BMSC13019 *Advanced Cardiovascular and Respiratory Measurement*
Term 2 - 2024

Profile information current as at 05/09/2024 02:31 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 - 2024

- 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. **Oral Examination**
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.

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 Student unit evaluation survey

Feedback

Some students felt that weekly interactive activities may be beneficial.

Recommendation

The inclusion of weekly interactive activities will be considered to promote student engagement.

Feedback from Student unit evaluation survey

Feedback

Students enjoyed the structure of the lectures and fortnightly tutorials.

Recommendation

The current teaching strategy will be maintained.

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 - Oral Examination - 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						

Textbooks and Resources

Textbooks

BMSC13019

Prescribed

ISE Electrocardiography for Health Professionals
5th Edition (2019)
Authors: Kathryn Booth and Thomas O'Brien
McGraw Hill
New York , America
ISBN: 9781260098310
Binding: Paperback
BMSC13019

Prescribed

Ruppel's manual of pulmonary function testing
12th Edition (2017)
Authors: Carl D Mottram
Elsevier
St Louis , Missouri , USA
ISBN: 9780323762618
Binding: Hardcover

View textbooks at the CQUniversity Bookshop

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 styles below:

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

For further information, see the Assessment Tasks.

Teaching Contacts

Candice Pullen Unit Coordinator
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Schedule

Week 1 - 08 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Indications for pulmonary function testing	Mottram Chapter 1	Tutorial on week 1 content

Week 2 - 15 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic

Spirometry Diffusion testing	Mottram Chapters 2 and 3	

Week 3 - 22 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Lung volumes, airway resistance and gases distribution tests Ventilation and ventilatory control tests	Mottram Chapter 4 and 5	Tutorial on weeks 2 and 3 content

Week 4 - 29 Jul 2024

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

Week 5 - 05 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Bronchoprovocation challenge testing Specialised tests and evaluations	Mottram Chapters 9 and 10	Tutorial on weeks 4 and 5 content

Vacation Week - 12 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
No content will be covered this week.		

Week 6 - 19 Aug 2024

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

Week 7 - 26 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Cardiopulmonary exercise testing and field testing	Mottram Chapter 7	Tutorial on weeks 6 and 7 content

Week 8 - 02 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Clinical presentation and management of the cardiac patient Ambulatory Monitoring	Booth and O'Brien Chapters 14 and 13	**Written Assessment** Due: Week 8 Monday (2 Sept 2024) 9:00 am AEST

Week 9 - 09 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Electrophysiology Electrical axis and hypertrophy	Booth and O'Brien Chapters 2 and 15	Tutorial on weeks 8 and 9 content

Week 10 - 16 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Bundle branch blocks Myocardial infarction	Booth Chapter 10 Supplied resources on eReading List	

Week 11 - 23 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Invasive testing procedures Cardiac and respiratory pharmacology	Supplied resources on eReading List	Tutorial on weeks 10 and 11 content

Week 12 - 30 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic

Revision		**Online Oral Examinations will be conducted during the week.** **Onilne Oral Examination** Due: Week 12 Monday (30 Sept 2024) 11:45 pm AEST

Review/Exam Week - 07 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 14 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Tutorials will be held on fortnightly. All pre-recorded lectures and tutorials will be recorded and placed on Moodle. The tutorials will be student-led and allow students to discuss the unit content covered to date. Please see your timetable for dates and times.
Students will be required to complete an Oral Examination online during week 12. Dates and times will be available on Moodle after the vacation week.

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 normal physiology and how they present in routine clinical tests.
You will be given a series of 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 that relate to each case study. In providing a response you may refer to the textbook, journal articles, and professional body websites.
Use of Generative Artificial Intelligence:
Students are permitted to use Generative AI for the assessment in the following ways:

- Developing literature search strategies
- Guidance on developing arguments
- Assistance in formatting and grammar

If Generative AI is used in any way, it must be cited as per the CQU Guidelines (Academic Learning Centre). The following statement must be completed and included on the front page of the uploaded assessment:
"*I have used (insert technology) to (insert how you used this) in accordance with the requirements of this unit. The reason I used this was to (explain why you used it). The details of how I used it as (insert how). I hereby declare that the submission is an appropriate representation of my individual skills and abilities to meet the requirements of the task/s.*"
As per academic writing requirements and assessment criteria; citations of information should be of the primary source (i.e statistics returned by AI must be fact-checked and referenced from their original source as well as the AI source). Failure to cite primary sources as well as AI sources could be considered a breach of academic integrity.
Your use of Generative AI must be clearly outlined in an appendix including the prompt used and Generative AI response. Failure to include an appendix may result in academic integrity investigation.

Assessment Due Date
Week 8 Monday (2 Sept 2024) 9:00 am AEST

Return Date to Students
Week 10 Monday (16 Sept 2024)

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
Responses to case study questions will be graded according to a marking guide.
Marks will be awarded based on factual accuracy. All sources must be cited appropriately and in-text citations be utilised in the responses.
Students will be assessed on their ability to apply theoretical knowledge and evaluate data critically.

Referencing Style

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

Submission
Online

Submission Instructions
Submit as a Word Document or PDF

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.

2 Onilne Oral Examination

Assessment Type
Oral Examination

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.
This assessment item will assess your understanding of the content covered in weeks 7-11 and its application to clinical scenarios.
During this assessment, students will be required to respond verbally to a series of questions. Each student must select a time during week 12 to complete this assessment task. Oral examinations will be conducted individually, online via Zoom. The assessment will take approximately 40 minutes to complete. All sessions will be recorded for moderation purposes.

Use of Generative Artificial Intelligence:
Students are NOT permitted to use Generative AI for this assessment.
Students may use hand-written study notes, the textbook and/or printed lecture slides to assist with developing a response. Students will not be permitted to use or engage with any electronic device for the duration of the oral assessment.

Assessment Due Date
Week 12 Monday (30 Sept 2024) 11:45 pm AEST

Students will be able to select a timeslot that best suits them via Moodle.

Return Date to Students
Review/Exam Week Monday (7 Oct 2024)

Feedback will be uploaded to 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
Students will be graded according to a marking guide for each question.
Responses will be assessed according to factual accuracy and relevance for their responses to the question.

Referencing Style

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

Submission
No submission method provided.

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.

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