



# BIOL1620

## Foundations in Medical Sciences

Session 1, In person-scheduled-weekday, North Ryde 2025

*School of Natural Sciences*

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## General Information

Unit convenor and teaching staff

Fleur Ponton

[fleur.ponton@mq.edu.au](mailto:fleur.ponton@mq.edu.au)

Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit provides foundation skills required for working in medical and life sciences laboratories. Skills will be learnt in the context of current global health issues including antimicrobial resistance and malaria, health reporters such as immunity and haematology and approaches to disease diagnosis. Students will acquire hands-on laboratory skills, including aseptic technique for microbiology, use of microscopes and spectrophotometers, extraction of bioactive molecules, and data collection and analyses. Students will hear from medical and life science researchers who will provide context for the weekly skills topics and information on the diverse employment areas in medical science. Students also begin to acquire skills in interpreting and citing scientific literature and developing a foundation in communication skills and scientific writing.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Good Health and Well Being.

## 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:** Articulate and practice appropriate health, safety and ethical standards relevant to medical science

**ULO2:** Describe global health issues of significance to society today using appropriate scientific terminology

**ULO3:** Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic technique, imagery and measurement, labelling, diagnostic sample preparation)

**ULO4:** Describe and practice scientific methods from generating hypotheses and predictions to designing experimental procedures, and undertaking data collection

**ULO5:** Develop competency in working individually or as a team.

## General Assessment Information

To pass this unit you need to achieve a total mark equal to or greater than 50% across all assessments.

### Participation

We strongly encourage all students to actively participate in all learning activities. Regular engagement is crucial for your success in this unit, as these activities provide opportunities to deepen your understanding of the material, collaborate with peers, and receive valuable feedback from instructors, to assist in completing the unit assessments. Your active participation not only enhances your own learning experience but also contributes to a vibrant and dynamic learning environment for everyone.

### Late assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is 11:55 pm. A 1-hour grace period will be provided to students who experience a technical concern.

For any late submission of time- sensitive tasks, such as scheduled tests/ exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for Special Consideration.

### Special consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. Written Assessments: If you experience circumstances or events that affect your ability to complete the written assessments in this unit on time, please inform the convenor and submit a Special Consideration request through <https://students.mq.edu.au/study/assessment-exams/special-consideration>

## Assessment Tasks

Name	Weighting	Hurdle	Due
Mid-term exam: Skills Assessment	30%	No	Week 7

Name	Weighting	Hurdle	Due
<a href="#">Infographic</a>	30%	No	Due at the latest on 11/05/2025 at 11:59pm
<a href="#">Final exam: skills and knowledge assessment</a>	40%	No	Week 13

## Mid-term exam: Skills Assessment

Assessment Type [1](#): Examination

Indicative Time on Task [2](#): 20 hours

Due: **Week 7**

Weighting: **30%**

Students will be assessed on their skills they have acquired during the first laboratory sessions of the unit. The examination will take place in the laboratory.

On successful completion you will be able to:

- Articulate and practice appropriate health, safety and ethical standards relevant to medical science
- Describe global health issues of significance to society today using appropriate scientific terminology
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic technique, imagery and measurement, labelling, diagnostic sample preparation)
- Describe and practice scientific methods from generating hypotheses and predictions to designing experimental procedures, and undertaking data collection

## Infographic

Assessment Type [1](#): Poster

Indicative Time on Task [2](#): 20 hours

Due: **Due at the latest on 11/05/2025 at 11:59pm**

Weighting: **30%**

You will be asked to select a topic in Medical Sciences and design an individual (1 per student) infographic reflecting the research in this topic.

On successful completion you will be able to:

- Describe global health issues of significance to society today using appropriate scientific terminology
- Describe and practice scientific methods from generating hypotheses and predictions to designing experimental procedures, and undertaking data collection
- Develop competency in working individually or as a team.

## Final exam: skills and knowledge assessment

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 33 hours

Due: **Week 13**

Weighting: **40%**

The final exam consists of two components, a quiz covering issues and topics taught during the session and a practice-based reflective section where you will be tested on your lab and Excel skills. The examination will take place in the laboratory.

On successful completion you will be able to:

- Articulate and practice appropriate health, safety and ethical standards relevant to medical science
- Describe global health issues of significance to society today using appropriate scientific terminology
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic technique, imagery and measurement, labelling, diagnostic sample preparation)
- Describe and practice scientific methods from generating hypotheses and predictions to designing experimental procedures, and undertaking data collection

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<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

Welcome to BIOL1620!

### Week 1 classes and content

Week 1 will focus on better understanding what is lab safety, scientific honesty and how the unit works. Read and do the required tasks on iLearn under Week 1 tab. DO NOT COME to the laboratory practical, all what you need to do is ONLINE. The lecture for week 1 will also be available on iLearn, under Week 1 tab. This lecture will describe the activities of the unit and how to navigate the iLearn page of the unit.

### Methods of communication

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLean.

## 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 [connect.mq.edu.au](http://connect.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/>

### Academic Success

[Academic Success](#) 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 the [Service Connect Portal](#), 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/](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.

## Changes from Previous Offering

To enable students more time to focus on learning, understanding and reflecting on the content of our unit we have revised the assessment structure as follows. There are now only three assessments: a skills assessment, an infographic and a final exam. Although no marks are associated with attendance, all activities provide you with key content designed to help you understand content and complete the assessment.

The unit will be now graded.

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Unit information based on version 2025.05 of the [Handbook](#)