

# BIM331 Immunology

School: School of Health - Biomedicine

2024 | Semester 1

UniSC Sunshine Coast  
UniSC Moreton Bay

**BLENDED  
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

*Please go to [usc.edu.au](http://usc.edu.au) for up to date information on the teaching sessions and campuses where this course is usually offered.*

## 1. What is this course about?

### 1.1. Description

This course will advance your understanding of the complex and interesting world of your body's defence system. Immunology studies the body's defences against invading microorganisms, and the way in which these defences can break down and lead to disease. You will also discover that the immune system is impacted by physiological and environmental factors as well as aging and the course links immunological theory to the broader populations and social context.

### 1.2. How will this course be delivered?

| ACTIVITY  | HOURS | BEGINNING WEEK | FREQUENCY |
|---|-------|----------------|-----------|
| <b>BLENDED LEARNING</b>   |       |                |           |
| <b>Learning materials</b> – Online learning modules including interactive concept checks and formative exercises.         | 2hrs  | Week 1         | 13 times  |
| <b>Tutorial/Workshop 1</b> – Weekly interactive e-Lectorials will be delivered via Zoom                                   | 1hr   | Week 1         | 13 times  |
| <b>Tutorial/Workshop 2</b> – Fortnightly tutorials will be delivered on campus, odd weeks of Semester, commencing week 1. | 1hr   | Week 1         | 7 times   |
| <b>Laboratory 1</b> – Laboratory classes are on-campus and delivered during even weeks of semester, commencing week 2     | 3hrs  | Week 2         | 5 times   |
| <b>Information session</b> – Student poster conference, week 12 only, on campus   | 4hrs  | Week 12        | Once Only |

### 1.3. Course Topics

This course covers all of the key areas of contemporary immunological knowledge including:

- Innate immunity
- Antigen processing and presentation
- T and B cell development and activation
- Vaccination technology
- Transplantation and immunotherapy
- Mechanisms responsible for immune disorders such as allergies and autoimmunity

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth full-time study year of an undergraduate program.

## 3. What is the unit value of this course?

12 units

## 4. How does this course contribute to my learning?

| COURSE LEARNING OUTCOMES  | GRADUATE QUALITIES   |
|---|--|
| On successful completion of this course, you should be able to...   | Completing these tasks successfully will contribute to you becoming... |
| 1 Explain, describe and analyse practical lab results, principles, theories and concepts underlying immunology.           | Knowledgeable<br>Empowered   |
| 2 Articulate some aspects of the place and importance of immunological science in the prevention and treatment of disease | Sustainability-focussed  |
| 3 Utilise scientific research and link immunological issue to a broader population or social context.                     | Sustainability-focussed  |

## 5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

LFS202 or LFS203 or (LFS112 and enrolled in Program SC301, SB301, SA301, SA308, SE303, UB001)

### 5.2. Co-requisites

LFS203 and enrolled in Program SC357 or SC355 (Associate Degree Medical Laboratory Science pathway only)

### 5.3. Anti-requisites

Not applicable

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

## 6. How am I going to be assessed?

### 6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

### 6.2. Details of early feedback on progress

Early feedback will be provided through formative online quizzes and other activities via Canvas. Answers to Task 1B laboratory questions will be discussed during laboratory sessions.

6.3. Assessment tasks

| DELIVERY MODE | TASK NO. | ASSESSMENT PRODUCT                  | INDIVIDUAL OR GROUP | WEIGHTING % | WHAT IS THE DURATION / LENGTH? | WHEN SHOULD I SUBMIT?                        | WHERE SHOULD I SUBMIT IT?                          |
|---------------|----------|-------------------------------------|---------------------|-------------|--------------------------------|--|--|
| All           | 1a       | Quiz/zes                            | Individual          | 25%         | varies, up to 45 minutes       | Throughout teaching period (refer to Format) | Online Test (Quiz)                                 |
| All           | 1b       | Portfolio                           | Individual          | 10%         | < 200 words x 5 sub-tasks      | Throughout teaching period (refer to Format) | In Class   |
| All           | 2        | Artefact - Technical and Scientific | Group               | 25%         | A0 size Poster                 | Week 10                                      | Online Assignment Submission with plagiarism check |
| All           | 3        | Examination - Centrally Scheduled   | Individual          | 40%         | 2 hours                        | Exam Period                                  | Exam Venue   |

All - Assessment Task 1a: Review Quizzes

|                  |  |   |                                  |
|------------------|--|---|----------------------------------|
| <b>GOAL:</b>     | To demonstrate your understanding of key theoretical, practical, and clinical concepts covered in weeks 1-12 of the course |   |                                  |
| <b>PRODUCT:</b>  | Quiz/zes   |   |                                  |
| <b>FORMAT:</b>   | Online quizzes consisting of multi-choice and short answer questions, completed in weeks 4, 8 and 12                       |   |                                  |
| <b>CRITERIA:</b> | <b>No.</b>   |   | <b>Learning Outcome assessed</b> |
|                  | 1  | Explain and describe principles, theories and concepts underlying immunology and immunological assays | 1                                |
|                  | 2  | Articulate the importance of immunological science in the prevention and treatment of disease;        | 2                                |
|                  | 3  | Link immunological issue to a broader population or social context                                    | 3                                |

All - Assessment Task 1b: Laboratory portfolio

|                  |   |  |                                  |
|------------------|---|--|----------------------------------|
| <b>GOAL:</b>     | To demonstrate your understanding of key theoretical and practical concepts covered in weeks 1-12 of the course   |  |                                  |
| <b>PRODUCT:</b>  | Portfolio   |  |                                  |
| <b>FORMAT:</b>   | Data presentation, analysis, and responses to short questions related to laboratory activities in weeks 2, 4, 6, 8 and 10. This will include online pre-laboratory quizzes completed prior to laboratory sessions and worksheet completion within laboratory classes. |  |                                  |
| <b>CRITERIA:</b> | <b>No.</b>  |  | <b>Learning Outcome assessed</b> |
|                  | 1   | Explain and describe principles, theories and concepts underlying immunological assays | 1                                |
|                  | 2   | Link immunological issue to a broader population or social context                     | 3                                |
|                  | 3   | Scientific communication and genre conventions   | 1                                |

### All - Assessment Task 2: Poster Assignment

|                  |   |  |       |
|------------------|---|--|-------|
| <b>GOAL:</b>     | To demonstrate your knowledge and understanding of immunological issues and how they relate to a broader population or social context                 |  |       |
| <b>PRODUCT:</b>  | Artefact - Technical and Scientific   |  |       |
| <b>FORMAT:</b>   | Standard scientific poster: see Canvas for information and details.<br>Also includes submission of team of evaluation and critical review components. |  |       |
| <b>CRITERIA:</b> | <b>No.</b>  | <b>Learning Outcome assessed</b>   |       |
|                  | 1   | Accuracy and depth of:<br>Explain and describe principles, theories and concepts underlying immunology | 1     |
|                  | 2   | Articulate the importance of immunological science in the treatment and prevention of disease;         | 2     |
|                  | 3   | Link immunological issue to a broader population or social context                                     | 3     |
|                  | 4   | Scientific communication and genre conventions   | 1 2 3 |

### All - Assessment Task 3: End of semester exam

|                  |   |   |       |
|------------------|---|---|-------|
| <b>GOAL:</b>     | To demonstrate your understanding of key theoretical, practical, and clinical concepts covered in weeks 1-12 of the course. |   |       |
| <b>PRODUCT:</b>  | Examination - Centrally Scheduled   |   |       |
| <b>FORMAT:</b>   | Multi-choice and short answer.  |   |       |
| <b>CRITERIA:</b> | <b>No.</b>  | <b>Learning Outcome assessed</b>  |       |
|                  | 1   | Explain and describe principles, theories and concepts underlying immunology;                 | 1     |
|                  | 2   | Articulate the importance of immunological science in the treatment and prevention of disease | 2     |
|                  | 3   | Link immunological issue to a broader population or social context                            | 3     |
|                  | 4   | Use of scientific terminologies and clarity of communication                                  | 1 2 3 |

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

## 7.1. Schedule

| PERIOD AND TOPIC   | ACTIVITIES  |
|--|---|
| Week 1: Introduction to cells and organs of the immune system                  | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 2: Innate immunity and the complement system                              | e-Lectorial (workshop 1, Zoom), laboratory class            |
| Week 3: Mucosal and skin immunity, recognition and response                    | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 4: The major histocompatibility complex and antigen presentation          | e-Lectorial (workshop 1, Zoom), laboratory class            |
| Week 5: The genetic organisation and expression of B and T cell receptor genes | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 6: B and T cell development   | e-Lectorial (workshop 1, Zoom), laboratory class            |
| Week 7: B and T cell activation and expression                                 | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 8: Effector responses of the adaptive immune system                       | e-Lectorial (workshop 1, Zoom), laboratory class            |
| Week 9: Immune hypersensitivities  | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 10: Tolerance, autoimmunity and transplantation                           | e-Lectorial (workshop 1, Zoom), laboratory class            |
| Week 11: Infectious diseases and vaccines                                      | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |
| Week 12: Immunodeficiencies and cancer immunology                              | e-Lectorial (workshop 1, Zoom), poster presentations        |
| Week 13: Revision  | e-Lectorial (workshop 1, Zoom), tutorial class (workshop 2) |

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

| REQUIRED? | AUTHOR  | YEAR | TITLE           | EDITION     | PUBLISHER  |
|-----------|---|------|-----------------|-------------|------------|
| Required  | Jenni Punt, Sharon Stranford, Patricia Jones, Judith A Owen | 2018 | Kuby Immunology | 8th Edition | WH Freeman |

### 8.2. Specific requirements

To complete this course, students will need personal protective equipment (PPE) to be used within the laboratory classes. This includes: a clean laboratory coat, fully-enclosed footwear and safety glasses. Students must present with this PPE to gain entry to laboratory classes and assessments. Students are required to complete the online Laboratory Induction prior to gaining entry to the laboratory

## 9. How are risks managed in this course?

Risk assessments have been performed for all laboratory classes and a moderate level of health and safety risk exists. Moderate risks are those associated with laboratory work such as working with chemicals and hazardous substances. You will be required to undertake laboratory induction training and it is also your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

## 10.2. Assessment: Additional Requirements

### Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

## 10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate (the rates are cumulative):

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.

- 10% (of the assessment task's identified value) for the third day

- 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.

- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension you must contact your course coordinator to negotiate an outcome.

## 10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

## 10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.10. General Enquiries

### In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

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