MEDI2005
Human Health and Disease Processes
Session 1, In person-scheduled-weekday, North Ryde 2022

Medicine, Health and Human Sciences Faculty level units

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https://unitguides.mq.edu.au/unit_offerings/149609/unit_guide/print
General Information

Unit convenor and teaching staff
Unit Convenor, Lecturer and Tutor
Esther Lim
esther.lim@mq.edu.au
Contact via email
Consultation by appointment

Lecturer
Mirjana Strkalj
mirjana.strkalj@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
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 Convener.

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:

<table>
<thead>
<tr>
<th>Due date</th>
<th>Received</th>
<th>Days late</th>
<th>Deduction</th>
<th>Raw mark</th>
<th>Final mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday 14th</td>
<td>Monday 17th</td>
<td>3</td>
<td>15%</td>
<td>75%</td>
<td>60%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Quiz</td>
<td>10%</td>
<td>No</td>
<td>Week 4 and Week 7</td>
</tr>
<tr>
<td>Poster Presentation</td>
<td>20%</td>
<td>No</td>
<td>Week 8</td>
</tr>
<tr>
<td>Practical Test</td>
<td>20%</td>
<td>No</td>
<td>Week 13</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>No</td>
<td>Exam timetable</td>
</tr>
</tbody>
</table>

### 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:**


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

**Unit Schedule**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Introductory lecture</th>
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<tbody>
<tr>
<td>Week 2</td>
<td>Basic bacteriology</td>
</tr>
<tr>
<td>Week 3</td>
<td>Basic virology</td>
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</tbody>
</table>
Unit guide MEDI2005 Human Health and Disease Processes

<table>
<thead>
<tr>
<th>Week 4</th>
<th>Introduction to immunology: Altered cellular and tissue biology</th>
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<tbody>
<tr>
<td>Week 5</td>
<td>Inflammation and innate immunity</td>
</tr>
<tr>
<td>Week 6</td>
<td>Humoral and cellular responses</td>
</tr>
<tr>
<td>Week 7</td>
<td>Alterations in immunity and inflammation</td>
</tr>
<tr>
<td>Week 8</td>
<td>No Lecture - poster presentations</td>
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<tr>
<td>Week 9</td>
<td>Basic hematology</td>
</tr>
<tr>
<td>Week 10</td>
<td>Cancer Biology and Hallmarks</td>
</tr>
<tr>
<td>Week 11</td>
<td>Cancer microenvironment and treatments</td>
</tr>
<tr>
<td>Week 12</td>
<td>Cancer epidemiology</td>
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Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (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). 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) 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

https://unitguides.mq.edu.au/unit_offerings/149609/unit_guide/print
• 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.