



BMSC13001 *Advanced Haematology*

Term 2 - 2021

Profile information current as at 03/11/2025 10:50 pm

All details in this unit profile for BMSC13001 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

In this unit you will apply your foundation knowledge of haematology to the study of how haematological disorders manifest and are diagnosed through changes in number, cytogenetics and morphology of cells. Diseases of haemostasis including therapeutic management with anticoagulants will also be discussed. This advanced unit builds on the knowledge and skills taught in previous units and will prepare you for work as a Medical Laboratory Scientist in Haematology. You will be required to attend a compulsory residential school in Rockhampton and an assessment task will be completed on campus during this residential school.

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

Prerequisites: BMSC12003 Haematology and Transfusion Science

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 - 2021

- 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).

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. **Written Assessment**

Weighting: 20%

2. **Practical Assessment**

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 Student Feedback In Class

Feedback

Students found Residential School session highly beneficial.

Recommendation

Continue to use current Residential School format with involvement of industry expert.

Feedback from Student Feedback

Feedback

Students found industry expertise was exemplary and highly valuable to student learning.

Recommendation

Continue to use industry expert to assist in student learning outcomes for this unit.

Feedback from Student Feedback In Class

Feedback

Students appeared to be highly satisfied with unit overall.

Recommendation

Continue with current unit format with further enhancement for continued improvement.

Feedback from Student Feedback

Feedback

Some students found the assessment criteria for the written Assignment.

Recommendation

Review assessment criteria to further improve clarity on requirements for assessment tasks.

Unit Learning Outcomes

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

1. Distinguish benign from malignant haematological disorders based on numerical, cytogenetic and morphological changes in the cells.
2. Discuss the detection and monitoring of blood diseases using laboratory tests appropriate to the patient's clinical condition.
3. Discuss disorders of haemostasis and the use of anticoagulant therapies.
4. Analyse results of hematological tests and provide provisional and differential diagnoses with suggested further testing to support and confirm the diagnosis.
5. Perform morphological analysis of peripheral blood smears to make a differential diagnosis.

Competency Based Standards for Medical Scientists, December 2009.

Unit 1: Collection, preparation and analysis of clinical material - **Elements** 1.1.1 - 1.1.3; 1.1.6 - 1.1.8; 1.2.4; 1.3.1 - 1.3.5; 1.5.1 - 1.5.5 & 1.6.1 - 1.6.8;

Unit 2: Correlation and validation of results of investigations using knowledge of method(s) including analytical principles and clinical information - **Elements** 2.1.1 - 2.1.2; 2.2.1; 2.3.1 & 2.3.2

Unit 3: Interpretation, reporting and issuing of laboratory results - **Elements** 3.1.1; 3.2.1 - 3.2.3; 3.2.6 - 3.2.7 & 3.3.1 - 3.3.2

Unit 4: Maintenance of documentation, equipment, resources and stock - **Elements** 4.2.1 - 4.2.6

Unit 5: Maintenance and promotion of safe working practices - **Elements** 5.1.3; 5.2.1; 5.3.4; 5.3.9; 5.4.1 - 5.4.5

Unit 6: Professional accountability and participation in continuing professional development - **Elements** 6.5.6 & 6.5.7

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
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 - Written Assessment - 20%	•	•	•							
2 - Practical Assessment - 30%	•	•	•	•						
3 - Online Test - 50%	•	•	•	•						

Textbooks and Resources

Textbooks

BMSC13001

Prescribed

Clinical Haematology Atlas

Edition: 5th (2016)

Authors: Bernadette F. Rodak, Jacqueline H. Carr

Elsevier

St Louis , Missouri , United States of America

ISBN: 9780323322492

Binding: Spiral

BMSC13001

Prescribed

Rodak's Haematology, Clinical Principles and Applications

Edition: 6th (2019)

Authors: Elaine Keohane, Catherine Otto, Jeanine Walenga

Elsevier

St Louis , Missouri , United States of America

ISBN: 9780323530453

Binding: Hardcover

Additional Textbook Information

If you prefer to study with a paper copy, they can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code).

eBook version is also available for Rodak's Haematology, Clinical Principles and Applications at: <https://www.elsevier.com/books/rodaks-hematology/keohane/978-0-323-53045-3>

Access to both these books can also be gained via the eReading list on Moodle page.

[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 styles below:

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

For further information, see the Assessment Tasks.

Teaching Contacts

Roxina Sharma Unit Coordinator

r.r.sharma@cqu.edu.au

Schedule

Week 1 - 12 Jul 2021		
Module/Topic	Chapter	Events and Submissions/Topic
1. Introduction to Advanced Haematology 2. Bone Marrow Examination	Chapters 1 & 14	Recorded zoom tutorial
Week 2 - 19 Jul 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Haemolytic Anaemias; 1. Increased RBC Destruction 2. Intrinsic Defects 3. Extrinsic Defects - Immune and Non-Immune Causes	Chapters 20-25	Recorded zoom tutorial
Week 3 - 26 Jul 2021		
Module/Topic	Chapter	Events and Submissions/Topic
1. Non-Malignant Leucocyte Disorders 2. Paediatric and Geriatric Haematology 3. Platelet morphology	Chapters 26, 43, 10	Recorded zoom tutorial
Week 4 - 02 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Haematological malignancy; development, genetics and nomenclature	Chapters 28-30	Recorded zoom tutorial
Week 5 - 09 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
1. Myelodysplastic Syndromes 2. Myeloproliferative Neoplasms	Chapters 32-33	Written Assessment - Case study available Friday 13/08/21 Case Study Due: Week 8 Monday (6 Sep 2021) 5:00 pm AEST The written assessment - case study comprises 20% of the overall unit mark.
Vacation Week - 16 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Independent study week - an opportunity for self-directed learning, mid-unit revision and catch up.		No lectures.
Week 6 - 23 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Myeloid Leukaemia	Chapters 31, 28-30	Recorded zoom tutorial
Week 7 - 30 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Lymphoid Leukaemia	Chapters 31, 28-30	Recorded zoom tutorial
Week 8 - 06 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic
1. Lymphomas 2. Myelomas 3. Other Haematological Malignancies	Chapter 34	Recorded zoom tutorial Case Study Due: Week 8 Monday (6 Sept 2021) 5:00 pm AEST
Week 9 - 13 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic

1. Anticoagulants and Coagulopathies
 2. Platelet Disorders
- Chapters 37-42, 10

Week 10 - 20 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Compulsory Residential School: 24.09.2021 - 29.09.2021	Laboratory manual Practical Assessment	During the Residential School, you will be assessed on your ability to perform a number of morphological analyses as presented in your practical manual. Practical Assessment due date: Sunday 26/09/2021 1pm AEST. The practical assessment comprises 30% of the overall unit mark.

Week 11 - 27 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
1. Malaria 2. Other Blood Borne Parasites	Chapter 22	Recorded zoom tutorial

Week 12 - 04 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Revision week	On-line Q&A session	

Review/Exam Week - 11 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Revision / Online Test		End-of-Term Online Test The End-of-Term Online Test will be scheduled in the CQUniversity examination period between 14/10/21 - 22/10/21. The exact date will be advised on the unit Moodle page. The Online test comprises 50% of the overall unit mark.

Exam Week - 18 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Unit Contacts for 2021

Unit Coordinators:

Wayne Pederick: w.pederick@cqu.edu.au

Roxzina Sharma: r.r.sharma@cqu.edu.au

Lecturer / Tutor / Assessors:

Roxzina Sharma: r.r.sharma@cqu.edu.au

Caroline Zollinger: c.zollinger@cqu.edu.au

Pre-recorded lectures will be used throughout the term and will be available to students at the start of each lecture week. Pre-recorded tutorials will be available in most weeks - please see the Moodle site for further details. It is advisable to review the weekly lectures before each tutorial session.

This year students have e-access to the prescribed textbook, additional reading resources and some of the supplementary textbooks via the eReading Lists on the Moodle page.

Attendance to the Residential School is compulsory for all students. Further details will be provided on your Moodle page during the term.

Students are encouraged to use the Moodle Q&A for all communication purposes. This will be monitored by all of us. Live Q&A sessions will be held via Zoom from week 2 onwards - please see the Moodle site for further details.

Assessment Tasks

1 Case Study

Assessment Type

Written Assessment

Task Description

You will be provided with an authentic clinical case study on the unit Moodle site.

The following information regarding the case will be available to you: clinical presentation, patient history, blood smear morphology, haematological parameters (provided by an automated analyser) and biochemical changes (if any).

You are required to write a report (up to 1,500 words) using a case study approach describing the pathology observed, aetiology, specific morphological or haematological characteristics observed that led to the diagnosis, differential diagnosis, treatment options and any recommended further tests. Guidelines to complete the report, marking rubric and a template will be available on the Moodle site.

Assessment Due Date

Week 8 Monday (6 Sept 2021) 5:00 pm AEST

Answers must be submitted on the template provided and a PDF version uploaded to the Moodle site.

Return Date to Students

Week 9 Friday (17 Sept 2021)

Online by midnight on due date

Weighting

20%

Minimum mark or grade

50% of total attainable marks

Assessment Criteria

The case study assessment is worth 20% of your total unit marks. A minimum of 50% is required to pass this assessment.

The assessment task is marked according to how well you have met the specific requirements and in accordance with the detailed marking rubric, which is available on the BMSC13001 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 on Moodle with the appropriate documentation. Assessments that have been submitted more than 20 calendar days late will not be marked without an approved extension.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Discuss the detection and monitoring of blood diseases using laboratory tests appropriate to the patient's clinical condition.
- Analyse results of hematological tests and provide provisional and differential diagnoses with suggested further testing to support and confirm the diagnosis.
- Perform morphological analysis of peripheral blood smears to make a differential diagnosis.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking

2 Practical Assessment

Assessment Type

Practical Assessment

Task Description

This will be conducted on the final day of the residential school.

It will encompass skills practised on the days leading up to this assessment. This assessment must be handed to the assessor for marking on completion by end of the final day.

Assessment Due Date

Last day of the residential school (Sunday 26.09.21)

Return Date to Students

End of last day of the residential school (Sunday 26.09.2021)

Weighting

30%

Minimum mark or grade

50% of total attainable marks

Assessment Criteria

You must achieve a minimum of 50% marks in order to pass this assessment.

Students who pass the first attempt will be awarded the achieved grade, up to 100% of the total marks, which is 30% of the total unit grade. Students who fail the 1st attempt will be granted a second attempt. The second attempt will be conducted in the second half of the final day, prior to completion of the residential school session.

The repeat attempt will be a pass/fail, with the maximum marks being 50% of the total achievable marks, which is 15% of the total unit grade. A fail on the repeat attempt but passes in all other unit assessments and an overall grade of $\geq 44.5\%$ will be awarded a SA (supplementary assessment) grade. This will be available in the next scheduled offering of the Residential School (usually in the following year). As the SA is an interim grade this will not impact on the student's ability to progress in their studies.

Referencing Style

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

Submission

Offline

Submission Instructions

Handed to assessor at completion on the final day of residential school.

Learning Outcomes Assessed

- Distinguish benign from malignant haematological disorders based on numerical, cytogenetic and morphological changes in the cells.
- Perform morphological analysis of peripheral blood smears to make a differential diagnosis.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

3 End-of-Term Online Test

Assessment Type

Online Test

Task Description

Complete an online test.

The online test will consist of three sections;

Section A: Short answer questions

Section B: Long answer questions

Section C: Case studies

Assessment Due Date

During CQ University T2 2021 exam block.

Return Date to Students

After certification of grades.

Weighting

50%

Minimum mark or grade

50% of total attainable marks.

Assessment Criteria

Provide answers to a series of short answer, long answer and case study questions.

Students must receive at least 50% of the final online test mark to pass this unit.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Distinguish benign from malignant haematological disorders based on numerical, cytogenetic and morphological changes in the cells.
- Discuss the detection and monitoring of blood diseases using laboratory tests appropriate to the patient's clinical condition.
- Discuss disorders of haemostasis and the use of anticoagulant therapies.
- Analyse results of hematological tests and provide provisional and differential diagnoses with suggested further testing to support and confirm the diagnosis.
- Perform morphological analysis of peripheral blood smears to make a differential diagnosis.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

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