

PUB210 Concepts of Epidemiology

School: School of Health - Public Health

2024 | Semester 2

UniSC Sunshine Coast

**BLENDED
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

Please go to usc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

This course explores the science of epidemiology which is about understanding the distribution, patterns, determinants of health and wellbeing, and disease in populations. Knowledge gained from epidemiology is used to inform research, policy and practice decisions to protect and promote the health and wellbeing of the population. You will develop your knowledge about epidemiological concepts and study designs, and apply epidemiology skills to current and emerging public health issues.

1.2. How will this course be delivered?

| ACTIVITY | HOURS | BEGINNING WEEK | FREQUENCY |
|--|-------|----------------|-----------|
| BLENDED LEARNING | | | |
| Learning materials – 2 hours of independent structured learning materials | 2hrs | Week 1 | 13 times |
| Tutorial/Workshop 1 – 2-hour workshop - on-campus | 2hrs | Week 1 | 13 times |

1.3. Course Topics

Introduction to epidemiological concepts

Measuring and interpreting disease occurrence and associations between exposures and disease

Epidemiological study designs, bias, confounding and concepts of causation

Appraising and interpreting epidemiological literature

Applying epidemiological concepts to health surveillance, outbreaks, and disease prevention activities

2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

| COURSE LEARNING OUTCOMES | GRADUATE QUALITIES MAPPING | PROFESSIONAL STANDARD MAPPING * |
|---|--|--|
| On successful completion of this course, you should be able to... | Completing these tasks successfully will contribute to you becoming... | International Union for Health Promotion and Education |
| 1 Calculate and interpret epidemiological measures of occurrence and association used to assess public health impact. | Empowered | B.3, B.8, 6.3, 6.4, 9.4 |
| 2 Identify and critique epidemiological study designs. | Creative and critical thinker Ethical | B.3, B.8, 6.4, 9.1 |
| 3 Appraise and communicate epidemiological evidence to inform health policy decision making. | Creative and critical thinker | 4.1, 4.2 |

* Competencies by Professional Body

| CODE | COMPETENCY |
|--|---|
| INTERNATIONAL UNION FOR HEALTH PROMOTION AND EDUCATION | |
| B.3 | The determinants of health and their implications for health promotion action |
| B.8 | The evidence base and research methods, including qualitative and quantitative methods, required to inform and evaluate health promotion action |
| 4.1 | Use effective communication skills including written, verbal, nonverbal, and listening skills |
| 4.2 | Use information technology and other media to receive and disseminate health promotion information |
| 6.3 | Collect, review and appraise relevant data, information and literature to inform health promotion action |
| 6.4 | Identify the determinants of health which impact on health promotion action |
| 9.1 | Identify and use appropriate health promotion evaluation tools and research methods |
| 9.4 | Use research and evidence-based strategies to inform practice |

5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Not applicable

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

Weekly in-class practice activities will be used to provide you with early feedback to support your preparation for all tasks.

6.3. Assessment tasks

| DELIVERY MODE | TASK NO. | ASSESSMENT PRODUCT | INDIVIDUAL OR GROUP | WEIGHTING % | WHAT IS THE DURATION / LENGTH? | WHEN SHOULD I SUBMIT? | WHERE SHOULD I SUBMIT IT? |
|---------------|----------|--|---------------------|-------------|---|-----------------------|--|
| All | 1 | Artefact - Technical and Scientific | Individual | 20% | 10 multiple choice; 5 short answer questions | Week 6 | Online Submission |
| All | 2 | Artefact - Professional, and Written Piece | Individual | 40% | Written critique (completion of a template) | Week 10 | Online Assignment Submission with plagiarism check |
| All | 3 | Artefact - Professional, and Written Piece | Individual | 40% | Written professional brief (completion of a template) | Week 13 | Online Assignment Submission with plagiarism check |

All - Assessment Task 1: Multiple choice and short answer questions

| GOAL: | To apply your skills in epidemiology to deconstruct extracts, assess epidemiological research designs, perform calculations related to disease occurrence and measures of association, and identify foundational epidemiological concepts. | | | | | | | | | | | | |
|------------------------|---|---------------------------|--|---------------------------|---|---|-----|---|---|---|---|--|-----|
| PRODUCT: | Artefact - Technical and Scientific | | | | | | | | | | | | |
| FORMAT: | Multiple choice and short answer questions related to the application of core epidemiological concepts. Further details on how to approach and complete the multiple choice and short answer questions will be available on Canvas. | | | | | | | | | | | | |
| CRITERIA: | <table border="1"> <thead> <tr> <th>No.</th> <th></th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Application of epidemiological concepts, including the strengths and weaknesses of different study designs.</td> <td>1 2</td> </tr> <tr> <td>2</td> <td>Accuracy of routine epidemiological calculations.</td> <td>1</td> </tr> <tr> <td>3</td> <td>Accuracy of interpretation of epidemiological data and study findings.</td> <td>2 3</td> </tr> </tbody> </table> | No. | | Learning Outcome assessed | 1 | Application of epidemiological concepts, including the strengths and weaknesses of different study designs. | 1 2 | 2 | Accuracy of routine epidemiological calculations. | 1 | 3 | Accuracy of interpretation of epidemiological data and study findings. | 2 3 |
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| 1 | Application of epidemiological concepts, including the strengths and weaknesses of different study designs. | 1 2 | | | | | | | | | | | |
| 2 | Accuracy of routine epidemiological calculations. | 1 | | | | | | | | | | | |
| 3 | Accuracy of interpretation of epidemiological data and study findings. | 2 3 | | | | | | | | | | | |
| GENERIC SKILLS: | Problem solving, Information literacy | | | | | | | | | | | | |

All - Assessment Task 2: Article critique

| | | | |
|------------------------|---|---|----------------------------------|
| GOAL: | To apply your knowledge and skills in epidemiology to critique an epidemiological study published in the peer-reviewed literature. | | |
| PRODUCT: | Artefact - Professional, and Written Piece | | |
| FORMAT: | Individually, you will use the knowledge and skills gained throughout the course to critically assess an allocated published peer-reviewed epidemiological article. The critical appraisal checklist and template, as well as further details on how to approach and complete the article critique will be available on Canvas. | | |
| CRITERIA: | No. | | Learning Outcome assessed |
| | 1 | Accuracy of the identification of the epidemiological characteristics of a study. | 1 2 |
| | 2 | Application of epidemiological concepts to assess and interpret epidemiological studies including the effects of potential bias, confounding and error. | 2 |
| | 3 | Quality of communication of the findings of an article critique. | 3 |
| GENERIC SKILLS: | Communication, Problem solving, Information literacy | | |

All - Assessment Task 3: Policy brief

| | | | |
|------------------------|---|---|----------------------------------|
| GOAL: | To demonstrate your knowledge and skills in professional communication of epidemiological findings to inform evidence-based public health approaches. | | |
| PRODUCT: | Artefact - Professional, and Written Piece | | |
| FORMAT: | Individually you will develop a written professional policy brief demonstrating your understanding of epidemiological concepts and evidence to ensure public health action is based on the best available evidence. The written professional brief template and further details on how to approach and complete the policy brief will be available on Canvas. | | |
| CRITERIA: | No. | | Learning Outcome assessed |
| | 1 | Application of epidemiological principles to develop the brief. | 1 3 |
| | 2 | Integration of epidemiological concepts and data to develop the argument. | 2 3 |
| | 3 | Appropriateness of recommendations made. | 3 |
| | 4 | Adherence to policy brief genre. | 3 |
| GENERIC SKILLS: | Communication, Problem solving | | |

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

| REQUIRED? | AUTHOR | YEAR | TITLE | EDITION | PUBLISHER |
|-------------|----------------------------------|------|---|---------|----------------------------|
| Recommended | Webb, P., Bain, C., and Page, A. | 2020 | Essential epidemiology: An introduction for students and health professionals | 4 | Cambridge University Press |

8.2. Specific requirements

Not applicable

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.

- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.

- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email safe@usc.edu.au.

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email studentwellbeing@usc.edu.au.

10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email AccessAbility@usc.edu.au or call 07 5430 2890.

10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.10. General Enquiries

In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au