MEDI205

Human Health and Disease Processes

S1 Day 2017

Medicine and Health Sciences Faculty level units

Contents

General Information

Unit convenor and teaching staff
unit convenor
Mirjana Strkalj
mirjana.strkalj@mq.edu.au

Patrick McNeil
patrick.mcneil@mq.edu.au

Sophia Champion
sophia.champion@mq.edu.au

Karen Vickery
karen.vickery@mq.edu.au

Jenny Lee
jenny.lee@mq.edu.au

Esther Lim
esther.lim@mq.edu.au

Credit points
3

Prerequisites
Admission to BClinSc and (12cp at 100 level) and (6cp at 200 level)

Corequisites

Co-badged status

Unit description
In this unit you will learn the basic concepts in immunology and microbiology, and the fundamental changes in body physiology due to disease. The basic concepts of neoplasia will also be introduced. You will focus on disease etiology, pathogenesis, local and systemic responses to cell injury and various molecular and cellular adaptations to injury and disease, including cell death. Infectious diseases, infection control and vaccination will be discussed using recent local and global health examples. The disease processes will be investigated at cellular, tissue and body system levels and disease will be studied as a personal, community and global issue. Materials will be presented in lectures, self- directed online learning, 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.

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

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

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

Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it 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 the Macquarie University Grading Policy, which is available at:http://www.mq.edu.au/policy/docs/grading/policy.html

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes.

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

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 one of these grades 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.

Extensions for Assessment tasks

Applications for assessment task extensions must be submitted via www.ask.mq.edu.au. For further details please refer to the Disruption to Studies Policy available at http://mq.edu.au/policy/docs/ disruption_studies/policy.html

Late Submission of Work

All assignments which are officially received after the due date, and where no extension has been granted by the course convenor or tutor, 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:

Assessment Tasks

Name	Weighting	Hurdle	Due
AT1 Online Learning Activity	20%	No	Weeks 3, 6, 9, 12
AT2 Group Poster Presentation	20%	No	Week 8
AT3 Written Practical Test	10%	No	Week 12
AT4 Final Exam	50%	No	University examination period

AT1 Online Learning Activity

Due: **Weeks 3, 6, 9, 12**
Weighting: **20%**

Each online learning activity is worth **5%** (4x5%=20% in total) of your final mark.

On successful completion you will be able to:

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

AT2 Group Poster Presentation

Due: **Week 8**
Weighting: **20%**

Group presentation and written report

On successful completion you will be able to:

- Identify systemic and local responses of the body to injury.
- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific

research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

AT3 Written Practical Test

Due: **Week 12**
Weighting: **10%**

Written practical test

On successful completion you will be able to:

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

Delivery and Resources

The following compulsory classes are scheduled for this unit:

- 2 h lectures: weeks 2-13

- 1 h practical sessions delivered online except in weeks 3&4, practical classes will be delivered in the Microbiology lab

- 2 h tutorials: weeks 2-13

Attendance requirements

Students are required to attend a minimum of 80% of tutorials and other scheduled learning activities, unless special consideration is granted by the unit convenor. If a student does attend a minimum of 80% of classes, he/she may not be able to pass the unit.

Recommended books:

Pathophysiology, 7th Edition

The Biologic Basis for Disease in Adults and Children

Kathryn L. McCance, Sue E. Huether, 2014

Mim's Medical Microbiology, 5th Ed, Richard V. Goering; Hazel M. Dockrell, Mark Zuckerman, Peter L. Chiodini, Ivan M. Roitt

Philadelphia Elsevier Sounders, 2013

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy_2016.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

In addition, a number of other policies can be found in the Learning and Teaching Category of 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/support/student_conduct/

Results

Results shown in *iLearn*, 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.

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 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

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.

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 in cancer development.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

Assessment task

- AT2 Group 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 the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Compare and contrast the biological and genetic mechanisms in cancer development.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

Assessment tasks

- AT2 Group Poster Presentation
- AT3 Written 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 outcomes

- Identify systemic and local responses of the body to injury.
- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and

communicate findings to peers and tutors.

Assessment tasks

- AT1 Online Learning Activity
- AT2 Group Poster Presentation
- AT3 Written 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.
- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms in cancer development.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

Assessment tasks

- AT1 Online Learning Activity
- AT2 Group Poster Presentation
- AT3 Written 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.
- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms in cancer development.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

Assessment tasks

- AT1 Online Learning Activity
- AT2 Group Poster Presentation
- AT3 Written 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.
- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Explain dynamic relationship between microorganisms and humans, and evaluate and apply the methods of microbial control.
- Compare and contrast the biological and genetic mechanisms in cancer development.
- Analyse and assess clinical case scenarios and critically analyse the latest scientific research and utilize it to describe the basic concepts learned in this unit and communicate findings to peers and tutors.

Assessment tasks

- AT1 Online Learning Activity
- AT2 Group 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 outcomes

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

Assessment task

- AT2 Group 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

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

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

Assessment task

- AT2 Group 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

- Apply the knowledge of human defence mechanisms including physical barriers and the immune system to discuss altered immunologic responses.
- Compare and contrast the biological and genetic mechanisms in cancer development.

Assessment tasks

- AT2 Group Poster Presentation
- AT3 Written Practical Test