



BMSC13001 *Advanced Haematology*

Term 1 - 2017

Profile information current as at 07/05/2024 10:51 am

All details in this unit profile for BMSC13001 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

On completion of this unit students will be able to appraise and perform advanced haematological and haemostatic methods used in the diagnosis and monitoring of blood diseases. Therapeutic management of diseases of blood coagulation will also be investigated. Distance education students will be required to: have access to a computer to make frequent use of internet resources; and, to attend a 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: CHEM11041 – Chemistry for the Life Sciences BMSC11001 – Human Body Systems 1 BMSC11003 – Intro to Medical Sciences BMSC11002 – Human Body Systems 2 BMSC11004 – Introduction to Biochemistry BMSC12003 – Haematology BMSC12002 – Work Integrated Learning 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 1 - 2017

- Distance
- 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 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: 10%

2. **Practical Assessment**

Weighting: 40%

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](#).

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 evaluation

Feedback

Learning resources are appreciated

Recommendation

Continue to provide variety of learning resources

Action

Variety of learning resources has been maintained and will continue to do so with industry support.

Feedback from Student evaluation

Feedback

Course well structured and relevant

Recommendation

Continue to maintain relevance of course content to meet needs of industry

Action

Industry experts performed lectures and provided course content, ensuring the continuing relevance of course material in line with industry practices.

Feedback from Student evaluation

Feedback

More blood films for residential school

Recommendation

Continue to procure more blood films from industry

Action

The majority of slides have been replaced, an industry contact from QLD Health is continuing to provide 10-20 slides of any interesting cases they have encountered, which we are now using in class for both learning and assessment

Unit Learning Outcomes

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

1. Assess the evidence base and factors that are essential in development of new haematological and haemostatic testing methods for the detection and monitoring of blood diseases.
2. Discuss limitations of haematology laboratory procedures and use of tests within specified limits.
3. Evaluate haematological and haemostatic instrumentation quality control processes including manual and automated validation and institute corrective action as required.
4. Distinguish between technical/instrumental causes and pathological causes of unexpected results and develop solutions to problems with testing procedure based on clinical and scientific expertise.
5. Discuss report presentation, critical range and interpretation of abnormal haematological and haemostatic results.
6. Describe common causes of artefactual or discrepant haematological and haemostatic test results and explain the concept of therapeutic range of anticoagulant therapy.

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	5	6
1 - Written Assessment - 10%	•	•				
2 - Practical Assessment - 40%			•	•	•	•
3 - Examination - 50%	•	•	•	•		

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - 10%	•	•	•							
2 - Practical Assessment - 40%	•	•	•	•		•				
3 - Examination - 50%	•		•	•		•				

Textbooks and Resources

Textbooks

BMSC13001

Prescribed

Hematology: Clinical Principles and Applications

4th edition (2012)

Authors: Rodak & Fritsma & Keohane

Elsevier Saunders

St Louis , Missouri , United States of America

ISBN: 9781437706925

Binding: Hardcover

BMSC13001

Supplementary

Clinical Hematology Atlas

4th edition (2012)

Authors: Rodak & Carr

Elsevier

St Louis , Missouri , United States of America

ISBN: 9781455708307

Binding: Hardcover

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Digital microscope

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Andrew Taylor-Robinson Unit Coordinator

a.taylor-robinson@cqu.edu.au

Schedule

Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
1. Introduction to Advanced Haematology	16	
2. Bone marrow examination		

Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
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1. Increased RBC destruction
2. Intrinsic defects
3. Extrinsic defects - Immune and Non-immune causes

22, 23, 24, 25

Week 3 - 20 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
1. Non-malignant leucocyte disorders 2. Paediatric and Geriatric Haematology	28, 38	

Week 4 - 27 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Haematological malignancy development, genetics and nomenclature	29, 30, 31, 32, 33	

Week 5 - 03 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
1. Myelodysplastic syndromes 2. Myeloproliferative neoplasms	34, 35	

Vacation Week - 10 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

Week 6 - 17 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Myeloid leukaemia	34, 35, 36, 37	Case study report Due: Week 6 Friday (21 Apr 2017) 5:00 pm AEST

Week 7 - 24 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Lymphoid leukaemia	34, 35, 36, 37	

Week 8 - 01 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
1. Lymphomas 2. Myelomas 3. Other haematological malignancies	29 - 37	

Week 9 - 08 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Residential School	Practical Workbook	

Week 10 - 15 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
1. Anticoagulants and coagulopathies 2. Platelet disorders	40, 41, 42, 43, 44, 45, 46, 47	Practical Assessment and Examination Due: Week 10 Friday (19 May 2017) 5:00 pm AEST

Week 11 - 22 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Malaria and other blood parasites	24	

Week 12 - 29 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Revision lecture		

Review/Exam Week - 05 Jun 2017

Exam Week - 12 Jun 2017

Assessment Tasks

1 Case study report

Assessment Type

Written Assessment

Task Description

You will be provided with an authentic clinical case study on the 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 then required to write a report (around 1,000 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 6 Friday (21 Apr 2017) 5:00 pm AEST

Return Date to Students

Week 8 Friday (5 May 2017)

Weighting

10%

Minimum mark or grade

50%

Assessment Criteria

The assessment task is marked according to how well you have met the specific requirements and in accordance with the criteria outlined below:

Presentation: The report is presented in the required template. Clarity of purpose and coherence of expression (spelling, grammar, syntax); Clear and organised flow of information.

Abstract: Provides a clear overview and overall summary of the case study.

Introduction: Provides necessary background information and pathophysiology of the case. Does not discuss the final diagnosis rather supports the intended diagnosis via arguments.

Materials and Methods: Briefly describes all the methods used to aid in diagnosis. Discusses further tests to be employed in order to confirm the diagnosis.

Results: All data presented clearly with reference ranges. Layout is clear with further tests and expected results discussed.

Discussion: Clear discussion of the results with supporting arguments and reasoning for arriving at the final diagnosis.

References: Harvard referencing system used with appropriate in-text references

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Assess the evidence base and factors that are essential in development of new haematological and haemostatic testing methods for the detection and monitoring of blood diseases.
- Discuss limitations of haematology laboratory procedures and use of tests within specified limits.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking

2 Practical Assessment and Examination

Assessment Type

Practical Assessment

Task Description

You will be provided with a laboratory workbook on the moodle site. This workbook will contain all the tasks that need to be completed during the residential school block. It will also contain a series of short questions and patient reports to be completed in relation to the authentic cases provided. Group experimental activities during the residential school will foster team work and provide hands-on experience of the haematological techniques used in pathology laboratories. Completion of the workbook will evidence student engagement and understanding of the principles behind the haematological tests. Laboratory staff or demonstrators will assess your individual experimental capability during residential school to ensure your understanding of the learning outcomes. You will be required to submit the completed version of the laboratory workbook on the moodle site.

Important: On Day 3 of your residential school block, you will have a final practical examination. Further details regarding the examination will be available on the moodle site.

Assessment Due Date

Week 10 Friday (19 May 2017) 5:00 pm AEST

Return Date to Students

Week 12 Friday (2 June 2017)

Weighting

40%

Minimum mark or grade

50%

Assessment Criteria

- Residential school and Workbook component: Each section will have respective assigned marks depending on the complexity of the task to be performed. A total mark obtained for the workbook and associated tasks would then be converted to 20% of your final grade. The laboratory staff will provide immediate verbal feedback to you on the practical hands-on aspect of this assessment item. The laboratory workbook template will contain the weightage of marks associated with the tasks and subsequent questions/reports to be completed
- Practical examination component: The practical examination conducted on Day 3 of the residential school is worth 20% of your final grade. Further information on the examination will be available on the moodle site.
- Total for practical assessment: $20 + 20 = 40\%$

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Evaluate haematological and haemostatic instrumentation quality control processes including manual and automated validation and institute corrective action as required.
- Distinguish between technical/instrumental causes and pathological causes of unexpected results and develop solutions to problems with testing procedure based on clinical and scientific expertise.
- Discuss report presentation, critical range and interpretation of abnormal haematological and haemostatic results.
- Describe common causes of artefactual or discrepant haematological and haemostatic test results and explain the concept of therapeutic range of anticoagulant therapy.

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

50%

Length

180 minutes

Minimum mark or grade

50

Exam Conditions

Closed Book.

Materials

Calculator - non-programmable, no text retrieval, silent only

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