



MEDI7101

Epidemiology and Biostatistics for Research

Session 1, In person-scheduled-weekday, North Ryde 2022

Medicine, Health and Human Sciences Faculty level units

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	5
<u>Policies and Procedures</u>	6

Disclaimer

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General Information

Unit convenor and teaching staff Janaki Amin janaki.amin@mq.edu.au
Credit points 10
Prerequisites Admission to MRes
Corequisites
Co-badged status HSYP8101
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.

General Assessment Information

All final grades are determined by a grading committee, in accordance with the Macquarie University [Assessment Policy](#), and are not the sole responsibility of the Unit Convenor. Students will be awarded a final grade, which corresponds to the grade descriptors specified in the [Assessment Procedure](#) (clause 128).

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements including professionalism, and achieve a final mark of 50 or better.

Further details for each assessment task will be available on iLearn.

Extensions for Assessment tasks

Applications for assessment task extensions must be submitted via www.ask.mq.edu.au. For further details please refer to the Disruption to Studies Policy available at <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/disruption-to-studies>.

Late Submission of Work

All assignments which are officially received after the due date, and where no extension has been granted by the course convenor or tutor, will incur a deduction of 5% per day penalty including weekends and public holidays. If you submit the assessment task 10 days or more beyond the due date, without an approved extension, you will be awarded a maximum of 50% of the overall assessment marks.

For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
Friday 14th	Saturday 15th	1	5%	75%	70%
Friday 14th	Monday 17th	3	15%	75%	60%
Friday 14th	Tuesday 25th	11	55%	75%	50% (capped)

Assessment Tasks

Name	Weighting	Hurdle	Due
Introductory concepts	10%	No	Week 4
Critical appraisal	40%	No	Week 11

Name	Weighting	Hurdle	Due
<u>Final Exam</u>	50%	No	Exam period

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 11**

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 period**

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.

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

This unit will be taught in one hour face to face lectures and 2 hour tutorials. These teaching sessions will be supplemented by readings from the required textbook and additional resources as indicated. Each week you will find the learning objectives and any preparation activities required to be completed prior to your tutorial session on this iLearn site. This course requires **ongoing attention** as concepts will build on each other. You are expected to **keep up to date** with your lecture and tutorial materials

Unit Organisation

This is a ten credit point unit run over a 13 week session. Further information is available via the online Learning Management System (LMS) iLearn <http://ilearn.mq.edu>.

Lecture slides and recordings

Lecture slides will be made available for all face to face lectures, as will any ECHO360 recordings of these sessions. ECHO360 recordings can be found on the right-hand side. At times lectures may fail to capture we therefore recommend that you come to all lecture and tutorial sessions.

Readings

The readings for each week will be listed in ilearn using the Leganto system. Leganto is the

reading list management system, which you can access through your iLearn unit. More information on Leganto is available here: <http://libguides.mq.edu.au/leganto>

Readings marked as 'required' are essential for completion in the marked week. Some readings may be included that are marked as 'recommended' or 'secondary sources', these are additional materials that may be of interest to you. Please use these at your discretion.

Additional Resources

At times we will provide you with additional resources to supplement your learning. These items will vary in nature from readings, website links, articles in the media to perhaps the occasional video. Our aim is to take your learning beyond the basic and help you build your knowledge throughout this degree.

Technology and equipment

Off-campus

To study optimally when off campus you will need to have access to a reliable internet connection to retrieve unit information and at times to join interactive session (eg zoom) or submit assessment tasks via iLearn.

On-campus

Teaching rooms are equipped with state of art audio-visual and ICT equipment including internet connection, high quality video cameras and multiple LCD screens.

Where learning activities (such as tutorials and other small group learning activities) are offered on-campus an online version will be available for those students who choose to continue their studies online (selected via eStudent).

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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 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.