



MEDI301

Cardiorespiratory 2

MED 3 2019

Medicine and Health Sciences Faculty level units

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General Information

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Credit points

3

Prerequisites

Admission to BClinSc and (12cp at 100 level) and (9cp at 200 level including MEDI201)

Corequisites

Co-badged status

Unit description

This is an intensive unit aimed at extending the understanding of the cardiovascular and respiratory body systems developed in MEDI201 (Cardiorespiratory 1). Learners will develop: a deep understanding of cardio-respiratory physiology, knowledge of the mechanisms that maintain homeostasis in these systems, and the ability to relate cardiovascular and respiratory diseases to underlying pathophysiological pathways. Students will identify key cardio-respiratory diseases and create a 'health campaign' targeting differing audiences with a view to summarising and broadcasting a holistic analysis of the impact of cardio-respiratory disease on individuals, as well as local and global communities. Learners will also critically consider experimental design and interpretation of scientific and medical evidence in cardio-respiratory contexts.

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:

Coherently explain the functions of the cardiovascular and respiratory body systems and the mechanisms that maintain their homeostasis.

Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).

Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.

Summarise relevant information and evidence to construct a variety of communications to inform different healthcare stakeholders.

Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.

Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

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 courses. 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 Bachelor of Clinical Science. 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 are required to attend a minimum of 80% of all small group interactive sessions. Students that do not meet this requirement 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-consideration>.

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	Hurdle	Due
Health campaign	30%	No	Weeks 2 and 4
Experiment design	30%	No	Weeks 3 and 5

Name	Weighting	Hurdle	Due
<u>Mini-exam</u>	40%	No	Week 3 and 5

Health campaign

Due: **Weeks 2 and 4**

Weighting: **30%**

Health campaign poster of the type for display in the clinical workplace (individual task) and health campaign radio or web video advertisement of the type for community education (group task).

On successful completion you will be able to:

- Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).
- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.
- Summarise relevant information and evidence to construct a variety of communications to inform different healthcare stakeholders.
- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.
- Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

Experiment design

Due: **Weeks 3 and 5**

Weighting: **30%**

Aim and method for a study pertaining to a physiological challenge and cardio/respiratory regulation. Taking one of the physiological challenge study designs, running a pilot study, and writing up the results and observations.

On successful completion you will be able to:

- Coherently explain the functions of the cardiovascular and respiratory body systems and the mechanisms that maintain their homeostasis.
- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.
- Summarise relevant information and evidence to construct a variety of communications to inform different healthcare stakeholders.

- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.
- Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

Mini-exam

Due: **Week 3 and 5**

Weighting: **40%**

In-class exam on unit content to date.

On successful completion you will be able to:

- Coherently explain the functions of the cardiovascular and respiratory body systems and the mechanisms that maintain their homeostasis.
- Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).

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.

Recommended Readings

Unit readings for MEDI301 are available via the university library website.

The recommended texts for this unit include:

1. Silverthorn DU. (2014, 2016 or 2018). *Human physiology: an integrated approach* (6th, 7th or 8th Global ed). Boston: Pearson Education.
2. Hall JE & Guyton AC. (2006). *Textbook of medical physiology* (13th ed). Philadelphia, PA: Saunders, Elsevier.

Unit Schedule

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

- 3 hour lecture on unit material. Mini-exams will be conducted at the beginning of the lecture on weeks when due.
- 3 hour seminar, which can take the form of a tutorial, practical, or group activity as required for the content of that week.

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 published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@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

If you are a Global MBA student contact globalmba.support@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 outcome

- Summarise relevant information and evidence to construct a variety of communications to inform different healthcare stakeholders.

Assessment tasks

- Health campaign
- Experiment design

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

- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.
- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.
- Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

Assessment tasks

- Health campaign
- Experiment design

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

- Coherently explain the functions of the cardiovascular and respiratory body systems and the mechanisms that maintain their homeostasis.
- Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).

Assessment tasks

- Health campaign
- Experiment design
- Mini-exam

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and

systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).
- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.

Assessment tasks

- Health campaign
- Experiment design
- Mini-exam

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.
- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.
- Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

Assessment tasks

- Health campaign
- Experiment design

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

- Coherently explain the functions of the cardiovascular and respiratory body systems and the mechanisms that maintain their homeostasis.
- Relate knowledge of cardiovascular and respiratory structure and function to cardio-respiratory disease processes (and potential interventions).
- Critically evaluate experimental design and appraise scientific and medical evidence to justify solutions to clinical problems and inform professional decision-making.
- Summarise relevant information and evidence to construct a variety of communications to inform different healthcare stakeholders.
- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.
- Effectively participate in classes and peer teams seeking and reflecting on feedback to improve individual and team performance.

Assessment tasks

- Health campaign
- Experiment design
- Mini-exam

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

- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.

Assessment tasks

- Health campaign
- Experiment design

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

- Demonstrate appropriate awareness of the societal, cultural and ethical dimensions of healthcare and medical research in the field of cardio-respiratory disease.

Assessment tasks

- Health campaign
- Experiment design