



# BMSC14001 *Integrated Pathology 1*

## Term 1 - 2023

Profile information current as at 29/04/2024 12:25 pm

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.

## 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

Prerequisites: BMSC13001 Advanced Haematology AND BMSC13002 Advanced Clinical Biochemistry AND BMSC13003 Medical Microbiology 2 AND BMSC13009 Immunology OR BMSC13023 Applied Immunology AND BMSC13010 Pharmacology AND BMSC13011 Advanced Transfusion Science AND BMSC13016 Advanced Histopathology and Cytopathology

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 - 2023

- 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](#).

## 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 SUTE

**Feedback**

Assessment description could be clearer

**Recommendation**

Review assessment description to provide clarity.

#### Feedback from Accreditation Standard

**Feedback**

Final theory assessment to be invigilated

**Recommendation**

Change final theory assessment from online test to invigilated exam.

## 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



### 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				
10 - Aboriginal and Torres Strait Islander Cultures				

## Textbooks and Resources

### Textbooks

**There are no required textbooks.**

#### Additional Textbook Information

There is no textbook for this unit, the textbooks from previous professional discipline units will be used and supplemental readings provided where necessary.

### IT Resources

**You will need access to the following IT resources:**

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Zoom (both microphone and webcam capability)

## Referencing Style

**All submissions for this unit must use the referencing styles below:**

- [Harvard \(author-date\)](#)
- [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**William Deasy** Unit Coordinator  
[w.deasy@cqu.edu.au](mailto:w.deasy@cqu.edu.au)

## Schedule

### Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Cystic Fibrosis	A weekly reading list will be provided on the Moodle page.	Introductory tutorial

### Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Diabetes mellitus	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 1

### Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Acute Myeloid Leukaemia	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 2

### Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Plasma Cell Leukaemia	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 3

### Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Tutorial covering Week 4

Burns

A weekly reading list will be provided on the Moodle page.

**Laboratory Diagnostic Review** Due: Week 5 Friday (7 Apr 2023) 11:45 pm AEST

### Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
No Lecture	N/A	N/A

### Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Rheumatoid Arthritis Residential School 19th - 22nd	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 5

### Week 7 - 24 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Systemic Lupus Erythematosus	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 6

### Week 8 - 01 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Multiple Myeloma	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 7 <b>Residential School Practical</b> Due: Week 8 Friday (5 May 2023) 11:45 pm AEST

### Week 9 - 08 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Chronic Kidney Disease	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 8

### Week 10 - 15 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Haemochromatosis	A weekly reading list will be provided on the Moodle page.	Tutorial covering Week 9

### Week 11 - 22 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Revision and Case Presentations	N/A	Tutorial covering Week 10

### Week 12 - 29 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Revision	N/A	Revision tutorial

### Review/Exam Week - 05 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
Revision / Exam - Date TBA	N/A	N/A

### Exam Week - 12 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
Exam - Date TBA	N/A	N/A

## Term Specific Information

The **Unit Coordinator** for this Unit is **Wayne Pederick** who can be contacted by e-mail ([w.pederick@cqu.edu.au](mailto:w.pederick@cqu.edu.au)) or via the Moodle forums.

This 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.

While there is no prescribed text for this unit the texts that were used for each of the clinical discipline in your course may be used for reference and a weekly reading list of journals etc. will be published on the Moodle page.

Lectures will all be pre-recorded and posted on the Moodle page.

There are weekly tutorials that will be linked to Zoom to enable remote attendance and these sessions will also be recorded and posted to the Moodle page.

These tutorials will summarise the weekly lecture content and provide an opportunity for you to discuss the lecture content.

I encourage you to engage with the tutorials preferably by attending in person or virtually via Zoom or if that is not possible review the video and post any questions on the Q&A Forum.

As per Australian educational standards, you are expected to commit 300 hours of engagement to your study of this unit (a double-credit unit). This is broken down as:

3 - 6 hours per week watching recorded lectures and revising the content through study notes

6 - 8 hours per week completing the weekly study questions on the unit's Moodle page

2 - 3 hours per week attending the weekly tutorial and reflecting on your answers to the weekly study questions

6 - 8 hours per week preparing your assessments or studying for your end of term test

## Assessment Tasks

### 1 Laboratory Diagnostic Review

#### Assessment Type

Case Study

#### Task Description

##### Part A

You will choose a disease and describe in detail the various laboratory-based tests that are performed on a patient's sample when investigating the disease or monitoring management.

The disease may be one that we are studying in this unit or another disease if you wish.

Write a 2500-word essay, supported by up to ten (10) references outlining the advances in the understanding the disease and the laboratory-based diagnosis.

##### Part B

Review and critique in detail two (2) scientific papers which have 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 5 Friday (7 Apr 2023) 11:45 pm AEST

Submissions via Moodle

#### Return Date to Students

Week 6 Friday (21 Apr 2023)

Feedback will be provided on the Moodle page

#### Weighting

25%

#### Minimum mark or grade

50%

#### Assessment Criteria

The overall 25% available for this assessment is broken down as follows

A total of 60 marks are available broken down as follows

- 40 marks for Part A, the disease review
- 20 marks for Part B, the scientific paper critiques (10 marks per paper).

A detailed marking rubric will be available on the Moodle site

### Referencing Style

- [Harvard \(author-date\)](#)
- [Vancouver](#)

### Submission

Online

### Submission Instructions

The documents are to be uploaded to Moodle.

### 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.

## 2 Residential School Practical

### Assessment Type

Practical Assessment

### Task Description

The Residential School is an opportunity to learn and perform a range of interdisciplinary clinical diagnostic procedures and complement the theoretical knowledge of integrated pathology.

The residential school will provide valuable practical experience in techniques currently performed in medical laboratories.

The laboratory practical tasks will comprise of laboratory-based exercises which will be completed during the four (4) day Residential School.

The exercises will be described in the laboratory workbook 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 page.

Completed laboratory workbooks will be submitted via Moodle.

### Assessment Due Date

Week 8 Friday (5 May 2023) 11:45 pm AEST

Laboratory Practical Workbook is to be uploaded to Moodle

### Return Date to Students

Week 10 Friday (19 May 2023)

Feedback will be provided on Moodle

### Weighting

35%

### Minimum mark or grade

50%

### Assessment Criteria

Assessment of the laboratory manual will be based on presentation of results of laboratory exercises including calculations, and answers to questions related to the cases studied.

Answers provided in the laboratory manual must be clearly presented and legible.

### Referencing Style

- [Harvard \(author-date\)](#)
- [Vancouver](#)

### Submission

Online

### Submission Instructions

Laboratory Practical Workbook is to be uploaded to Moodle



## **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

## **Examination**

### **Outline**

Complete an invigilated examination.

### **Date**

During the examination period at a CQUniversity examination centre.

### **Weighting**

40%

### **Length**

180 minutes

### **Minimum mark or grade**

50

### **Exam Conditions**

Closed Book.

### **Materials**

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).  
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