

LFS303 Pathophysiology

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 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 builds on your advanced knowledge of systemic physiology to gain a deep understanding of the complex changes in function that occur with disease. The major disorders associated with each of the organ systems will be explored. This course focuses on the pathogenesis of disease, enabling identification of areas for investigation, research, intervention and management, and advances communication skills of biomedical and medical information. The curriculum complements studies in a range of programs including Biomedical Science, Medical Science and Dietetics.

1.2. How will this course be delivered?

| ACTIVITY | HOURS | BEGINNING WEEK | FREQUENCY |
|---|--------|----------------|-----------|
| BLENDED LEARNING | | | |
| Learning materials – Pre-recorded e-Modules, H5P-embedded MCQ questions to check progress against learning outcomes, H5P-embedded drag-and-drop exercises to support practical classes | 1.5hrs | Week 1 | 13 times |
| Tutorial/Workshop 1 – Interactive synchronous multi-campus e-Lectorial (TELT only via Zoom) Weeks 1-13 | 1hr | Week 1 | 13 times |
| Tutorial/Workshop 2 – Interactive synchronous multi-campus Workshop (in person, on campus) Weeks 1, 3, 5, 7, 9, 11. Week 13 (exam preparation) online only. | 2hrs | Week 1 | 7 times |
| Laboratory 1 – Weeks 2, 4, 6, 8, 10 and 12 - in person, on campus practicals | 2hrs | Week 2 | 6 times |

1.3. Course Topics

- Basic pathophysiology of diseased states.
- Major diseases affecting the organ systems including: cardiovascular, digestive, endocrine, hepatic, immune, nervous, renal, and respiratory.
- Introduction to diagnostic testing and management of diseased states.

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 Describe, explain and clearly communicate knowledge of disease and dysfunction from cellular to organ system levels. | Knowledgeable Empowered |
| 2 Understand the use of common diagnostic tests in assessing health and disease. | Knowledgeable Engaged |
| 3 Display knowledge of pathological processes involved in disease and dysfunction | Knowledgeable Empowered |
| 4 Critically analyse and solve pathophysiological problems by collecting, accurately recording, interpreting and drawing conclusions. | Knowledgeable Creative and critical thinker |

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

(LFS201 and LFS202) or LFS203 or

5.2. Co-requisites

LFS201 or LFS203 and enrolled in Program SC357

5.3. Anti-requisites

LFS302 or NUR221 or PAR221 or HLT221

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

Students will be able to demonstrate understanding in human physiology as evidenced through the successful completion of pre-requisite courses or equivalent credit courses

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 weekly formative online H5P Quizzes and pre-laboratory 'Drag and Drop' exercises available in Canvas. Additional formative assessment activities (exemplar multiple choice and short answer questions) will be also completed in weekly e-Lectorials or Workshops.

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 | 1 | Quiz/zes | Individual | 25% | 6 subtasks covering content from weeks 1-2, 3-4, 5-6, 7-8, 9-10 and 11-12; 20 minutes each. | Refer to Format | Online Test (Quiz) |
| All | 2 | Examination - not Centrally Scheduled | Individual | 25% | 75 minutes | Week 7 | Online Submission |
| All | 3 | Examination - Centrally Scheduled | Individual | 50% | 2 hours | Exam Period | Exam Venue |

All - Assessment Task 1: Practical and theory portfolio - online component

| | | | | | | |
|------------------|--|---|--|--|--|----------------------------------|
| GOAL: | This portfolio has been designed to enable you to demonstrate your knowledge of cellular physiology, pathophysiological processes and diagnostic tests, and to understand key pathophysiology terminology. | | | | | |
| PRODUCT: | Quiz/zes | | | | | |
| FORMAT: | Individual, 20 minute quizzes with 15 multiple choice questions per subtask; completed online during weeks 2-13. The quizzes are open book. | | | | | |
| CRITERIA: | No. | | | | | Learning Outcome assessed |
| | 1 | Demonstration of knowledge and understanding of pathophysiological processes and diagnostic tests | | | | 1 2 3 |
| | 2 | Ability to critically analyse and solve pathophysiological problems | | | | 4 |
| | 3 | Use of correct pathophysiology terminology | | | | 1 2 3 4 |

All - Assessment Task 2: Mid-semester Exam

| | | | | | | |
|------------------|---|--|--|--|--|----------------------------------|
| GOAL: | This examination is a check-point where you can demonstrate your knowledge and understanding of pathophysiological processes, diagnostic tests and key pathophysiology terminology acquired to date. | | | | | |
| PRODUCT: | Examination - not Centrally Scheduled | | | | | |
| FORMAT: | A 75-minute examination based on case studies relating to content from weeks 1-6. This will incorporate data analysis, multiple choice, drag and drop, fill-in-the-blanks and short answer questions. The examination is open book. | | | | | |
| CRITERIA: | No. | | | | | Learning Outcome assessed |
| | 1 | Demonstration of knowledge and understanding of cellular physiology, pathophysiological processes and diagnostic tests. | | | | 1 2 3 |
| | 2 | Ability to utilise information from e-Lectorials, e-Workshops and practicals to critically analyse and solve pathophysiological problems | | | | 4 |
| | 3 | Use of correct pathophysiology terminology | | | | 1 2 3 |

All - Assessment Task 3: End-of-Semester Exam

| | | | |
|------------------|--|--|----------------------------------|
| GOAL: | This examination is an end-of-semester exam, where you can demonstrate the theoretical and practical applications of pathophysiology you have mastered to date. | | |
| PRODUCT: | Examination - Centrally Scheduled | | |
| FORMAT: | A comprehensive, two hour final examination, consisting of short answer questions based on weeks 1-13 content. Short answer questions will include elements of data analysis or will require analysis of patient-based case studies. | | |
| CRITERIA: | No. | | Learning Outcome assessed |
| | 1 | Demonstration of knowledge and understanding of pathophysiological processes and diagnostic tests. | 1 2 3 |
| | 2 | Application of knowledge from e-Lectorials, Workshops and laboratory classes to pathophysiological problems. | 4 |
| | 3 | Clear communication of pathophysiological knowledge and correct use of pathophysiology terminology | 1 2 3 4 |

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 pathophysiology and cellular adaptation | e-Module, e-Lectorial, Workshop |
| Week 2: Cellular injury and Neoplasia | e-Module, e-Lectorial, Practical |
| Week 3: Endocrine disorders | e-Module, e-Lectorial, Workshop |
| Week 4: Renal and electrolyte disorders | e-Module, e-Lectorial, Practical |
| Week 5: Inflammation and immunological disorders | e-Module, e-Lectorial, Workshop |
| Week 6: Haematological disorders | e-Module, e-Lectorial, Practical |
| Week 7: Disorders of the special senses and reproductive disorders | e-Module, e-Lectorial, Workshop |
| Week 8: Digestive and hepatic disorders | e-Module, e-Lectorial, Practical |
| Week 9: Vascular disease and hypertension | e-Module, e-Lectorial, Workshop |
| Week 10: Cardiac disease | e-Module, e-Lectorial, Practical |
| Week 11: Pain and neurological disorders | e-Module, e-Lectorial, Workshop |
| Week 12: Respiratory disorders | e-Module, e-Lectorial, Practical |
| Week 13: Shock and Course Review | e-Module, e-Lectorial, e-Workshop (online only) |

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 | Judy Craft, Christopher Gordon, et al | 2022 | Understanding Pathophysiology Australia and New Zealand Edition | 4th Edition | Elsevier |
| Required | LFS303 Teaching Staff | 2024 | Pathophysiology (LFS303): Course Manual | n/a | University of the Sunshine Coast Publication, Sippy Downs |

8.2. Specific requirements

To complete this course, students will need personal protective equipment (PPE) to be used within the lab 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.

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.

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.

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 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 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

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au