BMSC13009 *Immunology*
Term 1 - 2022

Profile information current as at 24/04/2024 01:16 am

All details in this unit profile for BMSC13009 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
The study of Immunology will introduce you to the structure and function of the human immune system. You will explore the mechanisms behind the human body's efforts to detect, contain and remove or destroy harmful pathogens whilst retaining tolerance to its own cells. In this unit you will also examine the consequences of a malfunctioning immune system.

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
Prerequisite BMSC11002 Human Body Systems 2 or BMSC11011- Human Anatomy and Physiology 2orBMSC11007- Medical Anatomy and Physiology 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 - 2022

- 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. **Practical Assessment**
Weighting: Pass/Fail
2. **Online Test**
Weighting: 50%
3. **Written Assessment**
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

Feedback
The assessment expectations assumed some knowledge and skills not yet covered in Year 2.

Recommendation
Review assessment content and guidance materials to better align with Year 2 curriculum.

Feedback from Student feedback and personal communication

Feedback
Some students did not see a clear connection between the unit's theory content and the practical component of the residential schools.

Recommendation
The residential school with be restructured to incorporate dedicated theory sessions where the key immunological principles of the practical will be discussed.

Feedback from Student feedback and personal reflection

Feedback
Tutorial questions mirroring the final test prepared students for this assessment.

Recommendation
The live tutorials incorporating test-like questions will be retained.

Unit Learning Outcomes

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

1. Assess the role of the major cells and tissues in the induction of an immune response
2. Explain the processes of self/non-self-discrimination and disorders that arise as a result of dysfunction in self/non-self-recognition (autoimmunity)
3. Describe how the non-specific and specific arms of the immune system work together to affect an immune response
4. Evaluate how the structure and function of antigen recognition molecules facilitate the interaction with antigen
5. Compare the typical mammalian immune system responses to proteins, bacteria, viruses, protozoa, helminths, fungi and other representative multi-cellular organisms
6. 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	6
1 - Practical Assessment - 0%	•			•	•	•
2 - Online Test - 50%	•	•	•	•	•	
3 - Written Assessment - 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						

Textbooks and Resources

Textbooks

BMSC13009

Prescribed

Basic Immunology
Edition: 6th (2019)
Authors: Abul Abbas, Andrew Lichtman, Shiv Pillai
Elsevier
ISBN: 9780323549431
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)
- American Psychological Association 7th Edition (APA 7th edition)

For further information, see the Assessment Tasks.

Teaching Contacts

Jason Steel Unit Coordinator
j.steel@cqu.edu.au

Schedule

Week 1 - 07 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Immunology	Basic Immunology 6th (2019) Abul Abbas, Andrew Lichtman, Shiv Pillai Chapter 1	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 2 - 14 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Innate Immune System	Chapter 2	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 3 - 21 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Antigen Capture and Presentation	Chapter 3	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 4 - 28 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Antigen Recognition in the Adaptive Immune System	Chapter 4	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 5 - 04 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
T cell-mediated Immunity	Chapter 5	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Vacation Week - 11 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Independent Study		

Week 6 - 18 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Effector Mechanisms of the T-cell	Chapter 6	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site. **Tuesday: Last day to sit for the Mid-session online test.**

Week 7 - 25 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Humoral Immune Responses	Chapter 7	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 8 - 02 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Effector Mechanisms of the Humoral System	Chapter 8	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 9 - 09 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Compulsory Residential School		Immunology Residential School

Week 10 - 16 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Immunological Tolerance and AutoimmunityImmunological Tolerance and Autoimmunity	Chapter 9	Tutorial with Unit Coordinator. Details will be provided on the unit Moodle site.

Week 11 - 23 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Immunology in Non-Microbiological Diseases (self directed learning)	Chapters 10, 11 & 12	**Tuesday: Last day to sit for the End of session online test.**

Week 12 - 30 May 2022

Module/Topic	Chapter	Events and Submissions/Topic

Review/Exam Week - 06 Jun 2022

Module/Topic	Chapter	Events and Submissions/Topic

Tuesday: Last day to submit written assessment.

Outline of the innate and adaptive immune systems Due: Review/Exam Week Tuesday (7 June 2022) 11:59 pm AEST

Term Specific Information

The coordinator for this unit is Dr Jason Steel. Please feel free to contact me on j.steel@cqu.edu.au or on 07 4930 6391.
TEXTBOOK
Basic Immunology 6th (2019)
Authors: Abul Abbas, Andrew Lichtman, Shiv Pillai
LECTURES
The lectures are prerecorded by Dr Jason Steel
The tutorials are delivered by Dr Jason Steel and will re-enforce the information from the pre-recorded lectures.
RESIDENTIAL SCHOOL
There is a compulsory Residential School associated with this unit, which is held from 11th May until 12th May 2022.

Assessment Tasks

1 Immunology Laboratory Experiments

Assessment Type
Practical Assessment

Task Description
Students will be provided with a laboratory workbook on the Moodle site prior to commencing the residential school. This workbook will contain all the tasks (experiments, skills and data analysis) that need to be completed during the residential school block. Completion of the tasks will provide evidence of student engagement and understanding of the principles behind the immunological tests. Laboratory demonstrators or the unit coordinator will assess your individual experimental capability during residential school to ensure your understanding of the learning outcomes.

Assessment Due Date

To be completed during the residential school.

Return Date to Students

To be completed during the residential school.

Weighting
Pass/Fail

Assessment Criteria
Successful completion of the laboratory activities/workbook at the residential school.

Referencing Style

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

Submission
Offline

Learning Outcomes Assessed

- Assess the role of the major cells and tissues in the induction of an immune response
- Evaluate how the structure and function of antigen recognition molecules facilitate the interaction with antigen
- Compare the typical mammalian immune system responses to proteins, bacteria, viruses, protozoa, helminths, fungi and other representative multi-cellular organisms
- Demonstrate competence in the use of primary resource material for experimental and research assignment purposes.

2 Mid and End of session online tests

Assessment Type
Online Test

Task Description
Students will be required to undertake two online tests for this unit. The tests, worth 25% each, makes up 50% of the unit's final grade. Students will be required to acheive a minimum combined total score of 25/50.
The first, a **mid-session test** will examine content from weeks 1-5 and will be open from Friday of week 5 through to Tuesday of week 6 (**8 - 19 April**). The test will need to be completed within a 90 minute window. The format of the online test will consist of multiple choice, short answer and a long answer question.
The second, a **end-of session** test will examine content from weeks 6-10 and will be open from Friday of week 10 through to Tuesday of week 11 (**20 - 24 May**). The test will be of a similar format to the mid-session test with multiple choice, short answer and a long answer question completed over 90 minutes.

Assessment Due Date

See "Task Description" above

Return Date to Students

Within 2 weeks of test closure.

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
Questions will be marked correct or incorrect at the completion of the online test. Part marks may be awarded for partially correct answers.
The 50% minimum mark requirement is on the cumulative score of both online tests, not on individual tests.

Referencing Style

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

Submission
No submission method provided.

Learning Outcomes Assessed

- Assess the role of the major cells and tissues in the induction of an immune response
- Explain the processes of self/non-self-discrimination and disorders that arise as a result of dysfunction in self/non-self-recognition (autoimmunity)
- Describe how the non-specific and specific arms of the immune system work together to affect an immune response
- Evaluate how the structure and function of antigen recognition molecules facilitate the interaction with antigen
- Compare the typical mammalian immune system responses to proteins, bacteria, viruses, protozoa, helminths, fungi and other representative multi-cellular organisms

3 Outline of the innate and adaptive immune systems

Assessment Type
Written Assessment

Task Description
Students are presented with a hypothetical senario and are asked to prepare a 2000 +/- 10% word outline that "Explains the 'innate' and 'adaptive' immune responses to a novel Henipavirus and outline how the non-specific and specific arms of the immune system cooperate to effect an immune response".
-Students will start with the premise of someone sneezing or coughing on someone and work their way through the immune responses, ending with viral clearance and the formation of immunological memory. *Hint: the first part of the immune response are your barriers (skin an mucus layers). Most of the virus will get trapped by these before they get into your lungs.*
-Diagrams and flow charts can be used and are not included in the word count.
-References are needed for this assignment (including any diagrams or figures used). **DO NOT reference lectures or lecture notes.** This information can be found from other sources (such as your textbook).

Assessment Due Date
Review/Exam Week Tuesday (7 June 2022) 11:59 pm AEST

Return Date to Students

2 weeks after submission

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
The assessment of this written report will be based on the demonstrated knowledge of immune processes, support of these arguments and ideas using appropriate robust scientific literature and clarity of the proposal with accurate referencing.
A detailed marking rubric will be available on the Moodle site for this unit.

Referencing Style

- Harvard (author-date)
- American Psychological Association 7th Edition (APA 7th edition)

Submission
Online

Learning Outcomes Assessed

- Assess the role of the major cells and tissues in the induction of an immune response
- Explain the processes of self/non-self-discrimination and disorders that arise as a result of dysfunction in self/non-self-recognition (autoimmunity)
- Describe how the non-specific and specific arms of the immune system work together to affect an immune response
- Evaluate how the structure and function of antigen recognition molecules facilitate the interaction with antigen
- Compare the typical mammalian immune system responses to proteins, bacteria, viruses, protozoa, helminths, fungi and other representative multi-cellular organisms
- Demonstrate competence in the use of primary resource material for experimental and research assignment purposes.

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