MEDI201

Cardiorespiratory 1

MED 3 2018

Medicine and Health Sciences Faculty level units

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General Information

Unit convenor and teaching staff
Unit Convenor
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By appointment

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Credit points
3

Prerequisites
Admission to BClinSc

Corequisites
MEDI202

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 microscopic and macroscopic 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 clinical cases.

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

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 programs. 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 program. 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 www.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-con

sideration.

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
Mini-Exams	60%	No	Weeks 3 & 5
Online Learning Activities	10%	No	Weeks 1, 2 & 3
Practical Test	30%	No	Tuesday 24th July 2018

Mini-Exams

Due: **Weeks 3 & 5**
Weighting: **60%**

Mini-exams 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 weeks. The duration of each mini-exam will be 60 min and they will be completed in-class. Each mini-exam will contribute to 30% 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 microscopic and macroscopic 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 clinical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Online Learning Activities

Due: **Weeks 1, 2 & 3**
Weighting: **10%**

There are a number of online quizzes and activities linked to the tutorials in weeks 1, 2 and 3. Performance in these activities will contribute to 10% of the grade awarded. Further details will be provided in iLearn.

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 microscopic and macroscopic 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 clinical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Practical Test

Due: **Tuesday 24th July 2018**
Weighting: **30%**

Laboratory-based test assessing skills and knowledge acquired in anatomy practical and simulation lab sessions from Weeks 1 to 4 and the Exercise Practical in Week 4. The duration of this test will be 1 h for the MEDI201 component and 1 h for the MEDI202 component, for a total of 2 h. The test will consist of anatomy lab stations and a written component. Closed shoes and a lab coat/gown must be worn. Further details regarding this test will be provided in iLearn.

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 microscopic and macroscopic 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 Practical Test in Week 5.

Recommended Readings

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

The recommended texts for this unit include:

1. **Physiology (primary)**: Silverthorn, D.U. (2014 or 2016). *Human physiology: an integrated approach* (6th or 7th Global ed). Boston: Pearson Education.
2. **Physiology (secondary)**: Hall, J.E. & Guyton, A.C. (2006). *Textbook of medical physiology* (13th ed). Philadelphia, PA: Saunders, Elsevier.
3. **Anatomy**: Moore, K.L., Dalley, A.F. & Agur, A.M.R. (2014). *Clinically oriented anatomy* (7th ed). Philadelphia, PA: Lippincott Williams & Wilkins.
4. **Anatomy Atlas**: Abrahams, P.H. *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 Wiliams & 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 3 and 5 the first lecture slot will include a mini-exam assessment (so please ensure you arrive promptly to class). In Week 4 the first lecture slot will include a feedback session on the first mini-exam and will not be recorded.
- Tuesday generally 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 will consist of anatomy practical and simulation lab classes (both 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).

- Thursday has no face-to-face classes. This is a further opportunity for independent study.
- Friday you will have a clinical case-based tutorial, except in week 4 (where you will have the exercise practical in lieu of regular tutorials in that week).

In Weeks 1 - 3 there will be online tutorials and activities that must be completed during the week.

The Exercise Practical is a 2 h class that replaces the case-based tutorial in Week 4 only. If you normally attend your Friday tutorial between 9-10 am or 10-11 am, you should attend the practical from 11am-1 pm. If you normally attend the Friday tutorial between 11 am-12 pm or 12-1 pm, you should attend the practical from 9 am-11 am.

The Practical Test is a 2 h test that replaces the anatomy practical and simulation lab classes in Week 5 only. It will assess content covered in practical classes in the preceding weeks. This test will consist of anatomy lab stations and a written component. Closed shoes and a lab coat/gown must be worn. Further details regarding the scheduling of this test will be provided via iLearn.

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). 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). 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).

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) 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 microscopic and macroscopic levels.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.

Assessment tasks

- Mini-Exams
- Online Learning Activities
- 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

- Mini-Exams
- Online Learning Activities
- 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 clinical cases.
- Evaluate cardiorespiratory related scientific literature, media reports, and online resources.

Assessment tasks

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

Assessment tasks

- Mini-Exams
- Online Learning Activities
- 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 microscopic and macroscopic 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

- Mini-Exams
- Online Learning Activities
- 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 microscopic and macroscopic 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.
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Assessment tasks

- Mini-Exams

- Online Learning Activities
- 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 microscopic and macroscopic 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.
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Assessment tasks

- Mini-Exams
- Online Learning Activities
- 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 microscopic and macroscopic 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

- Mini-Exams
- Online Learning Activities
- 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 microscopic and macroscopic levels.
- Recognise deviations from normal cardiorespiratory anatomy and physiology that lead to pathology.
- Use cardiorespiratory knowledge to solve clinical problems and analyse clinical cases.

Assessment tasks

- Mini-Exams
- Online Learning Activities
- Practical Test