COURSE OUTLINE

LFS203 Integrated Physiology

School: School of Health - Biomedicine

2026 | Trimester 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

In Integrated Physiology you will further develop your knowledge and skills in human physiology. The emphasis in this course is to appreciate how homeostasis is achieved by the interplay between multiple systems, overseen by both neural and endocrine control. You will learn how the human body functions in a coordinated but complex way by studying the various cells, tissues and organs associated with the body systems. You will further develop skills in research and communicating science relevant to the biomedical discipline. This course will prepare you for further study into biomedical applications, including pathophysiology.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Online learning materials	2hrs	Week 1	12 times
Tutorial/Workshop 2 – The weekly online sessions allow you to engage with the theory content and work through problems on the course topics (1st hour) in a facilitated workshop. The second hour – weekly dropin - will be used for assessment assistance and any questions.	2hrs	Week 1	12 times
Laboratory 1 – Science wetlab with practical skill development	3hrs	Week 1	6 times
Tutorial/Workshop 1 – Small class tutorial with interactive, collaborative learning, case study analysis and assessment assistance	2hrs	Week 2	6 times

1.3. Course Topics

Nervous system

Endocrine System

Muscle Physiology

Cardiovascular System

Respiratory System

Renal System

Digestive System

Reproductive Physiology

2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...		GRADUATE QUALITIES Completing these tasks successfully will contribute to you becoming...
1	Demonstrate depth and breadth of knowledge in the discipline of human physiology relevant to the cells, tissues, organs and systems.	Knowledgeable
2	Demonstrate how the human body uses an integrated approach to coordinate bodily functions.	Knowledgeable Creative and critical thinker
3	Research, critically evaluate, and ethically present appropriate and relevant literature about human physiology in a creative and informative way.	Knowledgeable Creative and critical thinker Ethical
4	Apply knowledge of physiology to solve problems.	Knowledgeable Creative and critical thinker
5	Ethically collect, record, interpret, and communicate findings from experiments using physiology knowledge.	Empowered Ethical

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

LFS112

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

LFS201 and LFS202

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

It is assumed that you have the following (to at least an Introductory level) understanding of quantitative statistics, information literacy skills - sourcing, synthesising and referencing of academic literature in the science domain

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

You will receive early feedback in various ways. These include formative feedback on physiology skill development, including data analysis and presentation in week 1 and 3 Laboratory classes. Formative feedback from the weekly learning materials and associated revision questions will allow you to check your understanding and comprehension of the physiology concepts, especially the integration of systems.

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	Portfolio	Individual	50%	Approximately 8 hours across the semester.	Throughout teaching period (refer to Format)	Online Assignment Submission with plagiarism check and in class
All	2	Artefact - Creative, and Written Piece	Individual and Group	25%	Final assignment - 600 words ± 10% and one diagram	Refer to Format	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	25%	60 minutes	Exam Period	Exam Venue

All - Assessment Task 1: Theoretical and Practical Portfolio

GOAL:	To regularly engage in the theoretical and practical components of the course through synthesis, analysis, application, and skill development.
PRODUCT:	Portfolio
FORMAT:	This assessment task will include a series of subtasks associated with the practical and theoretical components of the course. These include: 1A: Laboratory and workshop class preparation and participation (15%; Weeks 1 -12) 1B: In class theory and practical quiz (15%; Week 6 workshop) 1C: In class theory and practical quiz (20%; Week 12 workshop) Please refer to the Assessment module in the LFS203 Canvas site and the LFS203 Workbook for further details. This includes task descriptions, format, submission instructions.

CRITERIA:

No.		Learning Outcome assessed
1	Demonstration of knowledge of human physiology	1 2 5
2	Demonstration of the integration of human physiological systems	2
3	Application of knowledge of physiology to solve problems	4
4	Demonstration of physiology skills in the laboratory setting.	5
5	Collection, analysis and interpretation of data from physiology experiments.	1 2 4 5

GENERIC SKILLS:	Communication, Problem solving, Applying technologies

All - Assessment Task 2: Cell Communication assignment

GOAL:	This task is designed to help you explore the coordinated nature of the physiological systems in the human body, with emphasis on neural or hormone regulation and control. You will demonstrate depth of knowledge on your chosen ion channel OR hormone system and its specific actions.
PRODUCT:	Artefact - Creative, and Written Piece
FORMAT:	You will work in a group (2 - 3 students) to produce a 600 word written assignment with incorporation of one appropriate diagram, to describe the physiology of a chosen ion channel OR hormone (from a list provided). The assignment consists of four related components: 2A: Milestone submission (3%, Friday 3 weeks prior to the Final Assignment submission (Group submission) 2B: Turnitin self-audit (0%, Monday of Week 8; Group) 2C: Final submission (20%, Friday of Week 8; Group) 2D: Self-reflection on your contribution to the group assignment (2%; Friday Week 9; Individual) Please refer to the Assessment module in the LFS203 Canvas site for further details. This includes Comprehensive instructions, resources and a rubric, task descriptions, format, and submission instructions.
CRITERIA:	

No.		Learning Outcome assessed
1	Critical evaluation and synthesis of scientific literature to describe the physiology of the ion channel/hormone system its role in communication in the human body.	1 2 3
2	Communication of the ion channel's/hormone's mode of action using visual means.	1 2 3
3	Use of appropriate scientific and academic language.	1 3
4	Adherence to instructions on presentation and formatting, including referencing	3
5	Compliance with academic integrity when using and citing literature	3

GENERIC SKILLS:	Communication, Collaboration, Applying technologies, Information literacy

All - Assessment Task 3: Practical and Theoretical examination

GOAL:	To assess your physiology practical skills and ability to apply knowledge to theoretical concepts in human physiology covered in the course to solve physiology problems.
PRODUCT:	Examination - Centrally Scheduled
FORMAT:	A comprehensive, 60 minute examination, consisting of assessment of core competencies in physiology skills, data interpretation and written responses to questions. This examination will be held on campus in the science laboratory and will require you to wear PPE and have completed an induction. Please refer to the Assessment module in the LFS203 Canvas site for further details.
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstration of depth and breadth of knowledge of human physiology theory presented in the course.	1 2 5
2	Demonstration of the integration of human physiological systems	2
3	Application of knowledge of physiology to solve problems	4
4	Demonstration of physiology skills developed in the course.	5
5	Collect and interpret physiology data to draw theoretical conclusions.	4 5

GENERIC SKILLS:	Communication, Problem solving, Applying technologies

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	Online learning materials and Lectorial (workshop 2): Nervous system I Laboratory: Physiological data acquisition and analysis
Week 2	Online learning materials and Lectorial (workshop 2): Nervous system II Workshop: Neurophysiology review & Scientific Communication
Week 3	Online learning materials and Lectorial (workshop 2): Endocrine system I Laboratory: Compound action potential in nerves
Week 4	Online learning materials and Lectorial (workshop 2): Endocrine system II Workshop: Endocrine system
Week 5	Online learning materials and Lectorial (workshop 2): Muscle physiology Laboratory: Integrative physiology - blood glucose homeostasis during the absorptive state
Week 6	Online learning materials and Lectorial (workshop 2): Cardiovascular physiology I Workshop: Muscle Physiology
Week 7	Online learning materials and Lectorial (workshop 2): Cardiovascular physiology II Laboratory: Cardiovascular physiology
Week 8	Online learning materials and Lectorial (workshop 2): Respiratory physiology Workshop: Case Study Respiratory System
Week 9	Online learning materials and Lectorial (workshop 2): Renal physiology I Laboratory: Integrative Physiology - Dive Response
Week 10	Online learning materials and Lectorial (workshop 2): Renal physiology II Workshop: Case Study - Dehydration; Secondary active transport of sodium and glucose
Week 11	Online learning materials and Lectorial (workshop 2): Digestive system Laboratory: Fluid, electrolyte and acid-base balance
Week 12	Online learning materials and Lectorial (workshop 2): Reproductive Physiology Workshop: Digestive system and Reproductive Physiology

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	Lauralee Sherwood	2015	Human Physiology: From Cells to Systems	9th Edn.	Cengage Learning

8.2. Specific requirements

You must wear a lab coat, enclosed shoes, and safety glasses during laboratory classes. You must either purchase and bring to lab classes a copy of theLFS203 Integrated Physiology Laboratory Workbook or alternatively print it yourself (download from Canvas). The workbook is available for purchase from Mail and Print Services (MaPS).

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:
(a) The final mark is in the percentage range 47% to 49.4%; and
(b) The course is graded using the Standard Grading scale

10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

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 or using the SafeZone app. For general enquires contact the SafeUniSC team by phone 07 5456 3864 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 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