



BMSC12006 *Cardiorespiratory Physiology and Coronary Care Management*

Term 1 - 2017

Profile information current as at 25/04/2024 03:00 pm

All details in this unit profile for BMSC12006 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

On successful completion of this unit, you will be able to discuss the structure and function of the respiratory and cardiovascular systems and relate physiological function to common clinical tests of cardiorespiratory physiology. You will study the pathophysiology, diagnosis and treatment of a range of cardiac and respiratory conditions including acute coronary syndromes, cardiac failure, and chronic obstructive pulmonary diseases. Skill development in spirometry and electrocardiography (ECG) and best practice measurement will occur through practical exercises. You will also gain skills in case management and clinical interventions during the residential school to contextualize knowledge of respiratory and coronary care.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

BMSC11002 Human Body Systems 2

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 1 - 2017

- Distance
- Rockhampton
- Sydney

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:

Click here to see your [Residential School Timetable](#).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

[Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

[Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Written Assessment**

Weighting: 40%

2. **Practical Assessment**

Weighting: Pass/Fail

3. **Examination**

Weighting: 60%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Staff and Students

Feedback

The residential school needs have either be reduced or have more tasks available for the students to complete.

Recommendation

Lab tutor has more activities that could be included in this residential school. We could expand on the toad heart practical, rather than visualisation the students could record data sets.

Feedback from Students

Feedback

One piece of graded assessment is heavy weighting for this course

Recommendation

Re-introduce exam or another piece of graded assessment.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Describe and recognise common coronary and cardiorespiratory pathologies.
2. Perform, according to best practice guidelines, spirometry, 12 lead electrocardiographic (ECG) and undertake thorough clinical history and assessment of cardiac patients.
3. Accurately interpret 12 lead ECGs to aid in the diagnosis of common cardiac conditions.
4. Recognise the effects of the major medication groups on cardiovascular and respiratory system function.
5. Evaluate clinical data to aid in diagnosis and patient management.

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Written Assessment - 40%	•		•	•	•
2 - Practical Assessment - 0%	•	•	•		•
3 - Examination - 60%	•		•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•	•	•	•
2 - Problem Solving	•	•	•	•	•
3 - Critical Thinking	•	•	•	•	•
4 - Information Literacy	•	•	•	•	•
5 - Team Work		•			
6 - Information Technology Competence		•			
7 - Cross Cultural Competence		•			•
8 - Ethical practice		•			•
9 - Social Innovation					
10 - Aboriginal and Torres Strait Islander Cultures					

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 40%	•	•	•	•		•				
2 - Practical Assessment - 0%	•	•	•	•	•	•	•	•		
3 - Examination - 60%	•	•	•							

Textbooks and Resources

Textbooks

BMSC12006

Prescribed

Cardiopulmonary Anatomy & Physiology: Essentials of Respiratory Care

Edition: 6th (2013)

Authors: Terry Des Jardins

Delmar Cengage Learning

NY , NY , USA

ISBN: ISBN 9780840022585

Binding: Paperback

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Prescribed

Huszar's Basic Dysrhythmias and Acute Coronary Syndromes: Interpretation and Management Text & Pocket Guide Package, 4th Edition

Edition: 4th (2011)

Authors: Keith Wesley

Elsevier

USA

ISBN: 9780323039741

Binding: Paperback

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- LabTutor

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Andrew Fenning Unit Coordinator

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Schedule

Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Cardiovascular anatomy and physiology, blood vessels, blood pressure, autonomic nervous system control of the CVS, basic electrophysiology and ECG	Weekly Moodle block	

Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Respiratory anatomy and physiology (URT/LRT), respiratory blood supply and circulations, autonomic control of respiration	Weekly Moodle block	
Week 3 - 20 Mar 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Respiratory physiology 1 - ventilation, resistance, compliance, acid/base balance, typical lung pathologies	Weekly Moodle block	
Week 4 - 27 Mar 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Respiratory physiology 2 - spirometry and oxygen transport	Weekly Moodle block	
Week 5 - 03 Apr 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Cardiac electrophysiology 1 - basic ECG and interpretation	Weekly Moodle block	
Vacation Week - 10 Apr 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Week 6 - 17 Apr 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Cardiac electrophysiology 2 - arrhythmia diagnosis	Weekly Moodle block	
Week 7 - 24 Apr 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Cardiac electrophysiology 2 - arrhythmia diagnosis	Weekly Moodle block	Written Assessment - assignment Due: Week 7 Friday (28 Apr 2017) 11:00 pm AEST
Week 8 - 01 May 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Cardiac electrophysiology 2 - arrhythmia diagnosis	Weekly Moodle block	
Week 9 - 08 May 2017		
Module/Topic	Chapter	Events and Submissions/Topic
No classes - residential school 1		Practical Assessment Due: Week 9 Tuesday (9 May 2017) 11:00 pm AEST
Week 10 - 15 May 2017		
Module/Topic	Chapter	Events and Submissions/Topic
No classes - residential school 2		
Week 11 - 22 May 2017		
Module/Topic	Chapter	Events and Submissions/Topic
No classes - revision		
Week 12 - 29 May 2017		
Module/Topic	Chapter	Events and Submissions/Topic
No classes - revision		
Review/Exam Week - 05 Jun 2017		
Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Written Assessment - assignment

Assessment Type

Written Assessment

Task Description

Assignment topic - Choose **one** of the following options as the focus of your assessment item:

1 - A patient with cardiomyopathy inducing left ventricular hypertrophy, decreased left ventricular function and long-QT syndrome

OR

2 - An elite freediver who is at the point of hypoxia on the return journey to the surface following a deep dive

OR

3 - A soldier suffering from heat exhaustion and hyponatremia following a mission near the equator

Using **one** of the above scenarios, describe the interrelationship of the cardiovascular and respiratory systems by exploring the contribution of each system to typical "normal" physiological functioning compared to their current status.

Students should use journal articles and referenced textbook material to support their arguments. **Word limit is 4000 words.**

Assessment Due Date

Week 7 Friday (28 Apr 2017) 11:00 pm AEST

Return Date to Students

Week 9 Friday (12 May 2017)

Weighting

40%

Minimum mark or grade

50%

Assessment Criteria

The following criteria and marking scheme will be used to evaluate the assignment:

Section	Marks	Criteria
Topic/Title/Content	30	The response should state clearly the topic to be reviewed together with sufficient supporting evidence (references). Statements should be appropriately referenced and ideas should flow in a logical manner. Examination of practical experiments/techniques should be included.
Referencing	10	All articles referred to in the assignment need to be listed in this section. Referencing style should follow the "Harvard" style as described in the website listed in the assignments section of this Course Profile. It is estimated that a minimum of 10 journal articles will be required. Currency of the journals articles is important.
Positioning of Discussion	30	The implications of the relationship between both systems and how changes can be typically assessed should be discussed. The assignment should also discuss the current status of the subject described in each scenario.
Writing style/Presentation	30	The document should be word processed and submitted electronically via Moodle. Assignments should be clearly written in full sentences (not points) using correct spelling and grammar. Abbreviations should be explained when first used.
Total	100	

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Learning Outcomes Assessed

- Describe and recognise common coronary and cardiorespiratory pathologies.
- Accurately interpret 12 lead ECGs to aid in the diagnosis of common cardiac conditions.
- Recognise the effects of the major medication groups on cardiovascular and respiratory system function.
- Evaluate clinical data to aid in diagnosis and patient management.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

2 Practical Assessment

Assessment Type

Practical Assessment

Task Description

During the practical / residential school block you will complete a series of tasks including a practical evaluation of 12-lead ECG placement, patient assessment and interpretation. Other items will focus on cardiorespiratory anatomy and physiology and autonomic nervous system modulation. The tasks will be graded during the residential school as P/F.

Assessment Due Date

Week 9 Tuesday (9 May 2017) 11:00 pm AEST

Practical exercises and assessment will be completed during the block practical/residential school

Return Date to Students

Week 10 Tuesday (16 May 2017)

Weighting

Pass/Fail

Assessment Criteria

The tasks will be graded during the residential school as P/F. Check the assessment block in Moodle when available in relation to the practical manual.

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Offline

Submission Instructions

Completed during residential school

Learning Outcomes Assessed

- Describe and recognise common coronary and cardiorespiratory pathologies.
- Perform, according to best practice guidelines, spirometry, 12 lead electrocardiographic (ECG) and undertake thorough clinical history and assessment of cardiac patients.
- Accurately interpret 12 lead ECGs to aid in the diagnosis of common cardiac conditions.
- Evaluate clinical data to aid in diagnosis and patient management.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

60%

Length

150 minutes

Exam Conditions

Closed Book.

Materials

No calculators permitted

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?



Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem