



BMSC13011 *Immunohaematology*

Term 2 - 2017

Profile information current as at 28/04/2024 07:27 am

All details in this unit profile for BMSC13011 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

Students will be able to discuss important aspects in immunohaematology including blood storage, blood typing, cross matching and the immune response on successful completion of this unit. Students will gain this vital knowledge and develop skills in performing the tests required for emergency and planned blood transfusions via theoretical and practical sessions.

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

Pre-requisites: BMSC12003 - Haematology, (BMED19005 - Immunology or BMSC13009 - Immunology) Co-requisite: 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 2 - 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. **Practical Assessment**

Weighting: 50%

2. **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 Students

Feedback

The recorded lectures are poor quality and are from 2014 with no changes, 2-3 hr lectures are too long. There was a great deal of content.

Recommendation

Redo the lectures with better format, and repeatedly include questions on important topics in the learning resources at the end of each week, instead of just the week the lecture is delivered.

Feedback from Judy Couper

Feedback

There is a large amount of content for the unit so I think there needs to be a larger choice of questions on the exam paper, there was only one spare question for each part and the questions weren't clear, students interpreted the questions differently.

Recommendation

Add an extra two questions to Part A and Part B, and have the exam questions reviewed by a third party experienced in the field to avoid ambiguity.

Feedback from Industry expert

Feedback

We need to add phenotyping into the practical component of the unit as it is an important part of transfusion

Recommendation

Include phenotyping into the practical manual

Unit Learning Outcomes

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

1. Describe human blood products, their production, labelling, storage and medical use.
2. Interpret blood grouping via antigen/antibody identification.
3. Understand principles and concepts of blood type cross matching (immunohaematology and immunophenotyping).
4. Perform and interpret blood cross matching by identifying the presence of antibodies.
5. Explain the classification of adverse transfusion reactions and explain the consequences of using incompatible blood products.
6. Consider special factors for consideration in urgent blood transfusion.
7. Examine the production of autoantibodies and their role in erythrocyte destruction and tissue inflammation.
8. Perform and interpret direct antiglobulin tests.
9. Analyse and interpret antenatal and postnatal immunohaematology testing procedures and results.
10. Justify blood bank automation and quality control of manual and automated blood cross matching.

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	7	8	9	10
1 - Practical Assessment - 50%		•	•	•					•	•
2 - Examination - 50%	•	•	•		•	•	•		•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes									
	1	2	3	4	5	6	7	8	9	10
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 - Practical Assessment - 50%	•	•	•	•						
2 - Examination - 50%	•	•		•				•		

Textbooks and Resources

Textbooks

BMSC13011

Prescribed

Immunohematology: Principles and Practice

Edition: 3rd (2011)

Authors: Quinley E D

Lippincott Williams & Wilkins

Sydney , NSW , Australia

ISBN: ISBN-13: 978-0781782043

Binding: Hardcover

Additional Textbook Information

[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 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 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to transfusion science: range of blood products and overview of collection and processing. Basic genetics and immunology.	Chapter 3 pp. 30-34, Chapters 4 & 5.	

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
ABO blood grouping; Rhesus blood grouping. Laboratory techniques for grouping.	Chapters 9 & 10.	

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Pre-transfusion testing. Other blood groups.	Chapters 6, 8 & 11.	

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Australian Red Cross Blood Services.	Chapters 1, 2 & 3.	

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Quality assurance in blood banks and transplantation. Other blood groups, HLA and molecular techniques.	Chapters 7, 12 & 18.	

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Independent study: an opportunity for self-directed learning and mid-unit revision.		

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Adverse effects and avoiding them. Haemolytic anaemias, blood product substitutes.	Chapters 14 & 15.	

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Haemolytic disease of the newborn.	Chapter 16.	

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Use of specific blood fractions, organ and tissue transplantation.	Chapter 13.	

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Resolving transfusion problems. Case studies.		

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
No formal classes due to other residential schools.		

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
No formal classes due to residential school Mon-Wed 25-27 September.		<p>During the residential school you will be assessed on your competence to perform safely different blood banking techniques and to interpret correctly collected data. The practical assessment comprises 50% of the overall unit mark.</p> <p>Practical Assessment Due: Week 11 Wednesday (27 Sept 2017) 5:00 pm AEST</p>

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
Revision.		

Review/Exam Week - 09 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 16 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
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The end-of-unit exam comprises 50% of the overall unit mark.

Assessment Tasks

1 Practical Assessment

Assessment Type

Practical Assessment

Task Description

For medical scientists working in transfusion science or hospital blood banks, it is essential that laboratory techniques are performed and interpreted correctly each and every time. Failure to do this has potentially fatal consequences. For this reason, demonstration of practical competence is heavily weighted at 50% of the total unit mark.

During the residential school you will complete:

- (1) Laboratory workbook (25%): answer a set of questions in the laboratory workbook and interpret results as you perform each practical task;
- (2) Practical examination (25%): you will undertake a practical examination in which you will be required to perform routine blood banking techniques in order to obtain valid results and to interpret the data correctly.

Assessment Due Date

Week 11 Wednesday (27 Sept 2017) 5:00 pm AEST

Your practical examination will be completed in the last session of the residential school. Your laboratory workbook must be uploaded to the course moodle site before the due date.

Return Date to Students

Week 11 Thursday (28 Sept 2017)

The practical assessment will be performed and marked in-class.

Weighting

50%

Minimum mark or grade

You should obtain a minimum 50% mark in both your laboratory workbook and practical examination in order to pass this assessment.

Assessment Criteria

1. Residential school and laboratory workbook: Each section will have assigned marks depending on the complexity of the task to be performed. A total mark obtained for the workbook and associated tasks will then be converted to 25% of your final grade. The laboratory staff will provide active verbal feedback to you on the practical hands-on aspect of this assessment item. The laboratory workbook template will contain the weighted marks associated with the tasks and subsequent questions/reports to be completed.
2. Practical examination: The practical examination conducted on the last session of the residential school is worth 25% of your final grade. The practical examination will assess your ability to perform blood banking techniques and accurately interpret results to arrive at a provisional diagnosis. Further information on the examination will be available on the moodle site.

Referencing Style

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

Submission

Offline

Submission Instructions

During the residential school.

Learning Outcomes Assessed

- Interpret blood grouping via antigen/antibody identification.
- Understand principles and concepts of blood type cross matching (immunohaematology and immunophenotyping).
- Perform and interpret blood cross matching by identifying the presence of antibodies.
- Perform and interpret direct antiglobulin tests.
- Analyse and interpret antenatal and postnatal immunohaematology testing procedures and results.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

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

No calculators permitted

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