



MEDI201

Cardiorespiratory 1

MED 3 2016

Medicine and Health Sciences Faculty level units

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General Information

Unit convenor and teaching staff

Unit Convenor

Dane King

dane.king@mq.edu.au

Contact via Via email

Office 20, Level 1, 75 Talavera Road

By appointment

Lecturer

Ann Goodchild

ann.goodchild@mq.edu.au

Lecturer

Mark Butlin

mark.butlin@mq.edu.au

Lecturer

Alberto Avolio

alberto.avolio@mq.edu.au

Guest Lecturer

Roger Dampney

roger.dampney@mq.edu.au

Tutor

Ashkan Javadzadegan

ashkan.javadzadegan@mq.edu.au

Tutor

Itsu Sen

yi.qian@mq.edu.au

Credit points

3

Prerequisites

Admission to BClinSc

Corequisites

HLTH108 and PHYS149 and CBMS104 and BIOL108

Co-badged status

Unit description

MEDI201 is an intensive unit aimed at promoting understanding of the cardiorespiratory system and the bases for cardiorespiratory diseases. You will integrate understanding of the molecular and cellular basis of cardiorespiratory function with an understanding of cardiorespiratory anatomy and physiology in a clinical context. The emphasis will be on using course resources and learning to enhance problem solving ability. You will develop critical analysis/thinking skills for evaluation of clinical situations, as well as the scientific and medical literature.

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 a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.

Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.

Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.

Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.

Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

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

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

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
Friday 14th	Monday 17th	3	30%	75%	45%

Assessment Tasks

Name	Weighting	Due
Weekly Mini-Exams	60%	Weeks 2, 3, 4 and 5
Online Learning Activities	15%	Weeks 4 and 5
Anatomy Practical Test	25%	Week 5

Weekly Mini-Exams

Due: **Weeks 2, 3, 4 and 5**

Weighting: **60%**

Each mini-exam will consist of a combination of multiple-choice and short-answer style questions and will assess content covered in lectures, readings and tutorials from the preceding week. The duration of each mini-exam will be 30 min and they will be completed in-class. Each mini-exam will contribute to 15% of the grade awarded, for a total of 60%.

On successful completion you will be able to:

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online

resources.

Online Learning Activities

Due: **Weeks 4 and 5**

Weighting: **15%**

Four diverse tasks will be completed outside of class and submitted online. Task 2.1 will be a personal glossary of cardiorespiratory terms encountered throughout the unit. Task 2.2 will be a structured personal reflection on performance in the weekly mini-exams. Task 2.3 will be a referenced introduction section of a scientific report on an experiment examining the effects of exercise on selected cardiovascular parameters (approx. 500 words ~ 1 page). Task 2.4 will be a set of slides or visual aids used in a small group presentation of a 'clinical case' in the final tutorial session.

On successful completion you will be able to:

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Anatomy Practical Test

Due: **Week 5**

Weighting: **25%**

Laboratory-based test assessing skills and knowledge acquired in anatomy practical and simulation lab sessions from Weeks 1 to 4. The duration of this test will be 1 h and it will be completed in-class. Closed shoes and a lab coat/gown must be worn.

On successful completion you will be able to:

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.

Delivery and Resources

Technology Used

Active participation in the learning activities throughout the unit will generally require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library.

Required Unit Materials

All students are required to wear closed shoes and a lab coat/gown to attend anatomy practical classes and complete the Anatomy Practical Test.

Recommended Readings

Unit readings for MEDI201 are available via the university library website.

The recommended texts for this unit include:

1. **Physiology (primary):** Silverthorn DU. (2014 or 2016). *Human physiology: an integrated approach* (6th or 7th Global ed). Boston: Pearson Education.
2. **Physiology (secondary):** Hall JE & Guyton AC. (2006). *Textbook of medical physiology* (13th ed). Philadelphia, PA: Saunders, Elsevier.
3. **Anatomy:** Moore KL, Dalley AF & Agur AMR (2014). *Clinically oriented anatomy* (7th ed). Philadelphia, PA: Lippincott Williams & Wilkins.
4. **Anatomy Atlas:** Abrahams PH *et al.* (2008) *McMinn's clinical atlas of human anatomy* (6th ed). London, England: Mosby / Elsevier.
5. **Histology:** Ross, M.H., & Pawlina, W. (2011). *Histology: a text and atlas* (6th ed). Philadelphia, PA: Lippincott Williams & Wilkins.

Unit Schedule

In weeks 1 & 2 the emphasis will be on the respiratory system; in weeks 3 and 4 the emphasis will shift to the cardiovascular system. Week 5 will provide opportunities to integrate and consolidate your understanding of these two highly-coordinated body systems.

The structure of the learning activities in each week is as follows:

- Monday afternoon from 1 to 4 pm will consist of three face-to-face lectures given back-to-back. In weeks 2 through 5 the first lecture slot will include some Q&A and a mini-exam assessment.
- Tuesday has no face-to-face classes. This provides an ideal opportunity for you to review the material from the lectures and textbook readings and prepare for upcoming practicals, simulations and tutorials.
- Wednesday morning from 9 am to noon will consist of anatomy practical classes (co-

taught with MEDI202 Renal & Alimentary). You will be working with dissected human anatomical specimens (cadavers) in the anatomy lab (so remember to wear closed shoes and bring your lab coat/gown). In most weeks, except week 4, you will have a tutorial in the afternoon either from 2 to 3 pm or from 3 to 4 pm.

- Thursday morning either from 9 to 10 am or from 10 to 11 am you will be working in the simulation lab & interactive zone (these classes will also be co-taught with MEDI202). In week 4 only, you will have an exercise practical session from 11:30 am to 1:30 pm in the physiotherapy teaching spaces (Ground floor, 75 Talavera Road) in lieu of regular tutorials.
- Friday morning either from 9 to 10 am or from 10 to 11 am you will have a case-based tutorial, except in week 4 (where you will have the exercise practical in lieu of regular tutorials).

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

New Assessment Policy in effect from Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy_2016.html. For more information visit http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.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 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://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

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to

pathology.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical Test

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 human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy 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

- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities

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

- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical 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

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.

- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical 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

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical 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 a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.
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Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical 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 outcomes

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Apply knowledge of human cardiorespiratory structure and function to explain normal physiological processes.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical 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 outcomes

- Demonstrate a coherent and in-depth knowledge of the structure and function of the human cardiorespiratory systems at the micro- and macro-scopic levels.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse medical cases.

Assessment tasks

- Weekly Mini-Exams
- Online Learning Activities
- Anatomy Practical Test

Changes from Previous Offering

This is a new unit being offered exclusively to B Clinical Science students for the first time in 2016.