UNSW Course Outline

PHCM9794 Foundations of Epidemiology - 2024

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General Course Information

Course Code : PHCM9794
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : Faculty of Medicine and Health
Academic Unit : School of Population Health
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate, Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

An epidemiological approach to the collection, analysis, and interpretation of data is the foundation for public health practice. An understanding of epidemiological principles and methods is fundamental to the design, analysis, and critical evaluation of public health studies.

This course has been designed to develop your essential knowledge and skills in the epidemiological principles of descriptive and analytical methodologies used to answer population health questions. You will have the opportunity to calculate and interpret measures used to describe the distribution, determinants, and impact of disease in populations. A major focus of the course is the design principles and critical appraisal of common intervention and observational studies and identification of study limitations and sources of bias, essential for the translation of quality evidence into public health practice and policy.

You are encouraged to enroll in this subject early in your program. If you have concerns about numeracy it is advisable to consider enrolling in the course as an internal student.

Course Aims

This course aims to equip you with the core epidemiological skills by enabling you to apply an epidemiological approach to the study of disease and illness. You will learn to critically appraise, interpret and assess the quality of evidence of the most common study designs.

Relationship to Other Courses

Assistance with progression checking:

If you are unsure how this course fits within your program, you can seek guidance on optimising your program structure from staff at the Nucleus Student Hub.

- Progression plans for UNSW Medicine and Health programs can be found on the UNSW Medicine & Health website.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : To identify the three main types of research questions in epidemiology: to describe population health, predict population health, and to understand the causes of population health and disease
CLO2 : Describe epidemiological study designs and identify their strengths and limitations
CLO3 : Calculate and interpret measures of disease occurrence, measures of association between exposures and disease, and measures of public health impact.
CLO4 : Identify the types of selection and measurement bias and confounding in epidemiological studies and discuss methods to reduce their impact on study validity
CLO5 : Critically appraise epidemiological studies, demonstrating the ability to assess study design, interpret study methods, results and conclusions for error and bias.

Course Learning Outcomes	Assessment Item
CLO1 : To identify the three main types of research questions in epidemiology: to describe population health, predict population health, and to understand the causes of population health and disease	• Quiz • Mid-term assignment • End of term assignment
CLO2 : Describe epidemiological study designs and identify their strengths and limitations	• Mid-term assignment • End of term assignment
CLO3 : Calculate and interpret measures of disease occurrence, measures of association between exposures and disease, and measures of public health impact.	• Quiz • Mid-term assignment
CLO4 : Identify the types of selection and measurement bias and confounding in epidemiological studies and discuss methods to reduce their impact on study validity	• Quiz • End of term assignment • Mid-term assignment
CLO5 : Critically appraise epidemiological studies, demonstrating the ability to assess study design, interpret study methods, results and conclusions for error and bias.	• End of term assignment • Mid-term assignment

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Learning and Teaching in this course

All course materials and course announcements are provided on the course learning management system, Moodle.

By accessing and using the ICT resources provided by UNSW, you are agreeing to abide by the 'Acceptable Use of UNSW ICT Resources' policy particularly on respect for intellectual property and copyright, legal and ethical use of ICT resources and security and privacy.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Quiz Assessment Format: Individual	20%	Start Date: 07/06/2024 12:00 PM Due Date: 21/06/2024 12:00 PM Post Date: 21/06/2024 12:05 PM
Mid-term assignment Assessment Format: Individual Short Extension: Yes (2 days)	40%	Start Date: 03/07/2024 12:00 PM Due Date: 17/07/2024 12:00 PM Post Date: 31/07/2024 12:00 PM
End of term assignment Assessment Format: Individual Short Extension: Yes (2 days)	40%	Start Date: 24/07/2024 12:00 PM Due Date: 07/08/2024 12:00 PM Post Date: 21/08/2024 12:00 PM

Assessment Details

Quiz

Assessment Overview

This assessment comprises two multiple choice quizzes due before the census.

The quizzes are designed to evaluate your understanding of foundational concepts and calculations.

Feedback will be provided in the form of worked answers at the end of each quiz period.

Course Learning Outcomes

- CLO1 : To identify the three main types of research questions in epidemiology: to describe population health, predict population health, and to understand the causes of population health and disease
- CLO3 : Calculate and interpret measures of disease occurrence, measures of association between exposures and disease, and measures of public health impact.
- CLO4 : Identify the types of selection and measurement bias and confounding in epidemiological studies and discuss methods to reduce their impact on study validity

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

There are two separate quizzes with separate due date for this course. Refer to the course Moodle page for submission information.

Assessment information

Use of Generative Artificial Intelligence (AI) in the assessment

UNSW Pro-Vice Chancellor Education and Student Experience (PVCESE) provides guidance on the use of generative Artificial Intelligence in assessments.

For this assessment task, you may use AI-based software for simple editing assistance. You may not use any functions that generate or paraphrase passages of text, whether based on your own work or not.

Please note that your submission will be passed through an AI-generated text detection tool. If your marker has concerns that your answer contains passages of AI-generated text you may be asked to explain your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

Assignment submission Turnitin type

This is not a Turnitin assignment

Mid-term assignment

Assessment Overview

This is an individual assessment task due mid-term consisting of short-answer questions. You will be required to solve problems, interpret epidemiological measures, and critically appraise epidemiological studies.

Feedback will be provided in the form of solutions and ideal answers two weeks after the submission deadline.

Course Learning Outcomes

- CLO1 : To identify the three main types of research questions in epidemiology: to describe population health, predict population health, and to understand the causes of population health and disease
- CLO2 : Describe epidemiological study designs and identify their strengths and limitations
- CLO3 : Calculate and interpret measures of disease occurrence, measures of association between exposures and disease, and measures of public health impact.
- CLO4 : Identify the types of selection and measurement bias and confounding in epidemiological studies and discuss methods to reduce their impact on study validity
- CLO5 : Critically appraise epidemiological studies, demonstrating the ability to assess study design, interpret study methods, results and conclusions for error and bias.

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to the course Moodle page for submission information

Assessment information

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Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

End of term assignment

Assessment Overview

This is an individual assessment task due at the end of term consisting of short-answer questions. You will be required to solve problems, interpret epidemiological measures, and critically appraise epidemiological studies.

Feedback, provided in the form of solutions and ideal answers, will be given two weeks after the submission deadline.

Course Learning Outcomes

- CLO1 : To identify the three main types of research questions in epidemiology: to describe population health, predict population health, and to understand the causes of population health and disease
- CLO2 : Describe epidemiological study designs and identify their strengths and limitations

- CLO4 : Identify the types of selection and measurement bias and confounding in epidemiological studies and discuss methods to reduce their impact on study validity
- CLO5 : Critically appraise epidemiological studies, demonstrating the ability to assess study design, interpret study methods, results and conclusions for error and bias.

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Moodle page.

Submission notes

Refer to the course Moodle page for submission information.

Assessment information

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Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course Moodle page.

For student information on results, grades, and guides to assessment see: https://student.unsw.edu.au/assessment

Turnitin

All written assessment tasks in courses in the School of Population Health use Turnitin. Turnitin

is a similarity and generative AI detection software that enables assignments to be checked against the submitted assignments of other students using Turnitin, as well as the internet. If you are unfamiliar with the Turnitin software, a demonstration can be found at: https://student.unsw.edu.au/turnitin

Originality and Generative AI reports

In School of Population Health courses, access to the originality report of your submission through Turnitin is available to you. Students do not have access to the Generative AI report.

In School of Population Health courses, you are permitted to resubmit until the assignment due date (each file uploaded overwrites the previous version). This will help you in self-reviewing and revising your submission until the due date. **No resubmissions will be allowed after the due date and time of the assignment.** Therefore, draft assignments submitted in this way will be regarded as the final version at the due date if you have not uploaded a subsequent, finalised version. **IMPORTANT**: there are delays in the availability of subsequent Originality reports. For more details, see https://www.student.unsw.edu.au/turnitin

Grading and feedback

You will be provided with feedback on your assignment via Moodle. You will be marked according to the marking assessment criteria listed for that specific assessment task. The aim of any academic feedback for an assessment task is not only to grade your work. Importantly, it is also to help you to identify your strengths and weaknesses, and how you can improve and progress in your studies and professional abilities.

In addition to feedback, you will receive a mark that reflects the overall quality of the work you have submitted across the marking criteria. The marking criteria for assessments in this course are provided on Moodle.

Please note these grading criteria are:

- Not intended to be a **rigid formula** for interpreting your result. The descriptive criteria for each grade provides the basis for consistent standards within and across our courses while still embracing academic judgement on how well you have achieved the standard required.
- Applied to **each assessment** task within a course. That is, the grading policy is used with each assessment task specified for a course. Your final grade for a course is dependent on the combined sum of the grades across the number of specified assessment tasks.
- Based on a **criterion-referenced assessment.** That is grades are awarded on how well a student meets the standard required for a particular assessment task, not on how well they

do compared to other students in the course.

Feedback on assessment and review of results

If you believe the mark you've received for an assessment task doesn't reflect your performance you should first check you have grounds to seek a review: https://student.unsw.edu.au/results

In the first instance, you should discuss your performance with your Course Convenor. In your communication, you should clearly outline the reasons you are seeking clarification and do so against the marking criteria for the assessment.

Students may also formally apply to have their results reviewed. An application, which includes a justification for the review must be submitted through The Nucleus (https://student.unsw.edu.au/results) **within 5 days** of receiving the result. A review of results may result in an increase or decrease in marks.

Grading Basis

Standard

Requirements to pass course

In order to pass this course students must:

- Achieve a composite grade of at least 50 out of 100
- Meet any additional requirements specified in the assessment details section and on Moodle

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Module	Module 1. Epidemiological measures 1: the occurrence and distribution of disease
Week 2 : 3 June - 9 June	Module	Module 2. Epidemiological measures 2: study designs & comparative risks and associations
Week 3 : 10 June - 16 June	Module	Module 3. Introduction to critical appraisal of epidemiological studies
Week 4 : 17 June - 23 June	Module	Module 4. Study validity 1: Selection bias
Week 5 : 24 June - 30 June	Module	Module 5. Study validity 2: Measurement error
Week 6 : 1 July - 7 July	Module	Module 6. Study validity 3: Confounding, effect modification and age-standardisation
Week 7 : 8 July - 14 July	Module	Module 7. Design and appraisal: intervention and cohort studies
Week 8 : 15 July - 21 July	Module	Module 8. Design and appraisal: case control, cross-sectional and ecological studies
Week 9 : 22 July - 28 July	Module	Module 9. Public health prevention programs
Week 10 : 29 July - 4 August	Module	Module 10. Evidence synthesis to inform policy and practice decision-making

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

The times and locations of classes can be found on myUNSW under Class Timetable.

Students enrolled in online courses should also refer to Moodle as some classes are not centrally timetabled (e.g., workshops) and will not appear on the timetable website.

The expected engagement for all UNSW 6UOC courses is 150 hours per term. This includes lectures, tutorials, readings, and completion of assessments.

Course Resources

Prescribed Resources

Learning resources for this course consist of the following and are available on Moodle:

1. Course notes

2. Course readings (available on Leganto)

3. Lectures recordings and slides

4. Relevant course resources for each Module

5. Other (as required)

Recommended Resources

Recommended texts – There are many excellent epidemiology textbooks. For this course we recommend the following epidemiology textbook and have aligned appropriate chapters to the Modules in this course (see individual module course notes). This textbook has recently been updated, and we recommend the 4th edition, which is available as hard copy only from the UNSW library. However, the 3rd edition is available as an e-book through the UNSW library (linked below). Unless otherwise specified in the course, either edition is suitable as module reading.

- Webb, Bain and Page (2020) Essential epidemiology 4th edition. Cambridge University Press,

United Kingdom.

UNSW Library Print book: https://primoa.library.unsw.edu.au/permalink/f/1gq3lal/UNSW_ALMA21278835340001731

- Webb, Bain and Page (2017) Essential epidemiology 3rd edition. Cambridge University Press, United Kingdom.

UNSW Library e-book: https://primoa.library.unsw.edu.au/permalink/f/1gq3lal/UNSW_ALMA51230745780001731

We recommend you purchase your own copy of the 4th edition of this textbook. It is available as an e-book or hard copy. The links to the library and the UNSW bookshop are below.

- Print: https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9781108766807
- Digital: https://unswbookshop.vitalsource.com/products/-v9781108935487

Additional Costs

There are no additional costs associated with this course.

Course Evaluation and Development

Student feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

We use student feedback from myExperience surveys to develop and make improvements to the course each year. We do this by identifying areas of the course that require development from both the rating responses and written comments. Please spare a few minutes to complete the myExperience surveys for this course posted at the top of the Moodle page at the end of term.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Dana Bliuc			02 92958275	By appointment, requests via email	Yes	Yes
	Christine Linhart			02 93853136	By appointment, requests via email	No	No

Other Useful Information

Academic Information

As a student of UNSW Medicine & Health you are expected to familiarise yourself with the contents of this course outline and the UNSW Student Code and policies and procedures related to your studies.

Student Code of Conduct

Throughout your time studying at UNSW Medicine & Health, you share a responsibility with us for maintaining a safe, harmonious and tolerant University environment. This includes within the courses you undertake during your degree and your interactions with the UNSW community, both on campus and online.

The UNSW Student Code of Conduct website provides a framework for the standard of conduct expected of UNSW students with respect to both academic integrity and your responsibility as a UNSW citizen.

Where the University believes a student may have breached the code, the University may take disciplinary action in accordance with the Student Misconduct Procedure.

The Student Conduct and Integrity Office provides further resources to assist you to understand your conduct obligations as a student at UNSW.

Academic Honesty and Plagarism

Academic integrity

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to the principle of academic integrity, and ethical scholarship of learning is fundamental to your success at UNSW Medicine & Health.

Plagiarism, contract cheating, and inappropriate use of generative AI undermine academic integrity and are not tolerated at UNSW. For more information see the Academic Integrity and Plagiarism toolkit.

In addition to the information you are required to review in your ELISE training, UNSW Medicine &

Health strongly recommends that you complete the Working with Academic Integrity module before submitting your first assessment task.

Referencing

Referencing is a way of acknowledging the sources of information that you use to research your assignments. Preferred referencing styles vary among UNSW Medicine & Health disciplines, so check your course Learning Management System (e.g. Moodle or Open Learning) page for information on preferred referencing styles.

For further information on referencing support and styles, see the Current Student Referencing page.

Academic misconduct and plagiarism

At UNSW, academic misconduct is managed in accordance with the Student Misconduct Procedure. Allegations of plagiarism are generally handled according to the UNSW Plagiarism Management Procedure. Plagiarism is defined in the UNSW Plagiarism Policy and is not tolerated at UNSW.

Use of Generative AI and other tools in your assessment

UNSW has provided guiding statements for the use of Generative AI in assessments. This will differ, depending on the individual assessment task, your course requirements, and the course stage within your program.

Your course convenor will outline if and how you can use Generative AI in each your assessment tasks. Options for the use of generative AI include: (1) no assistance; (2) simple editing assistance; (3) planning assistance; and (4) full assistance with attribution.

You may be required to submit the original generative AI responses, or drafts of your original work. Inappropriate use of generative AI is considered academic misconduct.

See your course Moodle (or Open Learning) page for the full instructions for individual assessment tasks for your course.

Submission of Assessment Tasks

Special Consideration

In cases where illness, misadventure or other circumstances beyond your control will prevent you from submitting your assessment by the due date and you require an extension, you need to formally apply for Special Consideration through myUNSW.

UNSW has a **Fit to Sit/Submit rule**, which means that by sitting or submitting an assessment on the scheduled assessment date, you are declaring that you are fit to do so and cannot later apply for Special Consideration.

Timed online assessment tasks

If you experience a technical or connection problem during a timed online assessment, such as a timed quiz, you can apply for Special Consideration. To be eligible to apply you need to contact the Course Convenor and advise them of the issue immediately. You will need to submit an application for Special Consideration immediately, and upload screenshots, error messages or other evidence of the technical issue as supporting documentation. Additional information can be found on: https://student.unsw.edu.au/special-consideration

Examinations

Information about the conduct of examinations in your course is provided on your course Moodle page.

Other assessment tasks

Late submission of assessment tasks

UNSW has standard late submission penalties as outlined in the UNSW Assessment Implementation Procedure, with no permitted variation. All late assignments (unless extension or exemption previously agreed) will be penalised by 5% of the maximum mark per calendar day (including Saturday, Sunday and public holidays).

Late submissions penalties are capped at five calendar days (120 hours). This means that a student is not permitted to submit an assessment more than 5 calendar days (120 hours) after the due date for that assessment (unless extension or exemption previously agreed).

Failure to complete an assessment task

You are expected to complete all assessment tasks for your courses. In some courses, there will be a minimum pass mark required on a specific assessment task (a “hurdle task”) due to the

need to assure clinical competency.

Where a hurdle task is applicable, additional information is provided in the assessment information on your course Moodle page.

Feedback on assessments

Feedback on your performance in assessment tasks will be provided to you in a timely manner. For assessment tasks completed within the teaching period of a course, other than a final assessment, feedback will be provided within 10 working days of submission, under normal circumstances.

Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Any variation from the above information that is specific to an assessment task will be clearly indicated in the course and assessment information provided to you on your course Moodle (or Open Learning) page.

Faculty-specific Information

Additional support for students

The university offers a wide range of support services that are available for students. Here are some links for you to explore.

- The Current Students Gateway: https://student.unsw.edu.au
- Academic Skills and Support: https://student.unsw.edu.au/academic-skills
- Student support: https://www.student.unsw.edu.au/support
- Student Wellbeing, Health and Safety: https://student.unsw.edu.au/wellbeing

Mind Smart Guides are a series of mental health self-help resources designed to give you the psychological flexibility, resilience and self-management skills you need to thrive at university and at work.

- Mind Smart Guides: https://student.unsw.edu.au/mindsmart
- Equitable Learning Services: https://student.unsw.edu.au/els
- Guide to studying online: https://www.student.unsw.edu.au/online-study

Most courses in UNSW Medicine & Health use Moodle as your Learning Management System. Guidance for using UNSW Moodle can be found on the Current Student page. Difficulties with Moodle should be logged with the IT Service Centre.

- Moodle Support: https://student.unsw.edu.au/moodle-support

The IT Service Desk is your central point of contact for assistance and support with remote and on-campus study.

- UNSW IT Service Centre: https://www.myit.unsw.edu.au/services/students

Course evaluation and development

At UNSW Medicine & Health, students take an active role in designing their courses and their overall student experience. We regularly seek feedback from students, and continuous improvements are made based on your input. Towards the end of the term, you will be asked to participate in the myExperience survey, which serves as a source of evaluative feedback from students. Your input to this quality enhancement process is valuable in helping us meet your learning needs and deliver an effective and enriching learning experience. Student responses are carefully considered, and the action taken to enhance educational quality is documented in the myFeedback Matters section of your Moodle (or Open Learning) course page.

School-specific Information

Additional Resources

Additional resources are available on the SPH website: https://sph.med.unsw.edu.au/current-students/student-resources

Subject guides

Use these guides as a quick and easy pathway to locating resources in your subject area. These

excellent guides bring together the core web and print resources in one place and provide a one click portal into the online resources.

UNSW Library Subject Guides: http://subjectguides.library.unsw.edu.au/subjectguides

Public Health Subject Guide: http://subjectguides.library.unsw.edu.au/publichealth

Recording of lectures, tutorials and other teaching activities

Lectures, tutorials and other teaching activities *may* be recorded. Students should be advised that they are consenting to the recording by their enrolment in the course or participation in the activity. The purpose of audio and video recordings is to enhance the student experience by supporting engaged learning in an online teaching environment and ensure equitable access to all course resources for our students. If you have concerns about accessing course recordings, or being recorded, please contact the Course Convenor.

School Contact Information

School guidelines on contacting staff:

Course questions

All questions related to course content should be posted on Moodle or as directed by your Course Convenor.

In cases where email communication with course convenors is necessary, we kindly request the following:

- Use your official email address for any correspondence with teaching staff.
- We expect a high standard of communication. All communication should avoid using short-hand or texting language.
- Include your full name, student ID, and your course code and name in all communication.

Our course convenors are expected to respond to emails during standard working hours of Monday to Friday, 9am-5pm.

Administrative questions

If you have an administrative question about your program of study at the School please submit your enquiry online at UNSW Ask Us.

Complaints and appeals

Student complaints and appeals: https://student.unsw.edu.au/complaints

If you have any grievances about your studies, we invite you to address these initially to the Course Convenor. If the response does not meet your expectations, you may then contact the School Grievance Officer, A/Prof Timothy Dobbins (t.dobbins@unsw.edu.au).