



# BIOL1620

## Foundation in Life Sciences

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

*School of Natural Sciences*

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## General Information

Unit convenor and teaching staff

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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.

## 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 in the laboratory and tutorials

## General Assessment Information

- Competence with skills, data analyses and interpretation, and preparation of scientific reports are the main forms of assessment in BIOL1620.
  - Attendance at practical sessions is a required to pass this unit.
  - Detailed information for each assessment and marking criteria are outlined under the assessment tabs in iLearn.
  - All assessments are submitted via Turnitin which evaluates your assessment against that of other students in this years course and previous years, literature, websites etc. Turnitin then provides a similarity score that is used as a measure of plagiarism (see Academic Integrity policy in tab below).
  - Assessments (including quizzes) are your own work.
  - Online quizzes, in-class activities, or scheduled tests and exam must be undertaken at the time indicated in the unit guide. Should these activities be missed due to illness or misadventure, students may apply for Special Consideration. All other assessments must be submitted on their due time and date. Should these assessments be missed due to illness or misadventure, students should apply for Special Consideration.
- Assessments for this unit will be done in class, hence late submissions will not be accepted.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Participation in pracs</u>	0%	No	Week 1-12
<u>Mid-term quiz test</u>	15%	No	Week 7
<u>Mid-term practice-based exam</u>	30%	No	Week 7
<u>Lab Prep Activities</u>	10%	No	Week 1-12

Name	Weighting	Hurdle	Due
<a href="#">Final quiz test</a>	15%	No	Week 13
<a href="#">Final practice-based exam</a>	30%	No	Week 13

## Participation in pracs

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Week 1-12**

Weighting: **0%**

Attendance at, and participation in weekly practicals is compulsory. Participation will be demonstrated by actively undertaking the experiments, and will be recorded. Students may be able to attend a make-up class, or else a Special Consideration request must be submitted.

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
- Develop competency in working individually or as a team in the laboratory and tutorials

## Mid-term quiz test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **Week 7**

Weighting: **15%**

The mid-term exam has a quiz-based section where students will be tested on their knowledge.

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

## Mid-term practice-based exam

Assessment Type <sup>1</sup>: Practice-based task

Indicative Time on Task <sup>2</sup>: 17 hours

Due: **Week 7**

Weighting: **30%**

The mid-term exam has a practice-based section where students will be tested on their lab skills.

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

## Lab Prep Activities

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 6 hours

Due: **Week 1-12**

Weighting: **10%**

Students will be provided with pre-prac information and need to complete a quiz / short written piece before each class (45min x 8 assessment activities).

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
- 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 in the laboratory and tutorials

## Final quiz test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **Week 13**

Weighting: **15%**

The final exam has a quiz-based section where students will be tested on their knowledge.

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

## Final practice-based exam

Assessment Type <sup>1</sup>: Practice-based task

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Week 13**

Weighting: **30%**

The final exam has a practice-based section where students will be tested on their lab skills.

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

**LECTURES:** BIOL1620 comprises weekly lectures that cover hot topics in Health and Disease. While we understand that clashes may prevent you from attending lectures we find that students who attend lectures get the best out of the subjects. Lecturers are guests and represent the best in their fields, they are taking time out of their work to talk to you, so please do your best to attend the Q&A sessions with the lecturers.

**PRACTICAL CLASSES:** It is compulsory to attend the weekly block classes which begin with a tutorial followed by the practical session. A role will be taken to record attendance and to identify your participation in these classes.

Off-shore students **must** email the convenor as soon as possible to discuss study options.

On-campus teaching continues to be scheduled for Session 1, 2022. Masks are compulsory for all classes in indoor spaces and social distancing will be implemented wherever possible.

Students will also be required to sanitise surfaces before and after use. Students are requested to minimise the risk of spreading COVID to themselves and others in accordance with the university and NSW Health guidelines: <https://www.mq.edu.au/about/coronavirus-faqs> and <https://www.nsw.gov.au/covid-19/stay-safe>. Any further requirements or changes to units in relation to COVID will be communicated to students via iLearn.

## 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](https://ask.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/>

### 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/](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 since First Published

Date	Description
03/02/2022	I followed the instructions sent by Kerrie Tomkins and added: -General Faculty Policy on assessment submission deadlines and late submissions related to this unit -Off-shore students must email convenor -COVID Information and on-campus classes