apply causal criteria in appraising epidemiological evidence
3. Calculate and interpret epidemiological measures of association and effect measure modification
4. Compare and contrast conceptual approaches to the conduct and design of epidemiological studies
5. Develop appropriate analytic strategies to assess the strength of an association between a given exposure and outcome
6. Conduct quantitative bias analysis of an observed association, including assessment of unmeasured confounding, selection bias, and measurement bias

Subject Content

1. Models of causation in epidemiology
2. Epidemiological measures and concepts of interaction
3. Directed Acyclic Graphs (DAGs) to guide study design and statistical analysis
4. The design, conduct and analysis of studies in epidemiology
5. Analytic approaches to confounding, selection bias, and measurement bias

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Essay	1500 words	20	N	Individual	N
Essay	2500 words	30	N	Individual	N
Short Answer	2000 words	50	N	Individual	N

Teaching Periods

Spring (2025)

Online
Online
Subject Contact Andrew Page (https://directory.westernsydney.edu.au/search/name/Andrew Page/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PUBH7002_25-SPR_ON_2#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Andrew Page (https://directory.westernsydney.edu.au/search/name/Andrew Page/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PUBH7002_25-SPR_PS_1#subjects)