BMSC14001 *Integrated Pathology 1*
Term 1 - 2020

Profile information current as at 04/05/2024 07:15 am

All details in this unit profile for BMSC14001 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.

Corrections

Unit Profile Correction added on 06-05-20

The end of term examination has now been changed to an alternative form of assessment. Please see your Moodle site for details of the assessment.
The Residential School for this unit has been postponed and you will need to complete this at a later date. Please see your Moodle site for details of the assessment.

General Information

Overview

This integrated pathology unit builds on the knowledge, skill, technical and cognitive ability developed during previous study. You will evaluate laboratory-based information to diagnose complex diseases through application of knowledge of multiple clinical disciplines within medical laboratory science. You will apply your advanced-level knowledge of clinical biochemistry, haematology, histopathology, transfusion science, immunology, molecular pathology and quality management to 'real life' clinical scenarios and case studies focused on metabolic, neoplastic, cardiovascular and age-related diseases. Use of case studies will integrate advanced-level knowledge of the aetiology, pathophysiology, and investigation of metabolic, neoplastic, cardiovascular and age-related diseases that significantly affect the morbidity, mortality and economics of healthcare. At residential school you will perform laboratory tests using advanced methodology and instrumentation. This will further develop your analytical, evaluative and communication skills.

Details

Career Level: *Undergraduate*
Unit Level: *Level 4*
Credit Points: *12*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Prerequisite BMSC13009 Immunology AND BMSC13001 Advanced Haematology AND BMSC13002 Advanced Clinical Biochemistry AND BMSC13011 Immunohaematology AND BMSC13010 Pharmacology AND BMSC13003 Advanced Clinical Microbiology AND BMSC13016 Advanced Histopathology
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 - 2020

- Mixed Mode
- 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).

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 12-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Case Study**
Weighting: 25%
2. **Practical Assessment**
Weighting: 35%
3. **Examination**
Weighting: 40%

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.

Unit Learning Outcomes

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

1. Differentiate the aetiology, pathophysiology and clinical investigation of complex medical conditions with a focus on metabolic, neoplastic, cardiovascular and age-related disease
2. Perform medical laboratory tests demonstrating advanced methodology and instrumentation
3. Evaluate pathological mechanisms and analytical techniques in the laboratory-based diagnosis of metabolic, neoplastic, cardiovascular and age-related disease
4. Evaluate data and present information concerning pathological issues in an ethical and scientific context.

The learning outcomes achieved are linked to the objectives of the accrediting body, Australian Institute of Medical Scientists (AIMS).

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 - Case Study - 25%	•		•	•
2 - Practical Assessment - 35%		•	•	
3 - Examination - 40%	•			•

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				

Graduate Attributes	Learning Outcomes			
	1	2	3	4
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 - Case Study - 25%	•	•	•	•		•		•		
2 - Practical Assessment - 35%	•	•	•	•		•				
3 - Examination - 40%	•	•	•	•						

Textbooks and Resources

Textbooks

There are no required textbooks.

Additional Textbook Information

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

Wayne Pederick Unit Coordinator
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Schedule

Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Introduction		

Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Cystic Fibrosis 1		Lecture and Recorded Zoom Tutorial

Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Cystic Fibrosis 2		Lecture and Recorded Zoom Tutorial

Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Diabetes 1		Lecture and Recorded Zoom Tutorial

Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Diabetes 2		Lecture and Recorded Zoom Tutorial

Week 6 - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Vacation Week		

Week 7 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Acute Myeloid Leukemia 1 **Residential School , Rockhampton April 20th to 23rd**		Lecture and Recorded Zoom Tutorial Submission of Laboratory Practical Manuals at the end of the residential school

Week 8 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Acute Myeloid Leukemia 2		Lecture and Recorded Zoom Tutorial

Week 9 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
		Lecture and Recorded Zoom Tutorial
Haematochromatosis 1		**Laboratory Diagnostic Review** Due: Week 8 Monday (4 May 2020) 11:45 pm AEST

Week 10 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Haematochromatosis 2		Lecture and Recorded Zoom Tutorial

Week 11 - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revision		Lecture and Recorded Zoom Tutorial

Week 12 - 19 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revision and Exam Preparation		Lecture and Recorded Zoom Tutorial

Term Specific Information

This unit will provide an integrated approach to examining the pathology associated with significant metabolic diseases by examining the multiple interdisciplinary testing that occurs on patient samples in medical laboratories. An indepth approach for a selected number of diseases, e.g. diabetes, leukemia etc, and through lectures and tutorial sessions you will gain a thorough understanding of the laboratory testing and assays performed to aid in diagnosis of these diseases and support monitoring of therapeutic interventions. Associated with advanced learning of the laboratory based assays will be an understanding of the pathology underlying the disease and current advances in research and treatment. The theoretical knowledge will be supported by an residential school which will be held on the Rockhampton campus, April 20th to 23rd and will focus on performing a range of interdisciplinary laboratory techniques, data analysis and presentation.

Assessment Tasks

1 Laboratory Diagnostic Review

Assessment Type
Case Study

Task Description
In this assignment you will choose a disease and describe in the detail the various laboratory-based testing that is performed on a patient's sample.
Write a 2500-word essay supported by references (up to ten references) outlining advances in understanding disease pathology and laboratory-based diagnosis.
Review and critique in detail two scientific papers which has contributed to advanced knowledge associated with Pathogenesis and Diagnosis.
Your critical appraisal of a major scientific paper should include a summary of the outcomes of the described research, How these findings were a significant advance in either pathogenesis/diagnosis.
What methodology was used and what further developments have occurred based on the original paper. The paper critique is expected to be concise, between 750 and 1000 words.

Assessment Due Date
Week 8 Monday (4 May 2020) 11:45 pm AEST

Return Date to Students
Week 10 Monday (18 May 2020)

Weighting
25%

Minimum mark or grade
50%

Assessment Criteria
The overall 25% available for this assessment is broken down as follows
60 marks is available for each Review section and broken down as follows

- 20 marks for the scientific paper critique
- 40 marks for the review

A detailed marking rubric will be available on the Moodle site

Referencing Style

- American Psychological Association 6th Edition (APA 6th edition)

Submission
No submission method provided.

Learning Outcomes Assessed

- Differentiate the aetiology, pathophysiology and clinical investigation of complex medical conditions with a focus on metabolic, neoplastic, cardiovascular and age-related disease
- Evaluate pathological mechanisms and analytical techniques in the laboratory-based diagnosis of metabolic,

neoplastic, cardiovascular and age-related disease
- Evaluate data and present information concerning pathological issues in an ethical and scientific context.

Graduate Attributes

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

2 Residential School Practical Assignment

Assessment Type
Practical Assessment

Task Description
The residential School is an opportunity to learn and perform a range of interdisciplinary clinical diagnostic procedures and compliment the theoretical knowledge of integrated pathology. The residential school will provide valuable practical experience in techniques currently performed in medical laboratories.
The laboratory practical assessment will comprise of laboratory-based exercises which will be completed during the four (4) day Residential School. The exercises will be described in the subject laboratory manual and will involve completion of laboratory exercises, calculation and presentation of results. A detailed rubric of assessment criteria for laboratory manual will be available on the unit moodle site.
Competed laboratory manuals will be submitted in hard copy by hand on the final day of the Residential School

Assessment Due Date

Laboratory Practical Manuals to be submitted at the end of the Residential School

Return Date to Students
Week 9 Monday (11 May 2020)

Weighting
35%

Minimum mark or grade
50%

Assessment Criteria
Assessment of the laboratory manual will be based on presentation of results of laboratory exercises and calculations where indicated. Descriptive answers and associated labelled diagrams will also be assessed where exercises involving microscopy are required. Answers provided in the laboratory manual must be clearly presented and legible

Referencing Style

- American Psychological Association 6th Edition (APA 6th edition)

Submission
No submission method provided.

Learning Outcomes Assessed

- Perform medical laboratory tests demonstrating advanced methodology and instrumentation
- Evaluate pathological mechanisms and analytical techniques in the laboratory-based diagnosis of metabolic, neoplastic, cardiovascular and age-related disease

Graduate Attributes

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

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
40%

Length
120 minutes

Minimum mark or grade
Minimum passing grade of 50%

Exam Conditions
Closed Book.

Materials
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).
Calculator - non-programmable, no text retrieval, silent only

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