BMSC13019 *Advanced Cardiovascular and Respiratory Measurement*
Term 2 - 2020

Profile information current as at 19/05/2024 05:32 pm

General Information

Overview

Accurate analysis and assessment of cardiovascular and respiratory conditions requires comprehensive knowledge of clinical tests of cardiovascular and respiratory function. In this unit, you will study advanced clinical diagnostic tests of cardiovascular and respiratory function and relate it to pathophysiology of cardiac and respiratory conditions. This will include study of cardiac function tests including haemodynamic, electrophysiological and angiographic cardiovascular measurement; and the study of respiratory function tests including lung volumes and capacities, pulmonary gas exchange, airway resistance, compliance and blood gas measurements. In preparation for clinical placement you will attain knowledge and skills needed to analyse cardiovascular and respiratory conditions within an ethical framework of best practice and patient safety.

Details

Career Level: *Undergraduate*
Unit Level: *Level 3*
Credit Points: *12*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Pre-requisite BMSC12006 Cardiorespiratory Physiology and Measurement
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 2 - 2020

- Online
- Rockhampton

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).

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 12-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 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: 50%
2. **Online Test**
Weighting: 50%

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.

Unit Learning Outcomes

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

1. Discuss the underlying pathophysiology of cardiovascular and respiratory conditions
2. Discuss the principles and procedures of various cardiovascular and respiratory measurements according to best practice guidelines
3. Justify the implementation of a particular cardiovascular or respiratory measurement
4. Interpret the results of cardiovascular and respiratory measurements
5. Review the pharmacological implications associated with cardiovascular and respiratory measurements
6. Discuss the physiological exercise responses in cardiovascular and respiratory measurement.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level · Introductory Level · Intermediate Level · Graduate Level · Professional Level · Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
1 - Written Assessment - 50%	•	•	•	•	•	•
2 - Online Test - 50%	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - 50%	•	•	•	•			•	•		
2 - Online Test - 50%	•	•	•	•			•	•		

Textbooks and Resources

Textbooks

BMSC13019

Prescribed

Ruppel's manual of pulmonary function testing
11th Edition (2017)
Authors: Carl D Mottram
Elsevier
St Louis , Missouri , USA
ISBN: 9780323356251
Binding: Hardcover

Additional Textbook Information
Resources for the cardiac component of this unit will be provided on the Moodle site.
If you prefer to study with a paper copy, they can be purchased at the CQUni Bookshop here: http://bookshop.cqu.edu.au (search on the Unit code). eBooks can be purchased at the publisher's website.

IT Resources

You will need access to the following IT resources:

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

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Candice Pullen Unit Coordinator
c.pullen@cqu.edu.au

Schedule

Week 1 - 13 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Indications for pulmonary function testing	Mottram Chapter 1	

Week 2 - 20 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Spirometry Diffusion testing	Mottram Chapters 2 and 3	

Week 3 - 27 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lung volumes and gases distribution tests Ventilation and ventilatory control tests	Mottram Chapter 4 and 5	

Week 4 - 03 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Blood gas analysis Paediatric pulmonary function tests	Mottram Chapters 6 and 8	

Week 5 - 10 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Cardiopulmonary exercise testing Bronchoprovocation and specialised testing	Mottram Chapters 7,9 and 10	

Vacation Week - 17 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 24 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Pulmonary function testing equipment Quality Assurance	Mottram Chapters 11 and 12	

Week 7 - 31 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Indications for cardiac testing Haemodynamic assessment and testing	Moodle Resource. See eReading list.	

Week 8 - 07 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac electrophysiology ECG analysis 1	Moodle Resource. See eReading list.	**Written Assessment** Due: Week 8 Friday (11 Sept 2020) 5:00 pm AEST

Week 9 - 14 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
ECG analysis 2	Moodle Resource. See eReading list.	

Week 10 - 21 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Invasive testing	Moodle Resource. See eReading list.	

Week 11 - 28 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac and respiratory pharmacology	Moodle Resource. See eReading list.	

Week 12 - 05 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revision Online interactive oral presentations		

Review/Exam Week - 12 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 19 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Lectures and tutorials will be held online via zoom. All lectures and tutorials will be recorded and placed on Moodle. Please see the Moodle site for dates and time.
All students will be required to complete an online test during week 12. Students will be required to select a date and time for their interactive oral presentation. Dates and times will be available on Moodle after Census date. Please select a date and time early in the term.

Assessment Tasks

1 Written Assessment

Assessment Type
Written Assessment

Task Description
Having an understanding of a wide range of pulmonary function testing procedures, the data they generate and the physiological implications of the results are of paramount importance as they are integral diagnostic procedures routinely used in clinical settings. This assessment task will assist you in understanding how pathological conditions of the respiratory system impact upon normal physiology and how they present in routine clinical tests.
You will be given case studies and associated data. You will be required to interpret the given information by identifying the pathological condition that is presented and provide answers to a series of questions which relate to each case study. In providing a response you may refer to the textbook, journal articles, and profession body websites.
Further information regarding the assessment item will be available on the unit Moodle page.

Assessment Due Date
Week 8 Friday (11 Sept 2020) 5:00 pm AEST

Return Date to Students
Week 10 Friday (25 Sept 2020)
Feedback will be returned via Moodle.

Weighting
50%

Minimum mark or grade
You will be required to achieve a minimum of 50% of the marks available for this assessment task to pass this unit.

Assessment Criteria
Performance in this task will be measured using the criteria of accuracy and a question-specific rubric, which will be made available via the Moodle site.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submit as a Word Document

Learning Outcomes Assessed

- Discuss the underlying pathophysiology of cardiovascular and respiratory conditions
- Discuss the principles and procedures of various cardiovascular and respiratory measurements according to best practice guidelines
- Justify the implementation of a particular cardiovascular or respiratory measurement
- Interpret the results of cardiovascular and respiratory measurements
- Review the pharmacological implications associated with cardiovascular and respiratory measurements
- Discuss the physiological exercise responses in cardiovascular and respiratory measurement.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking

- Information Literacy
- Cross Cultural Competence
- Ethical practice

2 Interactive Oral Presentation

Assessment Type
Online Test

Task Description
Throughout this course, you have explored a number of techniques used to assess cardiovascular and respiratory function in patients and how disease processes can alter normal function.
In this assessment item, you will be required to develop an oral presentation discussing a current cardiovascular or respiratory issue affecting your local community (eg: Alterations in lung function due to COVID 19 infection or Rheumatic heart disease within Indigenous communities). You will be expected to discuss the pathophysiology, testing regimes or diagnostic tests, patient monitoring and treatment options for your chosen topic. Please email the Unit Coordinator by Week 10 with your chosen topic. If you have not selected a topic by Friday of week 10, the Unit Coordinator will randomly select a topic for you.
You may make use of multimedia, such as PowerPoint, to support your presentation. Presentations will be delivered live via Zoom during Week 12. Your presentation should be between 8-10 minutes, followed by 5 minutes of questions from the Unit Coordinator. Questions will be based on your oral presentation and will be used to assess your understanding of both the topic and the underlying theory.

Assessment Due Date

Oral presentations will be delivered during week 12. Booking timeslots will be made availible on the Moodle site after Census date.

Return Date to Students

Certification of Grades

Weighting
50%

Minimum mark or grade
You will be required to achieve a minimum of 50% of the marks available for this assessment task to pass this unit.

Assessment Criteria
Students will be assessed on presentation skills, clarity of speech and ability to apply theoretical concepts to current modern-day issues.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Presentations will be conducted live via Zoom.

Learning Outcomes Assessed

- Discuss the underlying pathophysiology of cardiovascular and respiratory conditions
- Discuss the principles and procedures of various cardiovascular and respiratory measurements according to best practice guidelines
- Justify the implementation of a particular cardiovascular or respiratory measurement
- Interpret the results of cardiovascular and respiratory measurements
- Review the pharmacological implications associated with cardiovascular and respiratory measurements
- Discuss the physiological exercise responses in cardiovascular and respiratory measurement.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

- Cross Cultural Competence
- Ethical practice

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