# MEDI7101

# Epidemiology and Biostatistics for Research

Session 1, In person-scheduled-weekday, North Ryde 2024

*Macquarie Medical School*

# Contents

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# General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
Admission to MRes

Corequisites

Co-badged status

Unit description
This unit provides an introduction to scientific inquiry and evaluation of evidence fundamental to research and practice with particular reference to public health. You will be introduced to epidemiology, biostatistics, and qualitative methods, via modules designed with an integrated approach to learning in mind. You will learn about study design, analysis, and interpretation. You will also gain an appreciation of the importance of evidence to the field of health research and apply techniques directly to your field of research interest.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

# Learning Outcomes

On successful completion of this unit, you will be able to:

**ULO1:** Calculate and interpret the epidemiologic measures of occurrence; and association between exposure and disease and measures of public health impact

**ULO2:** Characterise analytic epidemiology study designs and describe the measures associated with these studies.

**ULO3:** Explain epidemiological and statistical concepts commonly used in public health.

**ULO4:** Organise, summarise, analyse and interpret data relevant to public health.

# Assessment Tasks

| Name | Weighting | Hurdle | Due |
|---|---|---|---|
| Introductory concepts | 10% | No | Week 4 |
| Critical appraisal | 40% | No | Week 10 |
| Final Exam | 50% | No | Exam week TBA |

## Introductory concepts

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 9 hours
Due: **Week 4**
Weighting: **10%**

Online quiz to examine understanding of introductions epidemiological terms and concepts.

On successful completion you will be able to:

- Calculate and interpret the epidemiologic measures of occurrence; and association between exposure and disease and measures of public health impact
- Explain epidemiological and statistical concepts commonly used in public health.
- Organise, summarise, analyse and interpret data relevant to public health.

## Critical appraisal

Assessment Type [1]: Case study/analysis
Indicative Time on Task [2]: 34 hours
Due: **Week 10**
Weighting: **40%**

You will choose an epidemiological article relevant to their area of research interest. You will use the knowledge of study designs and their strengths and limitations, to critique their chosen study using an appropriate critical appraisal framework.

On successful completion you will be able to:

- Calculate and interpret the epidemiologic measures of occurrence; and association between exposure and disease and measures of public health impact
- Characterise analytic epidemiology study designs and describe the measures associated with these studies.
- Explain epidemiological and statistical concepts commonly used in public health.

# Final Exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 35 hours
Due: **Exam week TBA**
Weighting: **50%**

Open book exam which will cover epidemiological and statistical concepts covered in the course.

On successful completion you will be able to:

- Calculate and interpret the epidemiologic measures of occurrence; and association between exposure and disease and measures of public health impact
- Characterise analytic epidemiology study designs and describe the measures associated with these studies.
- Explain epidemiological and statistical concepts commonly used in public health.
- Organise, summarise, analyse and interpret data relevant to public health.

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

# Delivery and Resources

The pripary mode of delivery for this unit is through in class (face to face) lectures and tutorials. You will also engage in a range of online learning activities, including and completion of reading materials.  Details can be found on the iLearn site for this unit.

Recommended Readings

You are expected to have access to the the text book Webb, Bain and Page: Essential epidemiology

Technology Used

Active participation in the learning activities throughout the unit will require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library. You will frequently be required to bring a laptop to your tutorial class.

# Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

## Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

# Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

# Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

## The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

# Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

# Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

# IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Unit information based on version 2024.01R of the Handbook