



# HLTH215

## Principles in Health and Disease 1

S2 Day 2018

*Dept of Chiropractic*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Unit Convenor & Lecturer

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Credit points

3

Prerequisites

6cp from (BIOL108 or BIOL115 or HLTH108)

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 2018 starts in Nov.

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

The raw marks resulting from assessment of your work will be used as an initial indicator of the quality of your learning and understanding. Note that the mark ranges mentioned for different grades in the Macquarie University Undergraduate Handbook are not the raw marks. To obtain a grade you must satisfy the qualitative definition of that grade. Once your grade has been determined, you are allocated a mark in the appropriate range indicating your approximate position amongst students assigned that grade.

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 Special Consideration. Information about the Special Consideration process is available at

<https://students.mq.edu.au/study/my-study-program/special-consideration>

Students with a pre-existing disability/health condition or prolonged adverse circumstances may be eligible for ongoing assistance and support. Such support is governed by other policies and may be sought and coordinated through [Wellbeing and Support Services](#).

**Supplementary examination:** If you receive **special consideration** for the final exam, a supplementary exam will be scheduled in the week of December 17-21 2018. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. Approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination. *The supplementary exam may be in a different format to the original exam (for e.g. oral examination) and you will be notified of this when you are granted a supplementary exam.*

## 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	0-49%
Pass	50-64%
Credit	65-74%
Distinction	75-84%
High Distinction	>85%

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Quizzes</u>	20%	No	ongoing
<u>Final Examination</u>	60%	No	University Examination Period
<u>Practical Quizzes and test</u>	20%	No	Varied, based on prac group

### Quizzes

Due: **ongoing**

Weighting: **20%**

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. Your ten best scores will be counted.

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: **60%**

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 hours of lectures (2 hrs on Wed, 1 hr on Thu) per week, weeks 1-13.
2. One x 1.5 hour tutorial per week, **weeks 2-13**.
3. Three x 3 hour practicals per student, starting from **week 2**
4. Five to six hours per week self-instructional learning, readings from the text and exercises on lecture topics

**Class times and locations: Check the online Timetables to confirm any changes.**

**Lecture times:**

Wednesday 8:00 – 10:00 in 10 Hadenfield Ave - T1 Theatre

Thursday 8:00 – 9:00 in 14 Sir Christopher Ondaatje Ave - T4 Theatre

**Workshop (Practicals)** start from Week 2 of Semester.

Class\_01 Friday 10:00 – 1:00 in 14 Eastern Rd - 150 Science Lab

Class\_02 Friday 14:00 – 17.00 in 14 Eastern Rd - 150 Science Lab

*Any changes made by students to their tutorial and practical class enrolment online after 26 July will not be considered.* Based on enrolments as at 9 am on 26 July, students will be allocated to practical groups by 30 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 of your choice, 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 2**

<i>Prac Group</i>	<i>Practical 1</i>	<i>Practical 2</i>	<i>Practical 3</i>	<i>Day &amp; Time</i>
A	10 Aug	17 Aug	24 Aug	Fri 10 - 1
B	10 Aug	17 Aug	24 Aug	Fri 2 - 5
C	31 Aug	7 Sep	14 Sep	Fri 10 - 1
D	31 Aug	7 Sep	14 Sep	Fri 2 - 5
E	5 Oct	12 Oct	19 Oct	Fri 10 - 1
F	5 Oct	12 Oct	19 Oct	Fri 2 - 5
G	26 Oct	2 Nov	9 Nov	Fri 10 - 1

**Tutorials start in Week 2 (Check University TimeTables to confirm any updates)**

Class 1	Thursday	9:30am	9 Wallys Wlk - 108 Tutorial Rm
Class 2	Thursday	9:30am	9 Wallys Wlk - 109 Tutorial Rm
Class 3	Thursday	11:00am	9 Wallys Wlk - 108 Tutorial Rm
Class 4	Thursday	11:00am	9 Wallys Wlk - 109 Tutorial Rm

Class 5	Thursday	12:30pm	9 Wallys Wlk - 108 Tutorial Rm
Class 6	Thursday	12:30pm	9 Wallys Wlk - 109 Tutorial Rm

**Attendance:** Participation in practicals and tutorials is compulsory. Attendance at lectures is strongly recommended.

### **Required and recommended resources**

#### **Required texts**

1. HLTH215 Tutorial workbook (available on iLearn only; to be printed by students)  
and
2. \*Understanding Pathophysiology by Judy Craft, Christopher Gordon & Adriana Tiziani; Mosby 2 Ed. 2014; ISBN 9780729541602

**OR**

K L McCance & S E Heuther. Pathophysiology. *The Biological Basis for Disease in Adults and Children*. Mosby. 7<sup>th</sup> 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. D. Anderson et al. 2015. *Nester's Microbiology a Human Perspective*. 8th Edition. McGraw-Hill, USA. ISBN: 9780073522593.
3. R. Goering et al. *Mims' Medical Microbiology*. Elsevier. 5 Ed. eBook ISBN: 9780702050299

#### **Useful web-links:**

<http://www-medlib.med.utah.edu/WebPath/> This site is the source of many of the pathology 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. For any IT help, contact [OneHelp](#)

## Unit Schedule

<b>Week</b>	<b>Lecture 1 (Wed 8-10)</b>	<b>Lecture 2 (Thurs 8-9)</b>
<b>1</b> <b>Aug</b> <b>1, 2</b>	Intro to unit 1: Overview; Microscopy, Staining	Intro to unit 2: Concepts of Health, Disease and Illness, Terminology
<b>2</b> <b>Aug</b> <b>8, 9</b>	Stressors and cell injury	Cell Structure - Prokaryotes versus Eukaryotes
<b>3</b> <b>Aug</b> <b>15, 16</b>	Micro-organisms 1: Biology of medically important bacteria	Micro-organisms 2: Biology of viruses: bacteriophages
<b>4</b> <b>Aug</b> <b>22, 23</b>	Micro-organisms 3: Biology of medically important viruses; Micro-organisms 4: medically important algae, fungi and parasites	Micro-organisms 5: Controlling the growth of micro-organisms
<b>5</b> <b>Aug</b> <b>29, 30</b>	Host defence mechanisms – non-specific defences	The Inflammatory response 1
<b>6</b> <b>Sep</b> <b>5, 6</b>	The Inflammatory response 2: An introduction to tissue repair; Immune response: Specific defence mechanisms	Applied Immunology, Immunological disorders 1
<b>7</b> <b>Sep</b> <b>12, 13</b>	Immunological disorders 2	Revision
<b>8</b> <b>Oct</b> <b>3, 4</b>	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
<b>9</b> <b>Oct</b> <b>10, 11</b>	Role of bacteria in Biotechnology and its Applications in Medical Microbiology; Principles of Epidemiology of Infectious Diseases & Infection Control 1	Principles of Epidemiology of Infectious Diseases & Infection Control 2
<b>10</b> <b>Oct</b> <b>17, 18</b>	Haemodynamic disturbances 1: Oedema, Disturbances to haemostasis; Haemodynamic disturbances 2: Arteriosclerosis	Haemodynamic disturbances 3: Thrombosis, Embolism, Infarction

11 Oct 24, 25	Haemodynamic disturbances 4: Alterations in blood pressure, Aneurysms, Shock; Neoplasia 1	Neoplasia 2
12 Oct 31, 1 Nov	The role of the mind/emotions in illness and disease. Stress Concepts of psychoneuroimmunology	Mental illness
13 Nov 7, 8	Revision on request	

## 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 \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

## 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 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](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)

## 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

### 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

- 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

- 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**

- 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**

- 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 tasks**

- Quizzes
- Final Examination
- Practical Quizzes and test

## **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 tasks**

- Quizzes
- Final Examination
- Practical Quizzes and test

## **Changes from Previous Offering**

This year the Lectures are 2 hr (Wed) + 1 hr (Thu) compared to the previous years' 1 hr x3 (Wed, Thu, Fri).

Tutorials start in Week 2