



BIOH12011 Pathophysiology and Pharmacology 1

Term 1 - 2022

Profile information current as at 20/05/2024 07:38 am

All details in this unit profile for BIOH12011 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

In this unit you will explore fundamental pathophysiology (alteration in function as seen in disease) of the cardiovascular, respiratory, endocrine, nervous, haematological systems, and the pharmacology of drugs used in the treatment and management of disease. Throughout the unit, there is an integrated focus on body systems contrasting normal and abnormal, and how disease states may be managed therapeutically. The unit concentrates on common major diseases of these body systems which facilitates a comprehensive study of the pathophysiology encountered in these disease states, as well as gaining an understanding of normal physiology. This is complemented by the study of the treatment and management of these diseases, whilst also focusing on the professional and legal responsibilities that underpin the use of medicines in the treatment of human disease.

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: BIOH11005 Introductory Anatomy Physiology or BMSC11010 Human Anatomy and Physiology 1

AND admission into CL91 (Bachelor of Nursing).

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 - 2022

- 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 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. **Online Quiz(zes)**

Weighting: 20%

2. **Case Study**

Weighting: 30%

3. **Online Test**

Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

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 Have Your Say and student communication

Feedback

Having a registered nurse (RN) conduct one of the weekly tutorials helped the students to contextualise their learning by providing real world case studies and anecdotes.

Recommendation

Continue to have a registered nurse deliver content in the unit to help the students with application of weekly content to nursing practice.

Feedback from Have Your Say

Feedback

Students commented that there is a lot of content to remember for a closed book exam that covers all 12 weeks, especially when doing a placement unit at the same time.

Recommendation

Consider splitting the assessment of content so that concepts that underpin the pathophysiology and pharmacology principles are assessed earlier in term and the application of these principles to specific disease states and treatments is at the end of term.

Feedback from Have Your Say and Self-reflection

Feedback

Students enjoyed the combination of assessment tasks, particularly the case study which allowed them to focus on a specific disease.

Recommendation

More case studies will be developed for future terms to expand the variety of disease topics for students to select from for their assessment.

Unit Learning Outcomes

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

1. Apply knowledge of the cardiovascular, respiratory, endocrine, nervous and haematological systems to discuss pathophysiological processes, signs and symptoms of various relevant diseases
2. Evaluate appropriate pharmacological interventions in disease processes of the cardiovascular, respiratory, endocrine, nervous and haematological systems
3. Explain basic pharmacological principles; pharmacokinetics, pharmacodynamics and pharmacotherapeutics
4. Outline the nurse's professional and legal responsibilities in the quality use of medicines.

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 - Online Quiz(zes) - 20% | | | • | • |
| 2 - Case Study - 30% | • | • | | • |
| 3 - Online Test - 50% | • | • | • | • |

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 | | | | |

Textbooks and Resources

Textbooks

BIOH12011

Prescribed

Pathophysiology and Pharmacology for Nurses (Volume 1 and 2 - Custom Value Pack)

Edition: 1st (2021)

Authors: Debra Carlson and Roslyn Clapperton (from Shane Bullock, Elizabeth Manias, Majella Hales, Elaine Marieb, Katja Hoehn, Suzanne Keller, Michael Adams and Matthew Sorenson)

Pearson

Australia

ISBN: 9780655798767

Binding: Paperback

Additional Textbook Information

This value pack will cover two units: BIOH12011 (Pathophysiology and Pharmacology 1) and BIOH12012 (Pathophysiology and Pharmacology 2).

The textbooks in this value pack have been specifically created to match the content delivered in these two units.

[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 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Debra Carlson Unit Coordinator

d.carlson@cqu.edu.au

Roslyn Clapperton Unit Coordinator

r.clapperton@cqu.edu.au

Schedule

Week 1 - 07 Mar 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|--|------------------------------|
| Introduction to pathophysiology and pharmacology. | Module 1: Introduction to pathophysiology and pharmacology. Chapters 1 to 8. | |

Week 2 - 14 Mar 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------------------|--|------------------------------|
| Pharmacology principles for nursing. | Module 2: Pharmacology principles. Chapters 9 to 14. | |

Week 3 - 21 Mar 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|--|---|
| Inflammation, analgesics and anti-inflammatory medication. | Module 3: Analgesics and anti-inflammatory medications. Chapters 15 to 18. | Assessment 1 - Online Quiz Opens: Week 3 Friday (25 Mar 2022) 5:00pm AEST |
| Week 4 - 28 Mar 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Haematology pathophysiology and pharmacology. | Module 4: Haematology pathophysiology and pharmacology. Chapters 19 to 21. | Assessment 2 - Case Study Topic Selection Due: Week 4 Monday (28 Mar 2022) 5:00pm AEST Assessment 1 - Online Quiz Due: Week 4 Friday (1 Apr 2022) 5:00 pm AEST |
| Week 5 - 04 Apr 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Cardiovascular pathophysiology and pharmacology - Part 1. | Modules 5 and 6: Cardiovascular pathophysiology and pharmacology. Chapters 22 to 27. | |
| Vacation Week - 11 Apr 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Week 6 - 18 Apr 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Cardiovascular pathophysiology and pharmacology - Part 2. | Modules 5 and 6: Cardiovascular pathophysiology and pharmacology. Chapters 22, 24 to 26 and 28 to 30. | |
| Week 7 - 25 Apr 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Respiratory pathophysiology and pharmacology - Part 1. | Modules 7 and 8: Respiratory pathophysiology and associated pharmacology. Chapters 31, 32, 34 and 35. | Assessment 2 - Case Study Online Component Due: Week 7 Tuesday (26 Apr 2022) 5:00pm AEST |
| Week 8 - 02 May 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Respiratory pathophysiology and pharmacology - Part 2. | Modules 7 and 8: Respiratory pathophysiology and associated pharmacology. Chapters 33, 34 and 36. | |
| Week 9 - 09 May 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Neurological pathophysiology and pharmacology - Part 1 | Modules 11 and 12: Neurological pathophysiology and associated pharmacology. Chapters 45 to 50 and 55. | Assessment 2 - Case Study Due: Week 9 Monday (9 May 2022) 5:00 pm AEST |
| Week 10 - 16 May 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |
| Neurological pathophysiology and pharmacology - Part 2 | Modules 11 and 12: Neurological pathophysiology and associated pharmacology. Chapters 51 to 54, 56, 61 and 62. | |
| Week 11 - 23 May 2022 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |

Endocrine pathophysiology and pharmacology - Part 1

Modules 9 and 10: Endocrine pathophysiology and associated pharmacology.
Chapters 37 to 40, 42 and 43.

Week 12 - 30 May 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|---|------------------------------|
| Endocrine pathophysiology and pharmacology - Part 2 | Modules 9 and 10: Endocrine pathophysiology and associated pharmacology. Chapters 38, 41 and 44. | |

Review/Exam Week - 06 Jun 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|---|
| | | Assessment 3 - Online Test: conducted during the university examination period. Date to be confirmed during the term. |

Exam Week - 13 Jun 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Term Specific Information

The unit coordinator is Dr Debra Carlson
The best way to contact the unit coordinator is
Email: d.carlson@cqu.edu.au
Phone: 07 4930 6364

The lectures in this unit are pre-recorded and primarily delivered by Roslyn Clapperton and Dr Debra Carlson. These pre-recorded lectures will be released progressively throughout the term on Moodle. It is expected that students will review the weekly content, including the assigned readings and pre-recorded lectures prior to attending the tutorials.

Dr Debra Carlson is a remedial therapist with a Bachelor of Health Science, Bachelor of Science (Honours) in physiology, conducted cardiovascular research for her PhD in exercise physiology and has a Graduate Certificate in Tertiary and Adult Education. Roslyn Clapperton has completed a Bachelor of Science (Sports and Exercise) and a Bachelor of Science (Honours) in exercise physiology. Roslyn is currently in the final stages of a PhD on skeletal muscle capillarisation in patients with peripheral arterial disease.

As per Australian educational standards, you are expected to commit 150 hours of engagement to your study of this unit. A recommended breakdown of study hours is given below:

- 2-3 hours per week watching recorded lectures and revising the content through study notes.
- 2-3 hours per week attending the weekly tutorials and reflecting on your answers to the weekly study questions.
- 2-3 hours per week revising content from this week and previous weeks.
- 2-3 hours per week preparing for your assessments or studying for the online quiz and online test.

Assessment Tasks

1 Assessment 1 - Online Quiz

Assessment Type

Online Quiz(zes)

Task Description

The purpose of the online quiz is to challenge your knowledge and understanding of the concepts that underpin pathophysiology and pharmacology and the use of pain relief medications. The quiz will be available for a period of one (1) week and must be completed by the closing date listed below.

Online quiz details:

- Opens: Week 3, Friday at 17:00 AEST
- Closes: Week 4, Friday at 17:00 AEST
- Topics examined: Week 1, 2 and 3
- Attempts allowed: two (2). The highest grade you achieve will serve as your final mark for the quiz.
- The quiz will contribute 20% to your final grade.
- There is a minimum requirement for the assessment task: 50% of the available marks.
- In the absence of an approved extension, there will be no opportunity to complete the task after the assigned date.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

Week 4 Friday (1 Apr 2022) 5:00 pm AEST

The quiz will be available for a period of one (1) week and must be completed by the closing date listed in the task description and on the Moodle site.

Return Date to Students

Marks will be available upon completing the assessment task.

Weighting

20%

Minimum mark or grade

50%

Assessment Criteria

Questions will be automatically marked as correct or incorrect.

The online quiz assessment equals 20% of the total unit marks, and the minimum requirement for this assessment task is 50% of the available marks.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Learning Outcomes Assessed

- Explain basic pharmacological principles; pharmacokinetics, pharmacodynamics and pharmacotherapeutics
- Outline the nurse's professional and legal responsibilities in the quality use of medicines.

2 Assessment 2 - Case Study

Assessment Type

Case Study

Task Description

You will need to select a case study topic from those provided on the Moodle page and research this topic. You will then be provided with an authentic clinical case study on the Moodle site in the form of a quiz which you are required to complete and gather information about the case study to use in the written component of this assessment.

There are three (3) stages to completing the case study assessment:

Stage 1 requires you to **choose your case study topic** from those provided in the link **in the assessment tile of the Moodle site**.

Stage 2 requires you complete an **online quiz which contains an online clinical case study of your patient**, you will need to take notes about the patient in your case study to complete stage 3.

The following information will be made available to you throughout the case study: clinical presentation, patient history, physical examination, pathophysiology, diagnosis and treatment. As you progress through the case study you will be required to answer questions relating to the information provided in the case study to demonstrate your understanding

of the underlying pathophysiology and pharmacology of the case study.

This quiz component is worth 5% of the marks allocated for this assessment.

Stage 3 is a **written component** which requires you to submit written responses to the four case study questions. Four questions related to your case study are located on the template for your specific case study in the assessment tile of the Moodle page. In your written response you will be required to demonstrate your understanding of the links between pathophysiology, risk factors, clinical manifestations, diagnosis and treatment. This assessment requires you to develop the level of understanding required to give evidence based advice within your scope of practice, to manage / educate your patients and close the gaps in healthcare.

This written component is worth 25% of the marks allocated for this assessment.

Guidelines to complete the written response and the marking rubric will be available on the Moodle site. Due dates for each task are located in the table below.

| Case Study Assessment Task | Time / Date the Assessment Task Opens | Time / Date the Assessment Task Closes |
|----------------------------|---------------------------------------|--|
| Topic selection | Week 1, Monday 09:00 AEST | Week 4, Monday 17:00 AEST |
| Online quiz component | Week 4, Tuesday 17:00 AEST | Week 7, Tuesday 17:00 AEST |
| Written component | Week 5, Monday 17:00 AEST | Week 9, Monday 17:00 AEST |

Assessment Due Date

Week 9 Monday (9 May 2022) 5:00 pm AEST

There are two separate due dates as per the table above. The case study quiz closes on Tuesday of week 7 and the answers will be automatically saved in Moodle. The written response is to be submitted online by 5pm on Monday of week 9.

Return Date to Students

Week 12 Friday (3 June 2022)

The assessment marks and feedback will be available by close of business of Friday of week 12.

Weighting

30%

Minimum mark or grade

50%

Assessment Criteria

The case study assessment equals 30% of the total unit marks, and the minimum requirement for this assessment task is 50% of the available marks.

Your submission will be assessed according to a detailed marking rubric, which will be available on the BIOH12011 Moodle site.

Please note that all late submissions will be penalised 5% per calendar day unless an application for an extension has been approved.

All extension requests must be made through the extension request system system on Moodle with appropriate documentation that complies with the Assessment Policy and Procedure. Assessments that have been submitted more than 20 calendar days late will not be marked unless an extension request has been approved.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Learning Outcomes Assessed

- Apply knowledge of the cardiovascular, respiratory, endocrine, nervous and haematological systems to discuss pathophysiological processes, signs and symptoms of various relevant diseases
- Evaluate appropriate pharmacological interventions in disease processes of the cardiovascular, respiratory, endocrine, nervous and haematological systems
- Outline the nurse's professional and legal responsibilities in the quality use of medicines.

3 Assessment 3 - Online Test

Assessment Type

Online Test

Task Description

The purpose of the online test is to assess your knowledge and understanding of the content covered in the unit and the application of these to various diseases. The online test will be available for a limited time during the examination block, the date and time will be indicated on Moodle towards the end term once it has been finalised.

Online test details:

- Topics examined: Weeks 4 to 12 inclusive.
- Attempts allowed: one (1).
- The online test will contribute 50% to your final grade.
- There is a minimum requirement for the assessment task: 50% of the available marks.
- In the absence of an approved extension, there will be no opportunity to complete the task after the assigned date.

Assessment Due Date

The online test will be conducted during the exam period. Date and time to be confirmed during the term.

Return Date to Students

Marks will be available upon certification of grades.

Weighting

50%

Minimum mark or grade

50%

Assessment Criteria

Questions will be a combination of automatically marked as correct or incorrect, and manually marked. A variety of question styles similar to those used in the formative quizzes on Moodle, as well as written application questions, will be used in the online test to assess the content in a variety of contexts.

The online test assessment equals 50% of the total unit marks, and the minimum requirement for this assessment task is 50% of the available marks.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Learning Outcomes Assessed

- Apply knowledge of the cardiovascular, respiratory, endocrine, nervous and haematological systems to discuss pathophysiological processes, signs and symptoms of various relevant diseases
- Evaluate appropriate pharmacological interventions in disease processes of the cardiovascular, respiratory, endocrine, nervous and haematological systems
- Explain basic pharmacological principles; pharmacokinetics, pharmacodynamics and pharmacotherapeutics
- Outline the nurse's professional and legal responsibilities in the quality use of medicines.

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