



# MEDI205

## Human Health and Disease Processes

S1 Day 2019

*Medicine and Health Sciences Faculty level units*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Unit Convenor

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By appointment

Unit adviser

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Credit points

3

Prerequisites

6cp in MEDI units at 200 level or above

Corequisites

Co-badged status

Unit description

This unit introduces students to key concepts in immunology and microbiology. Students will learn about fundamental changes in body physiology due to disease, including basic concepts of neoplasia. A focus will be placed on disease etiology, pathogenesis, local and systemic responses to injury and disease, including molecular and cellular adaptations and cell death. Students will investigate the disease processes at cellular, tissue and body system levels and approach disease from a personal, community and global perspective. Students will engage in discussions of infectious diseases, infection control and vaccination, using recent local and global health examples. Learning activities will include lectures, self-directed online learning tasks, microbiology practicals and tutorial based discussions.

## 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:

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

Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.

Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.

Compare and contrast the biological and genetic mechanisms of cancer development.

Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## General Assessment Information

### General Assessment Information

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>.

Further details for each assessment task will be available on iLearn.

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 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, as well as clinical- and laboratory-based practical sessions.

Furthermore, lectures and seminars are key learning activities that you are expected to attend throughout completion of the B Clinical Science course. 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 who do not maintain adequate attendance (greater than or equal to 80% of scheduled classes) 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 [ask.mq.edu.au](https://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>

### Late Submission

All assignments which are officially received after the due date, and where no extension has been granted, will incur a deduction of 10% for the first day, and 10% for each subsequent day including the actual day on which the work is received. Weekends and public holidays are included. For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
Fri 14th	Mon 17th	3	30%	75%	45%

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">AT1 Online Quiz</a>	10%	No	Week 4 and Week 10
<a href="#">AT2 Poster Presentation</a>	20%	No	Week 8
<a href="#">AT3 Practical Test</a>	20%	No	Week 7
<a href="#">AT4 Final Exam</a>	50%	No	University examination period

### AT1 Online Quiz

Due: **Week 4 and Week 10**

Weighting: **10%**

Each online quiz is worth 5% (2 x 5% = 10% in total) of your final mark.

On successful completion you will be able to:

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate

and apply the methods of microbial control.

- Compare and contrast the biological and genetic mechanisms of cancer development.

## AT2 Poster Presentation

Due: **Week 8**

Weighting: **20%**

Poster preparation (10% of your mark, assessed as a group) and individual presentation (10% of your mark)

On successful completion you will be able to:

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## AT3 Practical Test

Due: **Week 7**

Weighting: **20%**

Written practical test

On successful completion you will be able to:

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.

## AT4 Final Exam

Due: **University examination period**

Weighting: **50%**

Final exam

On successful completion you will be able to:

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## Delivery and Resources

### Recommended books:

Pathophysiology: The Biological Basis for Disease in Adult and Children, Kathryn L. McCance, Sue E. Huether, Valentina L. Brashers, Neal S. Rote, 7th Edition (2014), St. Louis, Missouri; Elsevier

Mims' Medical Microbiology, Richard V. Goering, Hazel M. Dockrell, Mark Zuckerman, Peter L. Chiodini, Ivan M. Roitt, 5th Edition (2013), Philadelphia; Elsevier Saunders

## Unit Schedule

The following compulsory classes are scheduled for this unit:

Lectures (2 hours): Monday 2-4pm, from Weeks 1-12

Practicals (1 hour): Practical classes are delivered online **except** in Week 3, where practical classes will be delivered in the Science Lab, E8A 160 on Wednesday 11-1pm, 1-3pm or 3-5pm.

Tutorials (2 hours): Wednesday, 10-12pm or 12-2pm OR Thursday 9-11am or 11-1pm, from Weeks 2, 4-12. **Please note that in Week 3, your tutorial will be held on Thursday, either 10-12pm or 12-2pm.**

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](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.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/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](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://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/study/getting-started/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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## 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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.

## Graduate Capabilities

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

#### Learning outcomes

- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

#### Assessment task

- AT2 Poster Presentation

### Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

#### Learning outcomes

- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise



them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## **Assessment tasks**

- AT2 Poster Presentation
- AT3 Practical Test

## **Commitment to Continuous Learning**

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

## **Learning outcome**

- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## **Assessment tasks**

- AT1 Online Quiz
- AT2 Poster Presentation
- AT3 Practical Test
- AT4 Final Exam

## **Discipline Specific Knowledge and Skills**

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

## **Learning outcomes**

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.

- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## **Assessment tasks**

- AT1 Online Quiz
- AT2 Poster Presentation
- AT3 Practical Test
- AT4 Final Exam

## **Critical, Analytical and Integrative Thinking**

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## **Learning outcomes**

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

## **Assessment tasks**

- AT1 Online Quiz
- AT2 Poster Presentation
- AT3 Practical Test
- AT4 Final Exam

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

### Learning outcomes

- Identify systemic and local responses of the body to injury and infection.
- Apply knowledge of the human defense mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms of cancer development.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

### Assessment tasks

- AT1 Online Quiz
- AT2 Poster Presentation
- AT4 Final Exam

## Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

### Learning outcome

- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

### Assessment task

- AT2 Poster Presentation

## Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

### Learning outcomes

- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

### Assessment task

- AT2 Poster Presentation

## Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

### Learning outcomes

- Explain the dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Assess clinical case scenarios and critically analyse the latest scientific research; utilise them to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

### Assessment tasks

- AT2 Poster Presentation
- AT3 Practical Test