



# LMED29006 Haematopathology 2

## Term 2 - 2024

Profile information current as at 29/07/2024 03:15 pm

All details in this unit profile for LMED29006 have been officially approved by CQU University 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

On completion of this unit, you will be able to evaluate the evidence base for haematological tests and provide advice on the diagnosis and monitoring of disease. By analysing complex cases, you will use problem solving and decision-making skills to critically evaluate treatment and management protocols.

#### Details

Career Level: *Postgraduate*

Unit Level: *Level 9*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

Prerequisite: LMED28002 Haematopathology 1

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 2 - 2024

- Melbourne
- 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 Postgraduate 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. **Written Assessment**

Weighting: 20%

#### 2. **Case Study**

Weighting: 30%

#### 3. **Examination**

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](#).

## Unit Learning Outcomes

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

1. Diagnose complex haematological disorders based on numerical, cytogenetic and morphological changes in the cells
2. Evaluate the detection and monitoring of blood diseases using laboratory tests appropriate to the patient's clinical condition
3. Advise on the the use of anticoagulant therapies in the management of disorders of haemostasis
4. Analyse results of specialised haematological tests and provide advice on further testing to provide a diagnosis
5. Evaluate the performance of routine and complex haematology and haemostasis testing including quality control procedures.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
<b>1 - Knowledge</b>	○	○	○	○	○
<b>2 - Communication</b>	○	○	○	○	○
<b>3 - Cognitive, technical and creative skills</b>	○	○	○	○	○
<b>4 - Research</b>		○	○		○
<b>5 - Self-management</b>					
<b>6 - Ethical and Professional Responsibility</b>					
<b>7 - Leadership</b>					
<b>8 - Aboriginal and Torres Strait Islander Cultures</b>					

## Textbooks and Resources

### Textbooks

LMED29006

#### Supplementary

##### **Blood cells**

Edition: 6th (2022)

Authors: Bain, Barbara

John Wiley & Sons, Inc

Hoboken Hoboken , New Jersey , USA

ISBN: 1-119-82029-4

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#### Supplementary

##### **Rodaks Haematology**

Edition: 6th (2020)

Authors: Elaine Keohane, Catherine Otto, Jeanine Walenga

Saunders

Philadelphia Philadelphia , Pennsylvan , USA

ISBN: 9780323530453

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

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

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Morphology image viewer

## Referencing Style

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

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

For further information, see the Assessment Tasks.

## Teaching Contacts

**Jacqui Dennis** Unit Coordinator

[j.dennis@cqu.edu.au](mailto:j.dennis@cqu.edu.au)

## Schedule

### Week 1 - 08 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
1. Introduction to unit. 2. Review of Haematopathology 1 3. Haemoglobinopathies	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 1 on Moodle.	Live Tutorial:

**Week 2 - 15 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Paediatric Haematology 2. Diagnostic Paediatric Haematology	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 2 on Moodle.	Tutorial: Paediatric Morphology

**Week 3 - 22 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Laboratory information systems 2. Health records and information exchange	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 3 on Moodle.	Tutorial: Digital Pathology

**Week 4 - 29 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Red cell Morphology 2. White cell Morphology	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 4 on Moodle.	Live Tutorial

**Week 5 Flow Cytometry - 05 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Flow cytometry 2. Flow cytometry analysis and interpretation	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 5 on Moodle.	Live Tutorial

**Vacation Week - 12 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic

**Week 6 Molecular Diagnostics - 19 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Molecular Diagnostics 2. Clinical aspects of Molecular Haematology	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 6 on Moodle.	Live Tutorial Research Tutorial  <b>Mid-term Written Assessment</b> Due: Week 6 Tuesday (20 Aug 2024) 5:00 pm AEST

**Week 7 Haematology Research - 26 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Research in Haematology 2. Current research in Acute Myeloid Leukaemia	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 7 on Moodle.	Live Tutorial  <b>Case study</b> Due: Week 7 Thursday (29 Aug 2024) 4:00 pm AEST

**Week 8: Cytogenetics/ Research - 02 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic

1. Cytogenetics and practical aspects 2. Clinical perspectives in cytogenetics	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 8 on Moodle.	Live Tutorial
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**Week 9: Bleeding disorders - 09 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Bleeding disorders 2. Diagnostics in bleeding disorders	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 9 on Moodle.	Tutorial: Laboratory testing and interpretation of bleeding disorders.

**Week 10: Thrombophilia - 16 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Thrombophilia 2. Diagnostics in Thrombophilia	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 10 on Moodle.	Tutorial: Laboratory testing and interpretation of Thrombophilia

**Week 11: Stem cells - 23 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
1. Stem cells 2. Practical aspects of stem cell processing	No prescribed textbook has been assigned for this subject. Please consistently review the lecture materials, recordings and additional resources available for week 11 on Moodle.	Live Tutorial

**Week 12: Revision - 30 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Revision Week		The End-of-unit Exam will be scheduled in the CQUniversity examination period between 10/10/24 - 18/10/24. The End-of-unit exam comprises 50% of the overall unit mark.

**Review/Exam Week - 07 Oct 2024**

Module/Topic	Chapter	Events and Submissions/Topic
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**Exam Week - 14 Oct 2024**

Module/Topic	Chapter	Events and Submissions/Topic
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## Term Specific Information

Your unit coordinators for LMED29006, Haematopathology 2, is Ms Jacqui Dennis. Your primary contact point is Jacqui and you can contact her using the following means:

Via the Discussion forum on the unit's Moodle site. The Discussion forum for this unit is continuously monitored and you can expect a response within one-two (1-2) business day/s of posting your question.

Through email (j.dennis@cqu.edu.au) or

Via Microsoft Teams

Your secondary contact point is Associate professor Genia Burchall and you can contact her using the following means:

Via the Discussion forum on the unit's Moodle site.

Through email (g.burchall@cqu.edu.au) or

Via Microsoft Teams

### CM18 - Master of Laboratory Medicine

Tutorials/Lectorials will be delivered each week at the Rockhampton and Melbourne campuses, and students who are enrolled in mixed mode will be able to join these classes via Zoom. These tutorials/lectoralials will also be recorded for the benefit of those students who are unable to attend the live classes. During the sessions, you will have the opportunity to ask questions or discuss uncertainties in relation to the lecture materials and recordings for each week. There will be some active learning exercises undertaken to assess your understanding of the weekly lecture material including short answer questions, kahoot quizzes, blood film morphology and cases studies etc.

These active learning activities will help you apply the knowledge learned during the weekly lectures and other pre-class learning material and prepare you for the assessments. You will gain the most benefit from the tutorials/lectoralial if you watch the weekly lectures beforehand and read the peer-reviewed article and/or other pre-class learning material. You are also strongly encouraged to participate in tutorials, as studies have shown that students who attend the tutorials and participate in discussions have higher rates of success (Karnik et al., 2020\*).

As per Australian educational standards, you are expected to commit 150 hours of engagement to your study of this unit. This is broken down as:

2 - 3 hours per week watching recorded lectures and revising the content through study notes

2 - 3 hours per week reviewing the peer-reviewed article provided in Moodle and other relevant resources available for each week

1.5 - 2.5 hours per week attending the weekly tutorial/lectoralial classes and reflecting on your answers to the activities undertaken during class, identifying areas of uncertainty that still remain and discussing this/these with other fellow students or the teaching staff.

3 - 4 hours per week preparing your assessments or studying for your exams

\*Karnik, A., Kishore, P., & Meraj, M. (2020). Examining the linkage between class attendance at university and academic performance in an International Branch Campus setting. *Research in Comparative and International Education*, 15(4), 371-390. <https://doi.org/10.1177/1745499920958855>

## Assessment Tasks

### 1 Mid-term Written Assessment

#### Assessment Type

Written Assessment

#### Task Description

This assessment evaluates your understanding of the learning objectives and activities covered from weeks 1 to 5, inclusive, in the unit. This includes pre-tutorial materials such as weekly lecture notes, videos, and other relevant resources provided with the unit content, as well as topics covered during scheduled tutorial classes. The assessment will consist of various question formats, such as short answer questions, extended response questions and morphology questions. The assessment will be conducted online and will have a duration of 90 minutes.

This assessment is worth 20% of your final grade. It is designed to gauge your progress approximately halfway through the term and to help you identify areas of strength and areas for improvement within the unit. Additionally, it aims to familiarize you with the structure and types of questions you can expect on the final exam.

Please note that this written assessment will be accessible online from 9 am, on Tuesday 20th August 2024, and it will remain open for 24h and you will only have 90 min to complete this assessment once commenced.

**Assessment Due Date**

Week 6 Tuesday (20 Aug 2024) 5:00 pm AEST

Your submission will close after 90 minutes

**Return Date to Students**

Week 8 Wednesday (4 Sept 2024)

Results will be available on Moodle.

**Weighting**

20%

**Assessment Criteria**

This assessment will only assess your learning and understanding of week 1-5.

Marking criteria will be as outlined in the test. Marks will range from 1-2 marks for short responses and 4-10 marks where more detailed information will be required. You are strongly encouraged to regularly attend and actively participate and engage in the weekly scheduled classes, ask questions where you are uncertain and ensure you come prepared for each class by having reviewed any pre-class learning material. If you still have questions or areas, you do not understand following each weekly tutorial class you will be encouraged to address these promptly by posting your questions on the Discussion forum and engaging in discussion on this/these topics with fellow students and academics, and the Unit coordinators.

**Referencing Style**

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

**Submission**

Online

**Submission Instructions**

Submission will be online on Moodle.

**Learning Outcomes Assessed**

- Evaluate the detection and monitoring of blood diseases using laboratory tests appropriate to the patient's clinical condition
- Advise on the the use of anticoagulant therapies in the management of disorders of haemostasis
- Evaluate the performance of routine and complex haematology and haemostasis testing including quality control procedures.

## 2 Case study

**Assessment Type**

Case Study

**Task Description**

There are two parts to this assessment task.

Part 1: Please form a group for this assessment with a max of 4 students in each group (min 3 students). You will be provided with several examples of authentic clinical case studies on the Moodle site.

You will be required to select the case study of interest to your group and the group leader must post in the Moodle Discussion board indicating which case has been selected (& names of their group members).

The case studies will be available for selection on a 'first come, first serve' basis. Each group must have their own case to work on (and present) and no 2 or more groups can select the same case.

Please check carefully the Moodle Discussion board before selecting your case study to ensure this has not already been chosen by another group previously.

The following information regarding the case will be available to you: clinical presentation, patient history, key laboratory information and/or other relevant case details.

Part 2: You are then required, as a group, to discuss and develop a PowerPoint presentation, using a case study approach. This will include:

A detailed description of the specific clinical history and pathophysiology and interpretation

A focus on the laboratory results and a discussion of further testing and their interpretation. What are the techniques of analysis and their principle?

Analysis of the provisional and differential diagnoses is required which should be discussed whilst showing critical thinking in your analysis.

Presentation of a new insight into the diagnosis will also be required, this needs to be within the last 5 years.

Guidelines to complete the presentation and a marking rubric will be available on the Moodle site.

**Assessment Due Date**

Week 7 Thursday (29 Aug 2024) 4:00 pm AEST



Presentations will be assessed in Week 7 and 8 Tutorial sessions. You must attend these sessions.

**Return Date to Students**

Week 10 Thursday (19 Sept 2024)

**Weighting**

30%

**Minimum mark or grade**

50%

**Assessment Criteria**

This assessment task will assess the following unit learning objectives:

1. Diagnose complex haematological disorders based on numerical, cytogenetic and morphological changes in the cells.
4. Analyse results of specialised haematological tests and provide advice on further testing to provide a diagnosis.

You will be assessed on your ability to interpret and discuss a clinical case whilst demonstrating critical thinking processes. You will also be assessed on the significance and novelty of your insight.

A detailed marking rubric will be provided in the unit Moodle site of the assessment criteria used. The marking rubric will include both a group assessment component as well as individual assessment component.

**Referencing Style**

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

**Submission**

Online Group

**Submission Instructions**

Online submission of the group PowerPoint as well as individual work will be required. The presentation will form the group submission part.

**Learning Outcomes Assessed**

- Diagnose complex haematological disorders based on numerical, cytogenetic and morphological changes in the cells
- Analyse results of specialised haematological tests and provide advice on further testing to provide a diagnosis

## Examination

**Outline**

Complete an invigilated examination.

**Date**

During the examination period at a CQUniversity examination centre.

**Weighting**

50%

**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).

## 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