PMSC13003 *Pharmacology in Paramedic Practice*
Term 1 - 2017

Profile information current as at 29/04/2024 06:40 am

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 1 - 2017

- Distance
- 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 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 couse / 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

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.

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: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Kirsty Shearer Unit Coordinator
k.shearer@cqu.edu.au

Schedule

Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic

Dosage measurements and calculations & review of drug pharmacokinetics & legal & ethical considerations	Text - Chapter 1 – dosage measurements and calculations (p21-30) Text - Chapter 6 – drug absorption, distribution, metabolism & excretion (p141-161)	

Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
The essentials Oxygen Sodium chloride 0.9% Water for injection **The home pharmacy...** **Street drugs**	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 Mar 2017

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

Week 4 - 27 Mar 2017

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

Week 5 - 03 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Adrenaline Box jellyfish antivenom Ceftriaxone Droperidol	QAS DTP's - adrenaline, box jellyfish antivenom, ceftriaxone, droperidol Text - adrenaline p235-241 (including review of SNS), box jellyfish antivenom p1088-9, ceftriaxone p931-3, droperidol p388-9	**Presentation and Written Assessment** Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST

Vacation Week - 10 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 17 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Drugs affecting clotting ANTI-PLATELETS Aspirin Clopidogrel Ticagrelor ANTI-COAGULANTS Enoxaparin Heparin FIBRINOLYTICS Tenecteplase	QAS DTP's - aspirin, clopidogrel, ticagrelor, enoxaparin, heparin, tenecteplase Text - aspirin p329-330, clopidogrel & ticagrelor p585, enoxaparin p578, heparin p577, tenecteplase p586	

Week 7 - 24 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic

Glucagon Glucose gel Glucose 10%	QAS DTP's - glucagon, glucose gel, glucose 10% Text - glucagon p764	

Week 8 - 01 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Glyceryl trinitrate Hydrocortisone Hydroxocabalamin Ipratropium bromide	QAS DTP's - glyceryl trinitrate, hydrocortisone, hydroxocabalamin, ipratropium bromide Text - glyceryl trinitrate p513-518 (including review of vascular smooth muscle), hydrocortisone p745-749, ipratropium bromide p615	

Week 9 - 08 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Lignocaine 1% Magnesium sulphate Midazolam Naloxone	QAS DTP's - lignocaine 1%, magnesium sulphate, midazolam, naloxone Text - lignocaine 1% p295, magnesium sulphate p1089, midazolam p347, naloxone p328	**Online Quiz(zes)** Due: Week 9 Friday (12 May 2017) 11:45 pm AEST

Week 10 - 15 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Ondansetron Oseltamivir Oxytocin Salbutamol Tetanus & influenza immunisation	QAS DTP's - ondansetron, oseltamivir, oxytocin, salbutamol, tetanus immunisation, influenza vaccine Text - ondansetron p653, oseltamivir p954, oxytocin p723-4, salbutamol p615	

Week 11 - 22 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
When to call for back-up - CCP drugs		**Online Quiz(zes)** Due: Week 11 Friday (26 May 2017) 11:45 pm AEST

Week 12 - 29 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Any last minute concerns...		

Review/Exam Week - 05 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 12 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Presentation and Written Assessment

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 the introduction of either a new drug (approved by the

TGA) or another service's drug (not currently used by your chosen service) into the already extensive armament of drugs on offer in your chosen ambulance service. Please note that simply altering the indications for a current drug or the route of administration of a current drug 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 one (25%) will require you to develop a paper including a review of the literature on your drug of choice. You will be required to review recent (no greater than 5 years) research articles (aim for 5 articles) in relation to this drug of choice. It is preferred that the literature review is in narrative form (that is, explain the research in your own words). The word limit for this section is 1500 words.
Using information you obtain from the journals you will combine the information, critique the literature and your report should include:
Introduction - your report aim
Research articles - identify the research designs, the study participants and describe how the data was collected for each study
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?
Conclusion - what are your recommendations (drug therapy protocol to be developed here or as an appendix - either way it is included in your word count)
Reference List
Part two (25%) - using the information collected in part one, you will be required to develop a scientific poster.
There is no specific word limit here, as you will be using the information gained in Part 1. Remember to summarise your information for presentation.

Assessment Due Date
Week 5 Friday (7 Apr 2017) 11:45 pm AEST

Return Date to Students
Week 7 Friday (28 Apr 2017)

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
Part one (25%) - The paper will be assessed on:
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: use of Harvard referencing; all sources referenced appropriately; reference list
Part Two (25%) – The poster will be assessed on:
Required content: looking at the main points covered & content
Presentation: looking at visual engagement; use of visual elements; graphics & overall presentation
Mechanics: looking at grammar & spelling & referencing
The assessment rubric used in marking this assessment task can be found on the unit Moodle page.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Part One and Part Two submitted through Moodle.

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 Online Quiz(zes)

Assessment Type
Online Quiz(zes)

Task Description
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 including drug calculations in accordance with the Queensland Ambulance Service DTP's. This is an individual assessment with no collaboration allowed.

Number of Quizzes
1

Frequency of Quizzes
Other

Assessment Due Date
Week 9 Friday (12 May 2017) 11:45 pm AEST
The quiz will open 0800hrs on Monday of week 8 and closes at 2345hrs AEST (Australian Eastern Standard Time) on Friday of week 9.

Return Date to Students
Week 11 Friday (26 May 2017)

Weighting
25%

Minimum mark or grade
50%

Assessment Criteria
You will be required to answer each question as a whole at ACP2 level to receive the full marks allocated to that question. **This assessment task must be completed by 2345hrs on the Friday of Week 9 (12 May 2017). 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. This quiz is worth 25% of your overall mark. All assessment pieces must be completed to pass this unit.**

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
You will be required to complete this task in an allocated time, there will be no option to save your answers and to go back to the quiz later.

Learning Outcomes Assessed

- Correctly calculate drug doses for the administration of paramedic medications

Graduate Attributes

- Critical Thinking
- Information Literacy

3 Online Quiz(zes)

Assessment Type
Online Quiz(zes)

Task Description
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 material offered throughout the unit as well as in accordance with the Queensland Ambulance Service DTP's.

Number of Quizzes
1

Frequency of Quizzes
Other

Assessment Due Date
Week 11 Friday (26 May 2017) 11:45 pm AEST
The quiz will open 0800hrs on Monday of week 10 and closes at 2345hrs AEST (Australian Eastern Standard Time) on Friday of week 11.

Return Date to Students
Exam Week Friday (16 June 2017)

Weighting
25%

Minimum mark or grade
50%

Assessment Criteria
You will be required to answer each question as a whole at ACP2 level to receive the full marks allocated to that question. **This assessment task must be completed by 2345hrs on the Friday of Week 11 (26 May 2017). 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. This quiz is worth 25% of your overall mark. All assessment pieces must be completed to pass this unit.**

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
You will be required to complete this task in an allocated time, there will be no option to save your answers and to go back 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