

PUBH 2020 EPIDEMIOLOGY FOR PUBLIC HEALTH

Credit Points 10

Coordinator Shirin Mumu (<https://directory.westernsydney.edu.au/search/name/Shirin Mumu/>)

Description Epidemiology is the foundation of public health and as outlined by the Council of Academic Public Health Institutions Australasia (CAPHIA). In their national core competency framework, epidemiology and biostatistics are key competencies for all public health graduates. The current subject will build on prior biostatistical knowledge to equip students with foundation skills that are essential for public health practice. The subject will provide public health students with a foundational understanding of the distribution and determinants of diseases or disorders within populations and how to apply this knowledge in the public health setting.

School Health Sciences

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 Undergraduate Level 2 subject

Pre-requisite(s) HLTH 2022 Biostatistics in Health

Equivalent Subjects PUBH 2010 (300872) Epidemiology

Learning Outcomes

After successful completion of this Unit, students will be able to:

1. Explain the scope of epidemiology and its application to public health
2. Calculate and interpret measures of health and disease and their application for population health indicators
3. Determine available information for descriptive epidemiology and their potential errors
4. Interpret graphs and other means of portraying epidemiological data
5. Calculate and interpret measures of risks and their application for public health policy and practice
6. Discuss principles of surveillance systems, analysis of their use and contribution to public health.
7. Describe potential errors in different data collection methods
8. Utilise core research methods to support evidence-based public health practice.

Subject Content

1. Why and how epidemiology is applied in public health (review of public health milestones and sub-disciplines)
2. Knowledge regarding the following calculations essential to public health practice: Prevalence, incidence, relationship between prevalence and incidence; understanding summary measures of population health indicators such as mortality indicators, life-expectancy at birth, at age 60, years of life lost (YLL) and disability-adjusted life years (DALY)
3. Understanding of populations at risk: where, when, who and age-standardised measures for comparisons within populations over time and between countries.

4. Understanding and use of sources of data for descriptive and analytical epidemiology including the use of vital statistics, special registries, data visualisation for public health.
5. Gain an understanding around the interpretation of epidemiological outputs such as graphs and other means of portraying epidemiological data
6. Calculation and application of measures of association to assess disease occurrence by potential risk factors
7. Understand principles of surveillance systems for both communicable and non-communicable disease and the use of effective surveillance, surveillance indicators in public health practice.
8. Understand potential errors in different data collection methods such as sample errors, selection bias, information error and confounding factors
9. Gain an understanding of core research methods to support evidence-based public health practice

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
Quiz	Online quizzes x 2	30	N	Individual	N
Case Study	1000 words	30	N	Individual	N
Essay	1500 words	40	N	Individual	N

Teaching Periods

Autumn (2025)

Online

Online

Subject Contact Shirin Mumu (<https://directory.westernsydney.edu.au/search/name/Shirin Mumu/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PUBH2020_25-AUT_ON_2#subjects)

Sydney City Campus - Term 1 (2025)

Sydney City

On-site

Subject Contact Liz Atteya (<https://directory.westernsydney.edu.au/search/name/Liz Atteya/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PUBH2020_25-SC1_SC_1#subjects)

Sydney City Campus - Term 3 (2025)

Sydney City

On-site

Subject Contact Liz Atteya (<https://directory.westernsydney.edu.au/search/name/Liz Atteya/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=PUBH2020_25-SC3_SC_1#subjects)