

# PUBH 7016 INTRODUCTION TO EPIDEMIOLOGY

**Credit Points** 10

**Legacy Code** 401076

**Coordinator** Dafna Merom ([https://directory.westernsydney.edu.au/search/name/Dafna Merom/](https://directory.westernsydney.edu.au/search/name/Dafna%20Merom/))

**Description** Epidemiology is the study of the distribution and determinants of disease and other health-related conditions in populations, and the application of this study to the control of health problems. Epidemiology encompasses a broad range of activities fundamental to the health sciences. The course is aimed to equip students with the ability to understand and critically appraise evidence from the health sciences used in the formulation of clinical interventions, assessments of population disease burden, and development of health policy. Students will be taught the fundamental concepts and principles of epidemiology and will be given the opportunities through exercises and tutorials to apply these concepts and principles to case studies from current epidemiological research and practice.

**School** Health Sciences

**Discipline** Epidemiology

**Student Contribution Band** HECS Band 2 10cp

**Level** Postgraduate Coursework Level 7 subject

**Equivalent Subjects** PUBH 7015

## Restrictions

Students must be enrolled in a postgraduate program

## Assumed Knowledge

High school mathematics (arithmetic, formulas and algebra, reading graphs).

## Learning Outcomes

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

1. Calculate and interpret measures of morbidity and mortality, and measures of association (including relative and attributable risk).
2. Discuss the strengths and weaknesses of the main types of epidemiological study design
3. Assess confounding or effect measure modification in epidemiological data
4. Assess the likely impact of bias and confounding on measures of association
5. Relate concepts of confounding, effect measure modification, and mediation within a putative causal pathway for a given health outcome
6. Critically appraise an observed association between an exposure and outcome using a hierarchy of evidence
7. Discuss the epidemiologic rationale underlying population and individual disease prevention strategies
8. Discuss the inter-relationships between host, agent, and environment in infectious disease epidemiology

9. Summarise the requirements of population-based screening and public health surveillance
10. Summarise current debates and challenges in epidemiology

## Subject Content

1. Measures of disease frequency
2. Measures of association
3. Study designs used in epidemiological research
4. Error in epidemiological studies: bias and confounding
5. Distinguishing causation from association
6. Disease prevention
7. Population screening
8. Epidemics, outbreaks and clusters
9. Public health surveillance
10. Current debates and challenges in epidemiology

## 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.

Item	Length	Percent	Threshold	Individual/Group Task
Numerical Problem Solving	300 words	20	N	Individual
Critical Review	500 words	30	N	Individual
Essay	2,500 words	50	N	Individual

## Prescribed Texts

- Webb, P, Bain, C. & Page, A. (2020). Essential Epidemiology: An Introduction for Students and Health Professionals (4th ed.). Cambridge University Press. Edition Cambridge University Press: Cambridge. ISBN 9781107529151
- Webb P, Bain C, Page A. (2017). Essential Epidemiology. An Introduction for Students and Health Professionals, 3rd Edition Cambridge University Press: Cambridge. ISBN 9781107529151
- Webb, P, Bain, C. & Page, A. (2020). Essential Epidemiology: An Introduction for Students and Health Professionals (4th ed.). Cambridge University Press. Edition Cambridge University Press: Cambridge. ISBN 9781107529151

## Teaching Periods

## Autumn

### Online

#### Online

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View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=PUBH7016\\_22-AUT\\_ON\\_O#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=PUBH7016_22-AUT_ON_O#subjects))

### Parramatta - Victoria Rd

#### Day

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View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=PUBH7016\\_22-AUT\\_PS\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=PUBH7016_22-AUT_PS_D#subjects))

## Sydney City Campus - Term 2

### Sydney City

#### Day

**Subject Contact** Andrey Zheluk ([https://directory.westernsydney.edu.au/search/name/Andrey Zheluk/](https://directory.westernsydney.edu.au/search/name/Andrey_Zheluk/))

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## Spring

### Online

#### Online

**Subject Contact** Dafna Merom ([https://directory.westernsydney.edu.au/search/name/Dafna Merom/](https://directory.westernsydney.edu.au/search/name/Dafna_Merom/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=PUBH7016\\_22-SPR\\_ON\\_O#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=PUBH7016_22-SPR_ON_O#subjects))

## Parramatta - Victoria Rd

#### Day

**Subject Contact** Dafna Merom ([https://directory.westernsydney.edu.au/search/name/Dafna Merom/](https://directory.westernsydney.edu.au/search/name/Dafna_Merom/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=PUBH7016\\_22-SPR\\_PS\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=PUBH7016_22-SPR_PS_D#subjects))