



MEDI2005

Human Health and Disease Processes

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>	3
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	4
<u>Delivery and Resources</u>	6
<u>Unit Schedule</u>	6
<u>Policies and Procedures</u>	7

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General Information

Unit convenor and teaching staff
Unit Convenor, Lecturer and Tutor
Esther Lim

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Contact via email

Consultation by appointment

Lecturer

Mirjana Strkalj

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Credit points

10

Prerequisites

(50cp at 1000 level or above) and admission to BClinSc

Corequisites

Co-badged status

Unit description

This unit integrates fundamental knowledge of human biological processes to human health and diseases. This unit focuses on key concepts in immunology, microbiology and oncology to further develop your understanding of major human diseases. In this unit, you will learn about fundamental changes in body physiology due to injury and disease, including local and systemic responses, and molecular and cellular adaptations. You will investigate disease aetiology, pathogenesis and processes at the cellular, tissue and body system levels and approach disease from a personal, community and global perspective. You will engage in discussions of disease incidence, prevalence and control, using recent local and global health examples. Learning activities will include lectures, self-directed online learning tasks, lab-based practical, and interactive tutorials and presentations. Through this unit you will gain an understanding of health and disease processes that will be critical for a profession in medicine, public health or biomedical research.

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: Identify systemic and local responses of the body to tissue injury and infection.

ULO2: Apply knowledge of human defense mechanisms including physical barriers and the immune system to identify normal and altered immunologic responses.

ULO3: Evaluate the dynamic relationship between microorganisms and humans, and methods of microbial identification and control.

ULO4: Describe common biological and genetic mechanisms of neoplastic transformation and development.

ULO5: Assess and utilize clinical case scenarios and the latest scientific research to describe, critically analyse and communicate basic concepts of diseases learned in this unit.

General Assessment Information

Grade descriptors and other information concerning grading are contained in the Macquarie University Assessment Policy, which is available at: <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment>.

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, 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.

Late Submission

Late submissions will receive a 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	Monday 17th	3	15%	75%	60%

Student Professionalism

In the Faculty of Medicine and Health 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 tutorials.

Furthermore, lectures and seminars are key learning activities that you are expected to attend throughout completion of the Bachelor of Clinical Science. While audio recordings and lecture slides may be made available following these large group sessions, it is important to recognise that such resources are a study aid - and should not be considered an alternative to lecture or seminar attendance.

Students are expected to attend a minimum of 80% of all small group interactive sessions. If you are unable to attend a small group activity, please refer to the iLearn site regarding further action.

Similarly, as part of developing professionalism, students are expected to submit all work by the due date. Applications for assessment task extensions must be supported by appropriate evidence and submitted via www.ask.mq.edu.au. For further details please refer to the Special Consideration Policy available at <https://students.mq.edu.au/study/my-study-program/special-consideration>.

Assessment Tasks

Name	Weighting	Hurdle	Due
Online Quiz	10%	No	Week 4 and Week 7
Poster Presentation	20%	No	Week 8
Practical Test	20%	No	Week 13
Final Exam	50%	No	Exam timetable

Online Quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 8 hours

Due: **Week 4 and Week 7**

Weighting: **10%**

A series of two online quizzes assessing lecture and tutorial content.

On successful completion you will be able to:

- Identify systemic and local responses of the body to tissue injury and infection.
- Apply knowledge of human defense mechanisms including physical barriers and the immune system to identify normal and altered immunologic responses.
- Evaluate the dynamic relationship between microorganisms and humans, and methods of microbial identification and control.

- Describe common biological and genetic mechanisms of neoplastic transformation and development.

Poster Presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 20 hours

Due: **Week 8**

Weighting: **20%**

Design and presentation of a scientific poster based on group research of an assigned topic

On successful completion you will be able to:

- Apply knowledge of human defense mechanisms including physical barriers and the immune system to identify normal and altered immunologic responses.
- Evaluate the dynamic relationship between microorganisms and humans, and methods of microbial identification and control.
- Describe common biological and genetic mechanisms of neoplastic transformation and development.

Practical Test

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 10 hours

Due: **Week 13**

Weighting: **20%**

In-class written test assessing learning undertaken in lab-based practical session

On successful completion you will be able to:

- Identify systemic and local responses of the body to tissue injury and infection.
- Apply knowledge of human defense mechanisms including physical barriers and the immune system to identify normal and altered immunologic responses.
- Evaluate the dynamic relationship between microorganisms and humans, and methods of microbial identification and control.
- Assess and utilize clinical case scenarios and the latest scientific research to describe, critically analyse and communicate basic concepts of diseases learned in this unit.

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **Exam timetable**

Weighting: **50%**

Formal written exam using a combination of question types assessing content delivered across the session. This task is completed under examination conditions during the University examination period.

On successful completion you will be able to:

- Identify systemic and local responses of the body to tissue injury and infection.
- Apply knowledge of human defense mechanisms including physical barriers and the immune system to identify normal and altered immunologic responses.
- Evaluate the dynamic relationship between microorganisms and humans, and methods of microbial identification and control.
- Describe common biological and genetic mechanisms of neoplastic transformation and development.
- Assess and utilize clinical case scenarios and the latest scientific research to describe, critically analyse and communicate basic concepts of diseases learned in this unit.

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

Recommended books:

Pathophysiology: The Biologic Basis for Disease in Adult and Children, Kathryn L. McCance, Sue E. Huether, Valentina L. Brashers, Neal S. Rote, 8th Edition (2019), Elsevier

Mims' Medical Microbiology and Immunology, Richard V. Goering, Hazel M. Dockrell, Mark Zuckerman, Peter L. Chiodini, 6th Edition (2019), Elsevier

Unit Schedule

Week 1	Introductory lecture
Week 2	Basic bacteriology
Week 3	Basic virology

Week 4	Introduction to immunology: Altered cellular and tissue biology
Week 5	Inflammation and innate immunity
Week 6	Humoral and cellular responses
Week 7	Alterations in immunity and inflammation
Week 8	No Lecture - poster presentations
Week 9	Basic hematology
Week 10	Cancer Biology and Hallmarks
Week 11	Cancer microenvironment and treatments
Week 12	Cancer epidemiology

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.