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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Disclaimer
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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
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Mirjana Strkalj
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Course Director
Cara Hildreth
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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://students.mq.edu.au/important-dates](https://students.mq.edu.au/important-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
Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>No</td>
<td>Final exam schedule</td>
</tr>
<tr>
<td>Online Quiz</td>
<td>10%</td>
<td>No</td>
<td>Week 4 and Week 10</td>
</tr>
<tr>
<td>Practical Test</td>
<td>20%</td>
<td>No</td>
<td>Week 13</td>
</tr>
<tr>
<td>Poster Presentation</td>
<td>20%</td>
<td>No</td>
<td>Week 8</td>
</tr>
</tbody>
</table>

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: Quiz/Test
Indicative Time on Task: 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: Quiz/Test
Indicative Time on Task: 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: Presentation
Indicative Time on Task: 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 Learning Skills Unit 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:


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

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

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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 (Note: The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)

Students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

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.
Student Enquiry Service
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

Equity 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.

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.