BMSC13023 *Applied Immunology*
Term 1 - 2024

Profile information current as at 04/05/2024 05:57 am

General Information

Overview
Building upon the foundational knowledge of how the immune system functions gained in Foundations of Immunology you will now examine the consequences of a malfunctioning immune system including immune deficiencies and autoimmunity. This will include a case-based learning approach and practical laboratory sessions to explore immune dysfunction.

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 N6568 Foundations of Immunology
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 - 2024

- Bundaberg
- 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 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. **Laboratory/Practical**
Weighting: Pass/Fail
2. **Written Assessment**
Weighting: 50%
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. Discuss immune function and dysfunction at the molecular and cellular levels
2. Explain how aberrations in immune regulation underlie autoimmunity, immunodeficiency, allergy and cancer
3. Explain how aberrations in immune regulation can be measured in the laboratory and corrected by directed therapeutics
4. Discuss the application of the principles of immunology to the development of vaccines and diagnostic techniques
5. Demonstrate competence in the use of primary resource material for experimental and research assignment purposes.

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
1 - Laboratory/Practical - 0%					•
2 - Written Assessment - 50%	•	•	•	•	•
3 - Examination - 50%	•	•	•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	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					

Textbooks and Resources

Textbooks

There are no required textbooks.

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

Jason Steel Unit Coordinator
j.steel@cqu.edu.au
Charmaine Ramlogan-Steel Unit Coordinator
c.ramlogan-steel@cqu.edu.au

Schedule

Week 1 - 04 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Immunology		

Week 2 - 11 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Hypersensitivity and Allergy		

Week 3 - 18 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Hypersensitivity and Allergy		

Week 4 - 25 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Autoimmune Diseases		

Week 5 - 01 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Autoimmune Diseases		

Vacation Week - 08 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
No formal teaching		

Week 6 - 15 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic

Immunology of Cancers		Residential School - Bundaberg Week 6: Tuesday - Wednesday

Week 7 - 22 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Immunology of Cancers		Residential School - Rockhampton Week 7: Tuesday - Wednesday

Week 8 - 29 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Immunodeficiencies		**Case Study** Due: Week 8 Friday (3 May 2024) 11:45 pm AEST

Week 9 - 06 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Immunodeficiencies		

Week 10 - 13 May 2024

Module/Topic	Chapter	Events and Submissions/Topic

Week 11 - 20 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Self-directed study/ Exam revision		Residential School - Rockhampton Week 11: Saturday - Sunday

Week 12 - 27 May 2024

Module/Topic	Chapter	Events and Submissions/Topic
Self-directed study/ Exam revision		

Review/Exam Week - 03 Jun 2024

Module/Topic	Chapter	Events and Submissions/Topic
		Assessment 3: An invigilated examination will be scheduled in the examination period from 6 June 2024 - 14 June 2024.

Exam Week - 10 Jun 2024

Module/Topic	Chapter	Events and Submissions/Topic
		Assessment 3: An invigilated examination will be scheduled in the examination period from 6 June 2024 - 14 June 2024.

Term Specific Information

- The primary unit coordinator is Dr. Jason Steel (j.steel@cqu.edu.au or 07 4930 6391)
- The secondary unit coordinator is Dr. Charmaine Ramlogan-Steel (c.ramlogan-steel@cqu.edu.au or 07 4920 6393)
- General immunology knowledge is required for this unit. There is no prescribed textbook for the unit but all students should have access to Basic Immunology 6th Edition (2019) by Abul Abbas, Andrew Lichtman, Shiv Pillai for revision of basic immunology.
- Lectures are pre-recorded and students are expected to engage with lecture content **PRIOR** to the tutorials. Attendance to tutorials are highly recommended.
- All students **MUST** attend one residential school (either in Rockhampton or Bundaberg)

Assessment Tasks

1 Laboratory Practical

Assessment Type
Laboratory/Practical

Task Description
Students need to attend one of the Residential School/Laboratory. Attendance at the practical component is mandatory to pass the unit as assessment of various immunological practical skills will be completed during the residential school.

Assessment Due Date

Return Date to Students

Weighting
Pass/Fail

Assessment Criteria
Attendance at the Residential School / Laboratory is mandatory to pass the unit. Competency of your laboratory skills will be assessed as part of the residential school.

Referencing Style

- Harvard (author-date)

Submission
No submission method provided.

Submission Instructions
Practical skills will be assessed during the residential school.

Learning Outcomes Assessed

- Demonstrate competence in the use of primary resource material for experimental and research assignment purposes.

2 Case Study

Assessment Type
Written Assessment

Task Description
Students will be presented with a clinical case(s) with immune implications.
Using knowledge of the immune system and it's applications to disease, from the unit's content, coupled with literature research, students are to write a report outlining the clinical disease presented in the clinical case, the immune processes responsible for the clinical presentation, pathology testing to confirm the diagnosis, and the immune-modulating therapies (and how they work) that could be used to treat the disease.
Clinical case(s) and a detailed marking rubric will be provided via Moodle.

Assessment Due Date
Week 8 Friday (3 May 2024) 11:45 pm AEST

Return Date to Students

2 weeks after submission

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
You will be assessed on the following criteria:

- Identification of the disease
- Accurate description of the immune processes involved in the development of the disease
- Clear description of diagnostic tests to confirm the disease
- Clear description of therapies (at least 1 immunotherapy and how it works) that could be used to treat the disease
- Appropriate use of referencing of scientific literature

A detailed marking rubric will be available on the Moodle site for this unit.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
The assessment is to be submitted on Moodle as a PDF or word file.

Learning Outcomes Assessed

- Discuss immune function and dysfunction at the molecular and cellular levels
- Explain how aberrations in immune regulation underlie autoimmunity, immunodeficiency, allergy and cancer
- Explain how aberrations in immune regulation can be measured in the laboratory and corrected by directed therapeutics
- Discuss the application of the principles of immunology to the development of vaccines and diagnostic techniques
- Demonstrate competence in the use of primary resource material for experimental and research assignment purposes.

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