



MEDI2005

Human Health and Disease Processes

Session 1, Weekday attendance, North Ryde 2021

Medicine, Health and Human Sciences Faculty level units

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Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

Unit Convenor

Esther Lim

esther.lim@mq.edu.au

Mirjana Strkalj

mirjana.strkalj@mq.edu.au

Course Director

Cara Hildreth

cara.hildreth@mq.edu.au

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

Detailed information on each assessment task can be found on iLearn.

Grades

Grade descriptors and other information concerning grading are contained in Schedule 1 of 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 in the Bachelor of Clinical Science are determined by a grading committee and are not the sole responsibility of the Unit Convenor.

Students will be awarded a final grade plus a Standardised Numerical Grade (SNG). The SNG is not necessarily a summation of the individual assessment components. The final grade and SNG that are awarded reflect the corresponding grade descriptor in the Grading Policy.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, attempt all assessment tasks, meet any ungraded requirements including professionalism and achieve an SNG of 50 or better.

Student 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 tutorials. Furthermore, lectures and seminars are key learning activities that you are expected to review throughout completion of the Bachelor of Clinical Science.

Students are required to attend a minimum of 80% of all small group interactive sessions. Students that do not meet this requirement may be deemed unable to meet expectations regarding professionalism and may be referred for disciplinary action (which may include

exclusion from assessments and unit failure).

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
Final Exam	50%	No	Final exam schedule
Online Quiz	10%	No	Week 4 and Week 10
Practical Test	20%	No	Week 13
Poster Presentation	20%	No	Week 8

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **Final exam schedule**

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.

Online Quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 8 hours

Due: **Week 4 and Week 10**

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.

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.

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.

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

Lectures (online)

- Made available Monday 9am of the week

Tutorials (face-to-face or online)

- Thursday 1-3pm or Thursday 4-6pm

Practicals

Practicals are online and must be completed by end of the week with the exception of the face-to-face laboratory practical in Week 3. Students must attend this practical.

- Tuesday 9th March (10-12pm, 1-3pm or 3-5pm) OR Wednesday 10th March (10-12pm, 1-3pm or 3-5pm)

Unit Schedule

Week	Lectures	Tutorials	Practicals	Assessments
Week 1	Introductory lecture	No	No practical. Online review	
Week 2	Introduction to immunology: Altered cellular and tissue biology	Yes	Online practical: Lymphatic system	
Week 3	Basic bacteriology	Yes	Lab practical	
Week 4	Basic virology	Yes	No practical. Online review	Online Quiz
Week 5	Inflammation and innate immunity	Yes	Online practical: ELISA	
Week 6	Humoral and cellular responses	Yes	Online practical: Immunity and vaccination	
Week 7	Alterations in immunity and inflammation	Yes	No practical. Online review	
Week 8	No Lecture - Poster information session	No	No practical.	Poster Presentation
Week 9	Basic hematology	Yes	Online practical: Interpreting blood test	
Week 10	Cancer biology and hallmarks	Yes	No practical. Online review	Online quiz
Week 11	Cancer microenvironment and treatments	Yes	Online practical: Histological features of cancer	
Week 12	Cancer epidemiology	Yes	No practical. Online review	
Week 13	Practical Test	No	No	Final Exam

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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

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.