

# **MEDI2900**

# **Introduction to Medical Research**

Session 3, In person-scheduled-weekday, North Ryde 2022

Macquarie Medical School

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#### Disclaimer

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### **General Information**

Unit convenor and teaching staff Unit convenor Mark Butlin mark.butlin@mq.edu.au Contact via See top of iLearn page for options to contact. Level 1, 75 Talavera Road, Macquarie University By appointment.

Laboratory Teaching Lead Julie Atkin julie.atkin@mq.edu.au Contact via E-mail Level 1, 75 Talavera Road, Macquarie University By appointment.

Credit points 10

Prerequisites 40cp at 1000 level or above

Corequisites

Co-badged status

Unit description

Through this unit, you will begin to develop the required knowledge and skills to participate in basic research in the field of health or biomedical science. You will learn about the importance of appropriate research notetaking and record keeping. Building upon this, you will learn about widely used research methodology and gain an appreciation for the translational capacity of medical research. You will be provided the opportunity to develop your skills in research planning and communication, in preparation for future studies that integrate research within your learning.

#### Important Academic Dates

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

### Learning Outcomes

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

**ULO1:** Recognise the basic research methods to prepare and commence research

**ULO2:** Apply basic methods to perform research data analysis, data collection, and data storage.

**ULO3:** Demonstrate and compare different communication types used throughout a research network.

### **General Assessment Information**

Grade descriptors and other information concerning grading are contained in the Macquarie Univ ersity Assessment Policy.

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 and a mark, which must correspond to the grade descriptors specified in the Assessment Procedure (clause 128).

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

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

#### Late Submissions

Unless a Special Consideration request has been submitted and approved, a 5% penalty (OF THE TOTAL POSSIBLE MARK) will be applied each day a written assessment is not submitted, up to the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.

For example:

Number of days (hours) late	Total Possible Marks	Deduction	Raw mark	Final mark
1 day (1-24 hours)	100	5	75	70
2 days (24-48 hours)	100	10	75	65
3 days (48-72 hours)	100	15	75	60
7 days (144-168 hours)	100	35	75	40
>7 days (>168 hours)	100	—	75	0

Late submission of time sensitive tasks, such as timetabled tests/exams, scheduled performance assessments/presentations, scheduled practical assessments/labs, will be addressed by the unit convenor in a special consideration application.

### Special Consideration

If you are unable to complete an assessment task on or by the specified date due to circumstances that are unexpected, unavoidable, significantly disruptive and beyond your control, you may apply for special consideration in accordance with the <u>Special Consideration Policy</u>. Applications for special consideration must be supported by appropriate evidence and submitted via <u>ask.mq.edu.au</u>.

### **Assessment Tasks**

Name	Weighting	Hurdle	Due
Medical Research Study	50%	No	Part A: Saturday Week 2. Part B: Sunday Week 5
Statistical Data Analysis	30%	No	Sunday Week 3
Assessment of simulated medical research	20%	No	Part A: Wk 4. Part B: in class Wk 5. Part C: Wed, Wk 6.

### Medical Research Study

Assessment Type 1: Report Indicative Time on Task 2: 30 hours Due: **Part A: Saturday Week 2. Part B: Sunday Week 5** Weighting: **50%** 

Using a hypothetical research project you will provide a report on the study design and study results and findings.

On successful completion you will be able to:

- Recognise the basic research methods to prepare and commence research
- Apply basic methods to perform research data analysis, data collection, and data storage.
- Demonstrate and compare different communication types used throughout a research network.

### Statistical Data Analysis

Assessment Type <sup>1</sup>: Quantitative analysis task Indicative Time on Task <sup>2</sup>: 18 hours Due: **Sunday Week 3**  Weighting: 30%

You will be provided with a data set in which to perform statistical and descriptive analysis.

On successful completion you will be able to:

- Apply basic methods to perform research data analysis, data collection, and data storage.
- Demonstrate and compare different communication types used throughout a research network.

#### Assessment of simulated medical research

Assessment Type 1: Work-integrated task Indicative Time on Task 2: 12 hours Due: Part A: Wk 4. Part B: in class Wk 5. Part C: Wed, Wk 6. Weighting: 20%

A structured assessment combining demonstration of practical research skills and a written task based on the practical activities conducted in the simulated medical research experience component of the unit.

On successful completion you will be able to:

- · Recognise the basic research methods to prepare and commence research
- Apply basic methods to perform research data analysis, data collection, and data storage.
- Demonstrate and compare different communication types used throughout a research network.

<sup>1</sup> 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.

<sup>2</sup> 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**

### Weeks 1 to 4 Remote learning

The first 4 weeks of this unit will be delivered on-line. You will be able to complete this period of the unit off-campus if you wish. The weekly material includes on-line, self-paced activities and participation in a weekly workshop held on-line.

### Week 5 Compulsory on-campus

Week 5 comprises an intensive practical-based week. On-campus attendance is required as there is in-class assessment as part of Assessment Task 3, and the on-campus activities are critical in the completion of Assessment Task 3.

## **Technology Used**

Active participation in the learning activities throughout the unit will generally require students to have access to a tablet, laptop or similar device, preferably with webcam and microphone. Students who do not own a laptop computer may borrow one from the University library.

### **Recommended Readings**

Unit readings are available via the University library website through Leganto.

# **Unit Schedule**

- Week 1: Study design in medical research
- Week 2: Statistics in medical research
- Week 3: Data and scientific presentation
- Week 4: Medical research network and communication
- Week 5: Medical research in practice (practical experience)

### **Policies and Procedures**

Macquarie University policies and procedures are accessible from Policy Central (https://policie s.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 <u>Student Policies</u> (<u>https://students.mq.edu.au/su</u> <u>pport/study/policies</u>). 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 <u>Policy Central</u> (<u>https://policies.mq.e</u> <u>du.au</u>) and use the <u>search tool</u>.

#### **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 <u>eStudent</u>, (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 <u>eStudent</u>. For more information visit <u>ask.mq.edu.au</u> or if you are a Global MBA student contact globalmba.support@mq.edu.au

#### Academic Integrity

At Macquarie, we believe <u>academic integrity</u> – 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 <u>online writing an</u> d maths support, academic skills development and wellbeing consultations.

#### Student Support

Macquarie University provides a range of support services for students. For details, visit <u>http://stu</u> dents.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 <u>http://www.mq.edu.au/about\_us/</u>offices\_and\_units/information\_technology/help/.

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

### **Inclusion and Diversity**

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone.

### Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses.

As part of developing professionalism, students are expected to attend all small group interactive sessions including clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures); however, you are encouraged to avoid relying upon such material as they

do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success, and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive at all learning activities on time, and if you are unavoidably detained, please join the activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.