



# LMED29003 *Transfusion and Transplantation* **Medicine 1** Term 2 - 2023

Profile information current as at 20/04/2024 07:44 am

All details in this unit profile for LMED29003 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.

## Corrections

### Unit Profile Correction added on 28-09-23

There has been an error with the Assessment details for Assessment 2 and Assessment 3. The details for these assessments should read as follows:

#### **Assessment 2**

Laboratory/Practical Workbook (30%)

#### **Task Description**

During the residential school you will complete:

**A Laboratory Workbook (30%):** answer a set of questions in the laboratory workbook and interpret results as you perform each practical task. Completion of the workbook will provide evidence for student engagement and understanding of the principles behind the laboratory tests. Completed workbooks are to be submitted online on the Moodle site by the due date.

#### **Assessment Due Date**

Term 3. Details to be provided during term on Moodle site.

#### **Return Date to Students**

Term 3. Details to be provided during term on Moodle site.

#### **Weighting**

30%

#### **Minimum mark or grade**

50% of total attainable marks.

#### **Assessment Criteria**

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

#### **Referencing Style**

Harvard (author-date)

Vancouver

#### **Submission**

online

#### **Submission Instructions**

Laboratory/Practical Workbook is to be submitted online by the specified due date.

#### **Learning Outcomes Assessed**

Accurately interpret and report test results in Transfusion and Transplantation Medicine 1.

#### **Assessment 3**

#### **Assessment Title**

Laboratory/Practical Assessment (Pass/Fail)

#### **Task Description**

For Medical Scientists working in a Transfusion Laboratory, it is essential that laboratory techniques are performed and interpreted correctly each and every time. Failure to do so has potentially fatal consequences. For this reason, demonstration of individual practical competence is vital.

You will be required to attend a compulsory residential school during which you will undertake a practical

assessment in the last session of the residential school. You will be required to accurately perform routine blood banking techniques in order to obtain valid results. You will also be required to correctly interpret these results in order to achieve safe transfusion outcomes. You will be provided with a patient sample and a number of donor units to determine the compatibility of the donor units to prevent any adverse transfusion outcomes. On completion, this assessment must be handed to the assessor for marking before the end of the final day of residential school.

**Assessment Due Date**

During the Residential School in Term 3. Details to be provided during term on Moodle site.

**Return Date to Students**

Term 3. Details to be provided during term on Moodle site.

**Weighting**

Pass/Fail

**Minimum mark or grade**

80% of total attainable marks for the Practical Assessment.

**Assessment Criteria**

**Practical Assessment (Pass/Fail):** You must achieve a minimum of 80% of total marks in order to pass this assessment.

**Referencing Style**

Harvard (author-date)  
Vancouver

**Submission**

Offline

**Submission Instructions**

To be handed to the assessor on completion for marking during the residential school period.

**Learning Outcomes Assessed**

Accurately interpret and report test results in Transfusion and Transplantation Medicine 1.

Demonstrate advanced testing skills in transfusion science including pre-transfusion compatibility testing, antenatal / postnatal / neonatal screening and the testing for autoantibodies.

## General Information

### Overview

This unit enables you to develop an understanding of the principles of transfusion and transplantation medicine. You will gain vital knowledge on topics such as safe blood storage and handling, blood and tissue typing and the detection and identification of antibodies significant in transfusion and solid tissue transplantation. You will also perform compatibility testing and discuss the potential adverse outcomes of blood transfusions plus pre-natal, antenatal and postnatal screening. You will be required to attend a compulsory residential school in Rockhampton. The residential school may be scheduled outside of the term of offering of the unit. The theoretical and practical sessions will allow you to develop skills in critical steps necessary in ensuring safe tissue transplantations and appropriate blood products and components for transfusion in both routine and emergency situations.

### 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

Prerequisites: Enrolment in Master of Laboratory Medicine.

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 - 2023

- Melbourne
- 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 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. **Written Assessment**

Weighting: 30%

#### 3. **Laboratory/Practical**

Weighting: Pass/Fail

#### 4. **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. Critically discuss the production, labelling, storage and transportation of human blood products and their medical uses
2. Accurately interpret and report test results in transfusion and transplantation medicine
3. Critique the importance of quality control in transfusion and transplantation medicine
4. Demonstrate advanced testing skills in transfusion science including pre-transfusion, compatibility testing, antenatal / postnatal / neonatal screening and the testing for autoantibodies
5. Examine the factors contributing to adverse outcomes and their effects in transfusion and transplantation medicine.

## 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 - Written Assessment - 20%	•		•		
2 - Written Assessment - 30%		•		•	
3 - Laboratory/Practical - 0%				•	
4 - Examination - 50%	•		•		•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Knowledge	◦	◦	◦	◦	◦
2 - Communication	◦	◦	◦	◦	◦
3 - Cognitive, technical and creative skills	◦	◦	◦	◦	◦
4 - Research					
5 - Self-management					
6 - Ethical and Professional Responsibility					
7 - Leadership					
8 - Aboriginal and Torres Strait Islander Cultures					

## Textbooks and Resources

### Textbooks

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#### Prescribed

##### **Modern Blood Banking and Transfusion Practices**

Edition: 7th (2018)

Authors: Denise M Harmening

F.A. Davis Company

Pennsylvania , PA , USA

ISBN: 9780803668881

Binding: Hardcover

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#### Supplementary

##### **Basic & Applied Concepts of Blood Banking and Transfusion Practices**

Edition: 4th (2016)

Authors: Paula R Howard

Elsevier - Health Sciences Division

St Louis , Missouri , USA

ISBN: 9780323697392

Binding: Paperback

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#### Supplementary

##### **Immunohaematology: Principles and Practice**

Edition: 3rd (2011)

Authors: Eva D. Quinley

Jones & Bartlett ( now BPS )

Sydney , NSW , Australia

ISBN: 978-0781782043

Binding: Hardcover

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#### Supplementary

##### **Transfusion and Transplantation Science**

Edition: 2nd edn (2017)

Authors: Avent, Neil

Oxford University Press UK

Oxford , United Kingdom

ISBN: 9780198735731

Binding: Paperback

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

For further information, see the Assessment Tasks.

## Teaching Contacts

**Roxina Sharma** Unit Coordinator

[r.r.sharma@cqu.edu.au](mailto:r.r.sharma@cqu.edu.au)

**Genia Burchall** Unit Coordinator

[g.burchall@cqu.edu.au](mailto:g.burchall@cqu.edu.au)

## Schedule

### Week 1 - 10 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
1. Introduction to Advanced Transfusion Science 2. Genetics 3. Immunological Principles	Part I - Chapter 1, pages 1-4; Chapters 2 and 3	Tutorial - introduction and overview of unit

### Week 2 - 17 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Blood and Blood Components	Part I - Chapter 1, pages 4-11 Part III - Chapters 13, 14, 15, 16, 18	Tutorial: blood and blood components

### Week 3 - 24 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
ABO and Rh Blood Group Systems	Part II - Chapters 6 and 7	Tutorial: ABO and Rh Blood Group Systems

### Week 4 - 31 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
1. Other Common Blood Groups 2. Uncommon Blood Groups	Part II - chapters 8, 9	Tutorial: Other common and uncommon blood group systems

### Week 5 - 07 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Principles of Serologic and Pretransfusion Compatibility Testing	Part II - Chapters 5, 10, 11	Tutorial: Pretransfusion Compatibility testing

### Vacation Week - 14 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Independent study week - an opportunity for self-directed learning and mid-unit revision.		No lectures

### Week 6 - 21 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Clinical and Non-clinical Conditions Associated with Transfusion Science	Part III - Chapters 17 and 21	Tutorial: Adverse transfusion outcomes <b>Assessment 1</b> - Case study analysis available Monday 21/08/23, comprises 20% of the overall unit mark.  <b>Case Study Analysis (20%) Due:</b> Week 6 Friday (25 Aug 2023) 5:00 pm AEST

### Week 7 - 28 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Haemolytic Disease of the Fetus and the Newborn.	Part III - Chapter 20	Tutorial: Haemolytic Disease of the Fetus and the Newborn.



**Week 8 - 04 Sep 2023**

Module/Topic	Chapter	Events and Submissions/Topic
1. The HLA System 2. Cellular Therapy in Haemopoietic and Organ Transplant Setting	Part IV - Chapters 23 and 24 Part III - Chapter 19	Tutorial: HLA system and Haemopoietic and organ transplant settings.

**Week 9 - 11 Sep 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Transfusion of Specific Blood Fractions	Part I - Chapter 1 - pages 11-19 Part III - Chapter 16	Tutorial: Transfusion of Specific Blood Fractions

**Week 10 - 18 Sep 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Quality Assurance, Quality Control, Regulatory and Compliance Issues	Part V - Chapters 25, 26, 28, 29	Tutorial: Quality Assurance, Quality Control issues

**Week 11 - 25 Sep 2023**

Module/Topic	Chapter	Events and Submissions/Topic
1. Automation in Transfusion Science 2. Transfusion Science in Summary	Part II - Chapter 12	Tutorial: Automation & Transfusion Science Summary

**Week 12 - 02 Oct 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Unit revision and exam preparation.		On-line Q&A session

**Review/Exam Week - 09 Oct 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Revision / Exam		The <b>End-of-unit Exam</b> will be scheduled in the CQUniversity examination period between 12/10/23 - 20/10/23. The exact date will be advised on the unit Moodle page. The End-of-unit exam comprises 50% of the overall unit mark.

**Exam Week - 16 Oct 2023**

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

Unit Contacts for 2023

Unit Coordinators:

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

A/P Genia Burchall: g.burchall@cqu.edu.au

Lecturer / Tutor / Assessor:

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

Pre-recorded lectures will be used throughout the term and will be available to students on the Friday before each lecture week.

Live tutorials and Q&A sessions will be held weekly. Please refer to the Moodle site for further details. It is advisable to review the weekly lectures before each tutorial session.

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. This will be conducted in Term 3 at the CQUniversity's Rockhampton campus. 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.

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 attending or watching recorded lectures and revising the content through study notes

3 - 4 hours per week completing the weekly readings, case studies and weekly revision quizzes on the unit's Moodle site.

1 - 2 hours per week attending the weekly tutorial and contributing to discussions and revising the content provided.

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 Case Study Analysis (20%)

#### Assessment Type

Written Assessment

#### Task Description

You will be provided an authentic clinical case study on the unit Moodle site. The following information regarding the case will be available to you: a pathology request form with patient information, tests requested and clinical notes for a potential blood transfusion. You are required to answer the related questions using the assessment template and the marking guide available on the Moodle site. Answers to be provided are a combination of short and long answers. A guide to number of words per question is provided within the assessment answer template.

#### Assessment Due Date

Week 6 Friday (25 Aug 2023) 5:00 pm AEST

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

#### Return Date to Students

Week 9 Friday (15 Sept 2023)

Online by the 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.

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 without an approved extension will be marked with the maximum marks being zero of the total achievable marks.

## Referencing Style

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

## Submission

Online

## Submission Instructions

Uploaded to Moodle site in PDF format by the due date.

## Learning Outcomes Assessed

- Critically discuss the production, labelling, storage and transportation of human blood products and their medical uses
- Critique the importance of quality control in transfusion and transplantation medicine

## 2 Laboratory Practical Assessments (30%)

### Assessment Type

Written Assessment

### Task Description

For Medical Scientists working in a Transfusion Laboratory, 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 individual practical competence is vital.

During the residential school you will complete:

**Part (A) Laboratory Workbook (10%):** answer a set of questions in the laboratory workbook and interpret results as you perform each practical task. Completion of the workbook will provide evidence for student engagement and understanding of the principles behind the laboratory tests. Detailed assessment scheme associated with the tasks and questions/analysis are to be completed. Completed workbooks are to be submitted online on the Moodle site by the due date.

**Part (B) Practical Assessment (20%):** you will undertake a practical assessment in the last session of the residential school in which you will be required to accurately perform routine blood banking techniques in order to obtain valid results. You will also be required to correctly interpret the results in order to achieve safe transfusion outcomes. You will be provided with a patient sample and a number of donor units to determine the compatibility of the donor units to prevent any adverse transfusion outcomes. On completion, this assessment must be handed to the assessor for marking before the end of the final day of residential school.

### Assessment Due Date

Sometime in Term 3. Details to be provided during term on Moodle site.

### Return Date to Students

Sometime in Term 3. Details to be provided during term on Moodle site.

### Weighting

30%

### Minimum mark or grade

50% of total attainable marks for Part (A) Laboratory Workbook and 80% of total attainable marks for Part (B) Practical Assessment.

### Assessment Criteria

**Part (A) Laboratory Workbook (10%):** You must achieve a minimum of 50% of total marks in order to pass this assessment.

**Part (B) Practical Assessment (20%):** You must achieve a minimum of 80% of total 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 20% of the total unit grade.

## Referencing Style

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

**Submission**

Offline

**Submission Instructions**

Part A to be submitted online by the specified due date. Part B to be handed to the assessor on completion.

**Learning Outcomes Assessed**

- Accurately interpret and report test results in transfusion and transplantation medicine
- Demonstrate advanced testing skills in transfusion science including pre-transfusion, compatibility testing, antenatal / postnatal / neonatal screening and the testing for autoantibodies

## No Assessment Title

**Assessment Type**

Laboratory/Practical

**Task Description**

No Assessment Task Description

**Assessment Due Date****Return Date to Students****Weighting**

Pass/Fail

**Assessment Criteria**

No Assessment Criteria

**Referencing Style**

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

**Submission**

No submission method provided.

**Learning Outcomes Assessed**

- Demonstrate advanced testing skills in transfusion science including pre-transfusion, compatibility testing, antenatal / postnatal / neonatal screening and the testing for autoantibodies

## 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