



# PMSC12004 Advanced Electrophysiology and Coronary Care

## Term 3 - 2019

Profile information current as at 19/04/2024 11:38 am

All details in this unit profile for PMSC12004 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

This unit will enable you to complete detailed clinical assessments and examination of cardiac patients, focusing on the use of 12-lead electrocardiograms as a diagnostic tool in emergency care. You will study the pathophysiology, diagnosis, and treatment of a range of cardiac and cardiorespiratory conditions, including acute coronary syndromes, cardiac failure, and cardiac arrest. Practical coronary care skills such as defibrillation and 12 lead ECG acquisition will be taught in this unit. Problem-based case management and clinical interventions are practised in the high-fidelity simulation environment during the residential school, allowing you to contextualise your knowledge of coronary care in preparation for decision-supported thrombolysis in paramedic practice.

### 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

Pre-requisite - PMSC11002 and BMSC11002 Co-requisite - PMSC12001

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 3 - 2019

- Mixed Mode

### 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: 50%

#### 2. **Practical Assessment**

Weighting: Pass/Fail

#### 3. **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 Unit Evaluation

##### Feedback

Timely, clear and actionable assessment feedback.

##### Recommendation

Students appreciated individual feedback on assessment items. Continue to provide individualised feedback on assessments to assist student engagement and learning.

#### Feedback from Unit Evaluation

##### Feedback

Clinical discussion sessions prior to scenario practice during residential school.

##### Recommendation

Feedback highlighted that students enjoyed the ability to review ECGs and the underlying pathophysiology of disease presentation before targeted scenario practice. Continue to use this method for residential schools.

#### Feedback from Unit Evaluation

##### Feedback

Study guides, handouts and notes assisted with learning.

##### Recommendation

ECG guides, weekly study guides and supplementary study notes were made available to assist with learning. Continue to develop and refine these resources.

## Unit Learning Outcomes

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

1. Apply evidence-based knowledge of pathophysiology to differentiate between a broad range of cardiorespiratory conditions
2. Accurately interpret ECGs to diagnose coronary conditions including dysrhythmias and acute coronary syndromes
3. Integrate comprehensive knowledge of current evidence-based practice to articulate and/or undertake clinical assessment, skills and interventions in the management of cardiorespiratory conditions.

Justification for this unit is strongly influenced by industry feedback on first CQUniversity graduate paramedics. By increasing the paramedic-specific focus of this unit the graduates will be better prepared for independent on-road practice without additional educational support from the ambulance services.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
<b>1 - Written Assessment - 50%</b>	•		

Assessment Tasks	Learning Outcomes		
	1	2	3
2 - Practical Assessment - 0%		•	•
3 - Examination - 50%	•	•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
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 - Practical Assessment - 0%	•	•	•	•	•			•		
3 - Examination - 50%		•	•	•						

## Textbooks and Resources

### Textbooks

PMSC12004

#### Prescribed

##### **Huszar's ECG and 12-Lead Interpretation**

5th Edition (2017)

Authors: Keith Wesley

Elsevier

St Louis , Missouri , USA

ISBN: 978-0-323-35575-9

Binding: Paperback

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#### Supplementary

##### **The 12-Lead ECG in Acute Coronary Syndromes**

4th Edition (2019)

Authors: Time Phelan, Barbara Aehlert

Elsevier

St Louis , Missouri , USA

ISBN: 978-0-323-49789-3

Binding: Spiral

[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 style: [American Psychological Association 6th Edition \(APA 6th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Andrew Hodgetts** Unit Coordinator

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**Shannon Delpont** Unit Coordinator

[s.delpont@cqu.edu.au](mailto:s.delpont@cqu.edu.au)

## Schedule

### Week 1 - 11 Nov 2019

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac anatomy and physiology review. ECG basics.	Huszar's ECG and 12-Lead Interpretation; Chapter 1, 2, 3 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 1	

**Week 2 - 18 Nov 2019**

Module/Topic	Chapter	Events and Submissions/Topic
Cardiopulmonary Resuscitation review. 12 Lead ECG introduction and acquisition.	Huzar's ECG and 12-Lead Interpretation; Chapter 12 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 2	

**Week 3 - 25 Nov 2019**

Module/Topic	Chapter	Events and Submissions/Topic
Systematic approach to ECG interpretation. Sinus and Atrial rhythms.	Huzar's ECG and 12-Lead Interpretation; Chapter 4, 5, 6	

**Week 4 - 02 Dec 2019**

Module/Topic	Chapter	Events and Submissions/Topic
Junctional rhythms and Atrio-ventricular Blocks.	Huzar's ECG and 12-Lead Interpretation; Chapter 7, 9	Written Assessment Part A due 5:00pm Friday

**Vacation Week - 09 Dec 2019**

Module/Topic	Chapter	Events and Submissions/Topic

**Week 5 - 16 Dec 2019**

Module/Topic	Chapter	Events and Submissions/Topic
Ventricular rhythms and Bundle Branch Blocks.	Huzar's ECG and 12-Lead Interpretation; Chapter 8, 13 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 4	

**Week 6 - 23 Dec 2019**

Module/Topic	Chapter	Events and Submissions/Topic
Coronary Heart Disease and Acute Coronary Syndromes Part 1.	Huzar's ECG and 12-Lead Interpretation; Chapter 15, 16, 17 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 3	

**Week 7 - 06 Jan 2020**

Module/Topic	Chapter	Events and Submissions/Topic
Coronary Heart Disease and Acute Coronary Syndromes Part 2.	Huzar's ECG and 12-Lead Interpretation; Chapter 15, 16, 17 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 3	Written Assessment Part B & C due 5:00pm Friday  <b>Written Assessment</b> Due: Week 7 Friday (10 Jan 2020) 5:00 pm AEST

**Week 8 - 13 Jan 2020**

Module/Topic	Chapter	Events and Submissions/Topic
Coronary Heart Disease and Acute Coronary Syndromes Part 3.	Huzar's ECG and 12-Lead Interpretation; Chapter 15, 16, 17 The 12-Lead ECG in Acute Coronary Syndromes; Chapter 3	

**Week 9 - 20 Jan 2020**

Module/Topic	Chapter	Events and Submissions/Topic

Other ECG findings and Congenital Heart Defects.

Huzar's ECG and 12-Lead Interpretation;  
Chapter 14  
The 12-Lead ECG in Acute Coronary Syndromes;  
Chapter 3

#### Week 10 - 27 Jan 2020

Module/Topic	Chapter	Events and Submissions/Topic
When to call for CCP/ICP/MICA backup and what they can do for your patient. Residential School		

#### Week 11 - 03 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
Residential School. Self directed learning.		<b>Practical Assessment Due: Week 11 Monday (3 Feb 2020) 11:45 pm AEST</b>

#### Week 12 - 10 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
Exam revision. Self directed learning.		

#### Exam Week - 17 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
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## Term Specific Information

Students enrolled as Distance will be required to attend a compulsory residential school. Students must nominate for the residential school through MyCQU, under My Timetable in the My Units tab. The Term 3 residential school is being held in Cairns only.

## Assessment Tasks

### 1 Written Assessment

#### Assessment Type

Written Assessment

#### Task Description

There are three (3) separate components to this assessment.

##### Part A - Assignment Proposal

You are required to choose one topic, from a list on the Moodle page, and submit a proposal for your discussion (Part B). The word limit for your assignment proposal is 500 words (+/- 10%). The proposal should include a brief description of your topic and its relevance and/or implications for paramedic practice. You must also provide a brief explanation of why you chose this particular topic. Finally, you must outline where and how you will source relevant academic literature pertinent to your topic and you must provide a preliminary reference list of no less than 5 recent peer reviewed scientific journal articles published after 2010.

##### Part B - Discussion

You are required to expand upon your initial assignment proposal and write a critical clinical review of the current research surrounding your topic. You will need to research evidence based, peer reviewed literature and discuss the strengths and/or weaknesses in the current research on your topic. You will use this evidence to formulate an argument for or against your topic and its place in contemporary paramedic practice. The word count for this assessment is 1500 word (+/- 10%).

##### Part C - ECG Interpretation and Clinical Significance

You will be supplied a series of 12 Lead ECGs. You will be required to apply the Systematic Approach to ECG Interpretation to each of the ECGs and diagnose the ECG accurately. Furthermore you will identify and mark the components of the Systematic Approach to ECG Interpretation on each ECG and discuss the clinical significance of these components. The word count for this assessment is no more than 100 words per ECG (+/- 10%). Exemplars on how to

complete this component will be available on the Moodle page.

### **Assessment Due Date**

Week 7 Friday (10 Jan 2020) 5:00 pm AEST

Part A is due Friday 5:00pm of Week 4; Part B & C are due Friday 5:00pm of Week 7

### **Return Date to Students**

Week 9 Friday (24 Jan 2020)

### **Weighting**

50%

### **Minimum mark or grade**

50

### **Assessment Criteria**

Please write your assessment using the following style and format, and then upload it into the PMSC12004 Moodle page using the Assessment 1 - Written Assessment link in the Assessment tab.

Presentation:

The document should be formatted on A4 International Standard paper with margins of 2.54cm. Line spacing should be set to 1.5, Ariel font and size set to 12 point.

**Only submissions in Microsoft Word format, .doc or .docx, will be accepted.**

Format:

Cover page; a cover page must be included for this assessment, in the following format:

- Assessment number and name
- Unit number and name (PMSC12004 Advanced Electrophysiology and Coronary Care)
- Your name
- Student number
- Word count (not including cover page and references)
- Assessment due date (If you have an approved extension this needs to be noted here)

Part A:

Part A is worth 10 marks. The word limit is 500 words (+/- 10%), excluding cover page and references. The assessment will be marked against the rubric which will be available on the Moodle page. You must provide a reference list of no less than 5 recent peer reviewed scientific journal articles published after 2010.

**In the absence of an approved extension there will be no opportunity to submit this assessment after the due date.**

Part B:

Part B is worth 50 marks. The word limit is 1500 words (+/- 10%), excluding cover page and references. The assessment will be marked against the rubric which will be made available on the Moodle page. You must provide a reference list of no less than 10 recent peer reviewed scientific journal article published after 2010. You may use Australian and/or New Zealand ambulance service guidelines, as appropriate, and expert textbooks and websites. You are not permitted to reference your prescribed or supplementary textbook or lectures from this unit in the reference list.

**In the absence of an approved extension there will be no opportunity to submit this assessment after the due date.**

Part C:

Part C is worth 40 marks. The word limit is no more than 100 words per ECG (+/- 10%), excluding references. The assessment will be marked against the rubric which will be made available on the Moodle page. You are required to provide a reference list for this assessment. You are encouraged to source recent peer reviewed scientific journal articles published after 2010. You may reference the prescribed and/or supplementary text book, Australian and/or New Zealand ambulance service guidelines and expert websites as required.

**In the absence of an approved extension there will be no opportunity to submit this assessment after the due date.**

**This is an individual assessment and collaboration with another student is not permitted. Any student found to have collaborated with another student will be reported for academic misconduct.**

Your marks from Part A, B and C will be totalled to give an overall score out of 100. The pass mark for this assessment is 50.

### **Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)



## Submission

Online

## Submission Instructions

Only submissions in Microsoft Word format will be accepted (.doc or .docx files)

## Learning Outcomes Assessed

- Apply evidence-based knowledge of pathophysiology to differentiate between a broad range of cardiorespiratory conditions

## Graduate Attributes

- Critical Thinking
- Information Literacy
- Information Technology Competence

# 2 Practical Assessment

## Assessment Type

Practical Assessment

## Task Description

You will be required to attend an assessment day/s at: Residential School

Your assessment tasks will consist of three (3) Objective Structured Clinical Examinations (OSCEs). The format of the OSCEs may include any of the following: Case Management Exercise (Long format or short format) or Viva Voce.

All assessment tasks align with the learning outcomes for this unit, as described in the Unit Profile.

The Case Management Exercise (CME) will take the format of a structured scenario where you will be allocated thirty (30) minutes to complete the long format CME, or fifteen (15) minutes to complete the short format CME. The CME is designed to assess your knowledge and understanding of the material covered throughout the unit by means of a structured, simulated patient interaction. Furthermore the CME is designed to assess your ability to perform a thorough and accurate patient assessment and use this information to formulate a provisional diagnosis. In combination with your patient assessment and provisional diagnosis you will be required to implement appropriate and timely clinical interventions, procedures and/or skills commensurate with your current scope of practice. Scene management and effective communication skills, including the ability to deliver a clinical handover to a senior clinician (i.e. CCP) or other health care professional, will also be assessed.

The Viva Voce is a verbal or interview style assessment, where you will have fifteen (15) minutes to answer a series of questions to demonstrate your knowledge and understanding of the material covered throughout the unit.

## Assessment Due Date

Week 11 Monday (3 Feb 2020) 11:45 pm AEST

## Return Date to Students

Week 12 Friday (14 Feb 2020)

## Weighting

Pass/Fail

## Assessment Criteria

The practical assessment is a pass/fail assessment. You must achieve a cumulative mark of greater than 50% for the three (3) OSCEs to pass this assessment.

The Long format CME will be worth 40% of the overall marks and the Short format CME and Viva Voce are worth 30% each of the overall marks.

Multiple scoring tools/rubrics will be utilised, based on the type of OSCE assessment. The scoring tools/rubrics for each assessment type are validated and reliable and will be available for review via the Moodle page prior to the assessment day/s.

All assessments will be moderated by the Unit Coordinator, therefore your results and feedback will not be made available at the completion of your assessment day/s or residential school.

Critical errors in this unit will be classed as anything, by act or omission that: causes immediate harm or has the potential to cause harm, to yourself, partner, patient or bystanders or any procedure that is performed outside your scope of practice. During any form of assessment, if any of the following are witnessed the assessment will continue and be moderated, upon review and confirmation of a critical error no marks will be awarded for that assessment item.

Furthermore, any critical error discovered on review or moderation will result in no marks being given for that particular assessment.

- Unsafe defibrillation
- Incorrect joule delivered during defibrillation
- Defibrillation of a non-shockable rhythm

- Failure to recognise a cardiac arrest within 1 minute
- Failure to defibrillate a shockable rhythm within 2 minutes
- Failure to perform a complete drug check
- Incorrect sharps disposal or unsafe practice with a sharp
- Performing a skill or procedure outside the scope of practice taught to you in PMSC11002, PMSC12001 or PMSC12004
- Administering pharmacology that is outside your scope of practice, or administering an incorrect drug or drug dose.
- Any grossly unsafe practice, as determined by the assessing academic

If you do not understand any of the above, please do not hesitate to clarify with your unit coordinator.

**Failure to attempt/undertake an assessment task will result in a fail for this assessment**

### Referencing Style

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

### Submission

No submission method provided.

### Learning Outcomes Assessed

- Accurately interpret ECGs to diagnose coronary conditions including dysrhythmias and acute coronary syndromes
- Integrate comprehensive knowledge of current evidence-based practice to articulate and/or undertake clinical assessment, skills and interventions in the management of cardiorespiratory conditions.

### Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Ethical practice

## Examination

### Outline

Complete an invigilated examination.

### Date

During the examination period at a CQUniversity examination centre.

### Weighting

50%

### Length

180 minutes

### Minimum mark or grade

50%

### Exam Conditions

Closed Book.

### Materials

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