



HLTH215

Principles in Health and Disease 1

S2 Day 2015

Dept of Chiropractic

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General Information

Unit convenor and teaching staff

Unit Convenor

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C5C West 351

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Credit points

3

Prerequisites

BIOL115 and (HLTH108 or BIOL108)

Corequisites

Co-badged status

Unit description

This unit provides the students with the opportunity to explore the relationship between health and disease, from both the biological and psychosocial perspective. The diversity of stressors influencing the human body and mind is explored, and the response of the body to them is discussed. This includes adaptations at both cellular and tissue levels of organisation, inflammation, the immune response, tissue death and neoplasia. The immunisation debate and other relevant public health issues are explored. The relationship between the brain, 'mind', immune and endocrine systems is also studied. By the conclusion of this unit, students will have an understanding of the complex relationship between ourselves and our environment.

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:

Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.

Explain the multifactorial nature of health and disease.

Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.

Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

General Assessment Information

The University Examination period for Second Half Year 2015 is during November and December.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations.

The only exception to not sitting an examination at the designated time is because of documented *illness or unavoidable disruption*. In these circumstances you may wish to consider applying for *Disruption to Studies*. Information about this process is available at **Policy Central**: <http://www.mq.edu.au/policy/>

If a Supplementary Examination is granted as a result of this process, the examination will be scheduled after the conclusion of the official examination period. The Supplementary Examination need not conform to the regular examination format. For e.g. it can be an oral (viva)

examination rather than a written examination. Contact the Unit convenor or the Faculty Centre for the Supplementary Exam dates. Please note that the format of the supplementary exam will not necessarily be the same as that of the original.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is, the final day of the official examination period.

Grades

Achievement of grades will be based on the following criteria:

High Distinction: provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application.

Distinction: provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.

Credit: provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; plus communication of ideas fluently and clearly in terms of the conventions of the discipline.

Pass: provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; and communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.

Fail: does not provide evidence of attainment of all learning outcomes.

There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; and incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.

Sometimes it helps to 'translate' these descriptions into numbers. So, what is expected from you in this unit, in order for you to attain a specific grade, is outlined below:

| Grade | |
|------------------|---|
| Fail | Failure to complete all assessment tasks or unsatisfactory performance |
| Pass | A minimum of 50% in each assessment task, including the final exam |
| Credit | A minimum of 50% in each assessment task, PLUS a minimum 65% total mark |
| Distinction | A minimum of 50% in each assessment task, PLUS a minimum 75% total mark |
| High Distinction | A minimum of 50% in each assessment task, PLUS a minimum 85% total mark |

Assessment Tasks

| Name | Weighting | Due |
|-----------------------------------|-----------|-------------------------------|
| <u>Assignment</u> | 20% | 9 September |
| <u>Quizzes</u> | 10% | ongoing |
| <u>Final Examination</u> | 50% | University Examination Period |
| <u>Practical Quizzes and test</u> | 20% | Varied, based on prac group |

Assignment

Due: **9 September**

Weighting: **20%**

Details will be provided on ilearn in week 1.

On successful completion you will be able to:

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as

immunisation, infection control and disease prevention.

Quizzes

Due: **ongoing**

Weighting: **10%**

There will be 11 short quizzes to be completed over the semester, in weeks 2-12 inclusive. Each is to be completed during your tutorial class.

On successful completion you will be able to:

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Final Examination

Due: **University Examination Period**

Weighting: **50%**

The final examination will cover the content of the entire semester. Questions will include multiple choice questions, true or false and short answer questions.

On successful completion you will be able to:

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Practical Quizzes and test

Due: **Varied, based on prac group**

Weighting: **20%**

Quiz 1: Take home, no marks

Quiz 2 + 3: To be done in practical class; timed. (8 marks)

Practical Exam: On the day of your 3rd practical session; 2 Questions. (12 marks)

More details are provided in the practical manual.

On successful completion you will be able to:

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Delivery and Resources

Delivery mode

1. Three x 1 hour lectures per week, weeks 1-13. Echo360 lecture recordings are available for this unit.
2. One x 1.5 hour tutorial per week, weeks 1-13.
3. Three x 3 hour practicals per student, starting from week 1
4. Five to six hours per week self-instructional learning, readings from the text and exercises on lecture topics

Class times and locations

Lecture times:

Three lectures of 1 hr each per week starting from 29 July

Wednesday 8:00 – 9:00 in Y3AT1

Thursdays 8:00 – 9:00 in Y3AT1

Fridays 8:00 - 9:00 in Y3AT1

Practicals start from Week 1 of Semester (31 Jul).

Class_01 Friday 9.00 – 12.00 in E8A 150

Class_02 Friday 13:00 – 16.00 in E8A 150

Any changes made by students to their tutorial and practical class enrolment online after 17 July will not be considered. Based on enrolments as on 17 July, students will be allocated to practical groups by 22 Jul and the list will be put up on iLecture. If your ID does not appear in the list,

contact the unit convenor immediately. Due to restrictions on class sizes, if you are unable to enrol in a particular class, you have to organise a swap with another student and inform the Unit convenor.

Each student is required to attend only 3 practical sessions, on consecutive weeks, as per schedule below. **A student allocated to one group cannot turn up for practicals meant for another group** without prior written approval (email) from the unit convenor.

Practicals start in Week 1 (Lab: E8A 150)

| <i>Prac Group</i> | <i>Practical 1</i> | <i>Practical 2</i> | <i>Practical 3</i> | <i>Day & Time</i> |
|-------------------|--------------------|--------------------|--------------------|-----------------------|
| A | 31 Jul | 7 Aug | 14 Aug | Fri 9-12 |
| B | 31 Jul | 7 Aug | 14 Aug | Fri 1-4 |
| C | 21 Aug | 28 Aug | 4 Sep | Fri 9-12 |
| D | 21 Aug | 28 Aug | 4 Sep | Fri 1-4 |
| E | 2 Oct | 9 Oct | 16 Oct | Fri 9-12 |

Tutorials start in Week 1

| Group | Day | Start | End | Room | Tutor |
|--------------|------------|--------------|------------|-------------|-----------------|
| 1 | Thursday | 9:00 | 10:30 | E4B308 | Amy Melamet |
| 2 | Thursday | 9:00 | 10:30 | E5A230 | Lindsay Gorrell |
| 3 | Thursday | 10:30 | 12:00 | E4B308 | Amy Melamet |
| 4 | Thursday | 10:30 | 12:00 | E5A230 | Lindsay Gorrell |
| 5 | Thursday | 12:00 | 13:30 | E5A230 | Lindsay Gorrell |
| 6 | Friday | 15:00 | 16:30 | E8A341 | Lindsay Gorrell |

Attendance: Attendance for practicals and tutorials is compulsory. Attendance at lectures is strongly recommended.

Required and recommended resources

Required texts

1. HLTH215 Tutorial workbook

2. *Understanding Pathophysiology by Judy Craft, Christopher Gordon & Adriana Tiziani; Mosby 2 Ed. 2014; ISBN 9780729541602

OR

K L McCance & S E Heuther. (2010) Pathophysiology. *The Biological Basis for Disease in Adults and Children*. Mosby. 7th Edition, 2015 ISBN: 9780323088541.

*Craft will also be the core text required for HLTH316 and HLTH317.

Recommended reading

1. A medical dictionary (This will be useful for all health science units)
2. E W Nester, D G Anderson, C E Roberts, & M T Nester. (2012). *Microbiology a Human Perspective*. 7th Edition. McGraw-Hill, USA.
3. Mims' *Medical Microbiology*. 5 Edn.; Elsevier

Useful web-links:

<http://www-medlib.med.utah.edu/WebPath/> This is the web site which is the source of many of the pathological images found on the web site.

[Communicable Diseases Australia](#)

[Centre for Diseases Control, USA](#)

[Immunisation Resources](#)

[Voice against Immunisations](#)

[World Health Organisation Infectious Diseases](#)

Unit web page

The URL of the HLTH215 iLearn site is: <http://ilearn.mq.edu.au/>

You will be asked for a username and password. Your username is your student MQID. Your MQID and password have been mailed to you by the University. If you have lost them contact <http://informatics.mq.edu.au/help/>

Unit Schedule

| Week | Lecture 1 (Wed 8-9) | Lecture 2 (Thurs 8-9) | Lecture 3 (Fri 8-9) |
|------|---------------------|-----------------------|---------------------|
| | | | |

| | | | |
|----|--|---|---|
| 1 | Intro to unit 1: Overview | Intro to unit 2: Concepts of Health, Disease and Illness, Terminology | Intro to unit 3: The study of Pathology and Microbiology Microscopy, Staining |
| 2 | Cell Structure - Prokaryotes versus Eukaryotes | Stressors and cell injury 1 | Stressors and cell injury 2 |
| 3 | Micro-organisms 1: Biology of medically important bacteria | Micro-organisms 2: Biology of medically important bacteria | Micro-organisms 3: Biology of medically important viruses |
| 4 | Micro-organisms 4: Biology of medically important viruses | Micro-organisms 5: Other medically important microbes: algae, fungi etc | Micro-organisms 6: Controlling the growth of micro-organisms |
| 5 | Host defence mechanisms – non-specific defences | Host defence mechanisms – non-specific defences | The Inflammatory response 1 |
| 6 | The Inflammatory response 2 An introduction to tissue repair | Specific defence mechanisms | Applied Immunology, Immunological disorders |
| 7 | Immunological disorders | Immunological disorders | Revision |
| 8 | Issues concerning Immunisation | The Host versus the Micro-organism 1: Interaction between the Micro-organisms and the Host | The Host versus the Micro-organism 2: Interaction between the Micro-organisms and the Host |
| 9 | Haemodynamic disturbances 1: Oedema, Disturbances to haemostasis | Haemodynamic disturbances 2: Arteriosclerosis | Haemodynamic disturbances 3: Thrombosis, Embolism, Infarction |
| 10 | Haemodynamic disturbances 4: Alterations in blood pressure, Aneurysms, Shock | Neoplasia | Neoplasia |
| 11 | Biotechnology and its Applications in Medical Microbiology | Principles of Epidemiology of Infectious Diseases & Infection Control | Principles of Epidemiology of Infectious Diseases & Infection Control |

| | | | |
|----|---|-----------------------------------|----------------|
| 12 | The role of the mind/emotions in illness and disease. Stress | Concepts of psychoneuroimmunology | Mental illness |
| 13 | Revision | Revision | |

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.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

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

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

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://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

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

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment tasks

- Assignment

- Quizzes
- Final Examination
- Practical Quizzes and test

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

- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment tasks

- Assignment
- Quizzes
- Final Examination
- Practical Quizzes and test

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

- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment tasks

- Assignment
- Quizzes
- Final Examination
- Practical Quizzes and test

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

- Demonstrate the appropriate use of terminology, within the disciplines of pathology and microbiology.
- Explain the multifactorial nature of health and disease.
- Demonstrate a broad knowledge and understanding of medical microbiology and general pathological processes.
- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment tasks

- Assignment
- Quizzes
- Final Examination
- Practical Quizzes and test

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 outcome

- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment task

- Assignment

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 outcome

- Apply an understanding of the epidemiological aspects of disease, to issues such as immunisation, infection control and disease prevention.

Assessment task

- Assignment