



PMSC13003 *Pharmacology in Paramedic Practice*

Term 3 - 2017

Profile information current as at 05/05/2024 05:03 am

All details in this unit profile for PMSC13003 have been officially approved by CQUUniversity 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

You will develop an understanding of pharmacotherapy in paramedic practice through investigation of the appropriate use of pharmacological interventions in patient management. You will develop knowledge of specific medications common to patients requiring care by paramedics, as well as skills to calculate medication dosages through a series of coursework and case management exercises.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Pre requisites: PMSC12001 Procedures and Skills in Paramedic Care and Co requisites: PHRM19001 Pharmacology and Toxicology or BMSC13010 Pharmacology

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 - 2017

- Distance

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 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. **Presentation and Written Assessment**

Weighting: 50%

2. **Online Quiz(zes)**

Weighting: 25%

3. **Online Quiz(zes)**

Weighting: 25%

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 feedback

Feedback

The use of learning tools, such as scenario-based learning, which shows students the relevance of this unit for paramedic practice

Recommendation

Continue to review and incorporate practical examples of the application of pharmacology in paramedic practice.

Feedback from Student feedback

Feedback

Assessments are good learning tools

Recommendation

Continue to review assessments to maintain balance and challenge students in application of their learning.

Feedback from Student feedback

Feedback

Lectures based upon drug therapy protocols - could just read it for themselves

Recommendation

A range of other learning tools to assist student learning to support the lectures have been developed - if the lectures are viewed in isolation this is fair and reasonable feedback. While one of the key undertakings of this unit is to orientate students to drug therapy protocols, a review with a view to incorporate more contextualisation into the drug therapy protocol lectures is recommended.

Unit Learning Outcomes

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

1. Describe the indications, pharmacokinetics, actions, routes of administration, contraindications, side effects and precautions of medications and fluids administered by paramedics, and how you would evaluate the effects of administration
2. Correctly calculate drug doses for the administration of paramedic medications
3. Discuss the implications of renal or hepatic dysfunction, pregnancy and extremes of age on drug administration in the paramedic context
4. Research and justify the most effective pharmacological treatment options in the pre-hospital context.

1. The educational institution **must** demonstrate it has developed a paramedic education course that provides students with the educational base for a graduate appropriate to the level of qualification to be attained, the specified level of competence to meet the requirements for employment as an entry level paramedic.
2. The educational course / curriculum requirements for work readiness **must** be determined by the curriculum / course development committee through consultation with all major stakeholders in particular, the principal ambulance services in Australia and New Zealand represented by the CAA.
3. The educational course / curriculum requirements to meet the work readiness requirements of the principal ambulance services in Australia and NZ and **should** be reviewed on a regular basis as part of a formal paramedic education course review process.
4. Given the complex nature of out of hospital, unscheduled care and the diversity of health care situations encountered, Paramedics **must** be well educated, skilled and knowledgeable practitioners in a range of subjects and be able to appraise and adopt an enquiry-based approach to the delivery of care
5. Paramedic education courses **should** produce graduates with an educational base and attributes appropriate to the level of qualification attained and specified level of competence required. These objectives and attributes **must** be clearly described for each course being assessed.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Presentation and Written Assessment - 50%	•			•
2 - Online Quiz(zes) - 25%		•		
3 - Online Quiz(zes) - 25%	•		•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	2	3	4
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 - Presentation and Written Assessment - 50%	•	•	•	•		•		•		
2 - Online Quiz(zes) - 25%			•	•						

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
3 - Online Quiz(zes) - 25%	•	•	•	•				•		

Textbooks and Resources

Textbooks

PMSC13003

Prescribed

Pharmacology for Health Professionals

Edition: 4th (2015)

Authors: Bryant, BJ and Knights, KM

Elsevier

Chatswood , NSW , Australia

ISBN: 978-0-7295-4170-1

Binding: Paperback

Additional Textbook Information

Students are encouraged to access the student resources through Evolve Learning System (access details in the front of the textbook) to facilitate their learning in this unit.

However,, if preferred, paper copies are still available through CQUni Bookshop here: <http://bookshop.cqu.edu.au>

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Access to eMIMS through the university library Paramedic Science Resource Guide
- Access to podcasts, audio files & videos as they appear on the unit Moodle page
- Access to Zoom (session log-in details will be provided)
- Optional access to textbook student resources through Evolve (information in front of prescribed text)

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

Laura Triffett Unit Coordinator

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Schedule

Week 1 - 06 Nov 2017

Module/Topic	Chapter	Events and Submissions/Topic
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Dosage measurements and drug calculations.
Review of drug pharmacokinetics, legal & ethical considerations in pharmacology.

Text - Chapter 1 – dosage measurements and calculations (p21-30)
Text - Chapter 6 – drug absorption, distribution, metabolism & excretion (p141-161)

Week 2 - 13 Nov 2017

Module/Topic	Chapter	Events and Submissions/Topic
<u>The essentials</u> Oxygen Sodium chloride 0.9% Water for injection <u>The home pharmacy...</u> <u>Street drugs</u>	QAS DTP's: oxygen, sodium chloride 0.9%, water for injection Text - Chapter 28 – pp 605-608 ARC Guideline 11.6.1 Text - Chapter 21 - pp 440-483	

Week 3 - 20 Nov 2017

Module/Topic	Chapter	Events and Submissions/Topic
<u>Special Considerations</u> Pregnancy Paediatrics Geriatrics Renal failure Hepatic dysfunction The effects of shock	Chapter 9 pp 189-202	

Week 4 - 27 Nov 2017

Module/Topic	Chapter	Events and Submissions/Topic
<u>Analgesics</u> Fentanyl Methoxyflurane Morphine Paracetamol Ibuprofen	QAS DTP's - fentanyl, methoxyflurane, morphine, paracetamol, Ibuprofen Text - Chapter 15, fentanyl p324, methoxyflurane p38, 284, morphine p322, paracetamol p67, 329	

Vacation Week - 04 Dec 2017

Module/Topic	Chapter	Events and Submissions/Topic
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Week 5 - 11 Dec 2017

Module/Topic	Chapter	Events and Submissions/Topic
<u>CNS Drugs & Antibiotics</u> Midazolam Naloxone Ceftriaxone Droperidol	QAS DTP's - ceftriaxone, droperidol, midazolam, naloxone Text - midazolam p347, naloxone p328, ceftriaxone p931-3, droperidol p388-9	

Week 6 - 18 Dec 2017

Module/Topic	Chapter	Events and Submissions/Topic
<u>Cardiovascular Drugs</u> GTN Adrenaline <u>ANTI-PLATELETS</u> Aspirin Clopidogrel Ticagrelor <u>ANTI-COAGULANTS</u> Enoxaparin Heparin <u>FIBRINOLYTICS</u> Tenecteplase	QAS DTP's - aspirin, clopidogrel, ticagrelor, enoxaparin, heparin, tenecteplase, adrenaline, GTN Text - aspirin p329-330, clopidogrel & ticagrelor p585, enoxaparin p578, heparin p577, tenecteplase p58, adrenaline p235-241 (including review of SNS), glyceryl trinitrate p513-518 (including review of vascular smooth muscle),	

Week 7 - 01 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Endocrine & Anti-emetic Drugs

Glucagon
Glucose gel
Glucose 10%
Ondansetron

QAS DTP's - glucagon, glucose gel,
glucose 10%, ondansetron,
Text - glucagon p764, ondansetron
p653

Week 8 - 08 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
Respiratory Drugs Salbutamol Hydrocortisone Ipratropium bromide	QAS DTP's - , hydrocortisone, salbutamol, ipratropium bromide Text - hydrocortisone p745-749, ipratropium bromide p61, salbutamol p615	Written Assessment & Presentation Due: Week 8 Friday (12 Jan 2018) 11:45 pm AEST

Week 9 - 15 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
Other drugs Hydroxocabalin Loratadine Magnesium sulphate Box Jellyfish Antivenom Oseltamivir Oxytocin	QAS DTP's - lignocaine 1%, magnesium sulphate, box jellyfish antivenom, oseltamivir, oxytocin, hydroxocabalin, Text - magnesium sulphate p1089, box jellyfish antivenom p1088-9, oseltamivir p954, oxytocin p723-4,	Drug Calculation Quiz Due: Week 9 Friday (19 Jan 2018) 11:45 pm AEST

Week 10 - 22 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
General pharmacology in paramedicine What to do if.....	No assigned reading; use this time to ensure learning and assessment tasks are completed.	

Week 11 - 29 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
CCP drugs	No assigned reading; use this time to ensure learning and assessment tasks are completed.	Pharmacology Quiz Due: Week 11 Friday (2 Feb 2018) 11:45 pm AEST

Week 12 - 05 Feb 2018

Module/Topic	Chapter	Events and Submissions/Topic
Revision & any last minute concerns...	No assigned reading; use this time to revise and post any ongoing questions to the forum.	

Review/Exam Week - 12 Feb 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 12 Feb 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Assessment Tasks

1 Written Assessment & Presentation

Assessment Type

Presentation and Written Assessment

Task Description

Historically, ambulance services followed a medical model for determining future clinical direction, often deferring to a medical advisory board or medical director to determine new skills, procedures or pharmacology. More recently, there has been a shift in thinking towards paramedics researching and determining their own destiny in a clinical sense. It

is therefore becoming an important skill for paramedics to be able to look at current research and new trends, and to analyse the evidence base to determine whether a new skill, procedure or pharmacology should be adopted (or not).

You have been tasked by a medical advisory board to review and propose the introduction of a new drug into the already extensive armament of drugs on offer in your chosen ambulance service. You can either choose a completely new drug not currently used by your service or you can research a drug currently used by another ambulance service for introduction into your service.

The drug you choose must be approved by the Therapeutic Goods Administration of Australia (TGA), not the FDA or any other international agency. If you choose a drug already used by another service please note that you cannot simply alter the indications or the route of administration for that drug- this is not sufficient for this task. The medical advisory board would like for you to report on the introduction of this drug into the ambulance service and therefore require 2 parts to this proposal.

PART A (25%)

You are required to review recent (no greater than 5-10 years) literature for research articles (aim for a minimum of 5 articles) in relation to this drug of choice.

Using information you have obtain from your research you will combine the information, critique and discuss the findings. As a minimum your report should include the following:

Introduction - your report aim

Research methodology - identify the search methodology and what databases you used

Discussion - What conclusions can be drawn from the studies? Discuss the implications of introducing this drug into paramedic practice, for example, do you need to cease the use of one drug for the introduction of another? Are there any cost/equipment implications?

Drug Therapy Protocol - Develop a new DTP for your drug of choice. This can be added as part of your report or as an appendix.

Conclusion - Summarise your findings and state your recommendations.

PART B (25%)

Using the information collected in Part A, you are required to develop a scientific poster about your drug of choice.

There is no specific word limit here, as you will be using the information gained in Part A. Remember to summarise your information for presentation.

Assessment Due Date

Week 8 Friday (12 Jan 2018) 11:45 pm AEST

Return Date to Students

Week 10 Friday (26 Jan 2018)

Weighting

50%

Minimum mark or grade

50%

Assessment Criteria

A marking rubric for both parts of this assessment task together with exemplar material will be provided on the Moodle page for reference

Part one (25%) -

Presentation and layout: information presented in a clear & logical sequence; content clearly written; appropriate word count; abbreviations & diagrams used appropriately

Questions: selected drug meets criteria; most current literature used; introduction; discussion of research design &

data; implications of introducing the drug; recommendations

Drug therapy protocol: developed appropriately; all information included; effective layout; sources acknowledged

Referencing: all sources referenced appropriately

Part Two (25%) –

Presentation- Excellent presentation of the scientific poster in terms of organised layout, use of visual aspects

Information Gathering- Full review of available literature from all sources relevant to the assignment. Comprehensive knowledge of the subject matter

Scholarliness- Clear statement of objectives, persuasive and comprehensive matter

Grammar- Work presented to a high grammatical standard with 2 or less grammatical errors

Referencing- Consistently accurate with in text and referencing list protocols in line with the APA system of referencing

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Describe the indications, pharmacokinetics, actions, routes of administration, contraindications, side effects and precautions of medications and fluids administered by paramedics, and how you would evaluate the effects of administration
- Research and justify the most effective pharmacological treatment options in the pre-hospital context.

Graduate Attributes

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

2 Drug Calculation Quiz

Assessment Type

Online Quiz(zes)

Task Description

For this assessment task you are required to complete an online quiz. You will be required to complete this online quiz by the end of week 9, this quiz will become available in Week 7 and will have a specific time limit imposed to complete the quiz. The quiz will be made up of case based management exercises which include drug calculations in accordance with the Queensland Ambulance Service drug therapy protocols.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

Week 9 Friday (19 Jan 2018) 11:45 pm AEST

Return Date to Students

Week 11 Friday (2 Feb 2018)

Weighting

25%

Minimum mark or grade

50%

Assessment Criteria

You will be required to answer each question at an Advanced Care Paramedic Two level (ACP2). In order to achieve the full marks allocated to that question you must complete the question fully and you must include any drug calculations in your answer. Please ensure that you read the question carefully. Some questions may ask you to give your answer as a dosage or as a volume to be given to the patient. This quiz is worth 25% of your overall mark. You must achieve a minimum pass mark of 50% in each quiz to pass this assessment. You will only be given one attempt for each quiz. You will have a time limit of 90 minutes to complete the quiz. This assessment task must be completed by 1700hrs on the Friday of Week 9 (19 Jan 2018). For this assessment task no late submissions will be accepted; therefore each quiz which

makes up this assessment task must be completed by the due date. In the absence of an approved extension, there will be no opportunity to complete the task after this date, and there will be no opportunity to apply a late penalty of five percent per day.

Referencing Style

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

Submission

Online

Submission Instructions

You will be required to complete this quiz in the allocated time frame. Once started, this quiz must be completed in one sitting. There is no option to save your answers and return to the quiz later.

Learning Outcomes Assessed

- Correctly calculate drug doses for the administration of paramedic medications

Graduate Attributes

- Critical Thinking
- Information Literacy

3 Pharmacology Quiz

Assessment Type

Online Quiz(zes)

Task Description

For this assessment task you are required to complete an online quiz. You will be required to complete this online quiz by the end of week 11, this quiz will become available in Week 10 and will have a specific time limit imposed to complete the quiz. The quiz will be made up of short answer questions related to the material offered in this unit, this may include drug calculations in accordance with the Queensland Ambulance Service drug therapy protocols.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

Week 11 Friday (2 Feb 2018) 11:45 pm AEST

Return Date to Students

Exam Week Friday (16 Feb 2018)

Weighting

25%

Minimum mark or grade

50%

Assessment Criteria

You will be required to answer each question at an Advanced Care Paramedic Two level (ACP2). In order to achieve the full marks allocated to that question you must complete the question fully and you must include your drug calculation and answer. Please ensure that you read the question carefully. This quiz is worth 25% of your overall mark. You must achieve a minimum pass mark of 50% in each quiz to pass this assessment. You will only be given one attempt for each quiz. You will have a time limit of 90 minutes to complete the quiz. This assessment task must be completed by 1700hrs on the Friday of Week 11 (2 Feb 2018). For this assessment task no late submissions will be accepted; therefore each quiz which makes up this assessment task must be completed by the due date. In the absence of an approved extension, there will be no opportunity to complete the task after this date, and there will be no opportunity to apply a late penalty of five percent per day.

Referencing Style

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

Submission

Online

Submission Instructions

You will be required to complete this quiz in the allocated time frame. Once started, this quiz must be completed in one sitting. There is no option to save your answers and return to the quiz later. .

Learning Outcomes Assessed

- Describe the indications, pharmacokinetics, actions, routes of administration, contraindications, side effects and precautions of medications and fluids administered by paramedics, and how you would evaluate the effects of administration
- Discuss the implications of renal or hepatic dysfunction, pregnancy and extremes of age on drug administration in the paramedic context

Graduate Attributes

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