

SPX211

Exercise Physiology I

School: School of Health - Sport and Exercise Science

2025 | Semester 2

UniSC Sunshine Coast
UniSC Moreton Bay

**BLENDED
LEARNING**

You can do this course without coming onto campus, unless your program has specified a mandatory onsite requirement.

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 is designed to provide you with an understanding of the physiology of human physical exercise. The course content includes the theoretical and practical components of the acute and adaptive responses of the energy transfer, respiratory, cardiovascular, muscle, nervous and endocrine systems during exercise and the integration of these systems.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Online	2hrs	Week 1	12 times
Laboratory 1 – On Campus	2hrs	Week 1	12 times
Seminar – On Campus	1hr	Week 2	3 times

1.3. Course Topics

- Introduction to exercise physiology
- Energy transfer and exercise
- Measurement of energy transfer
- Individual differences and exercise
- Pulmonary components and exercise
- Gas exchange and transport and exercise
- Respiratory system regulation and integration and exercise
- Heart and blood pressure and exercise
- Cardiovascular system regulation and integration and exercise
- Cardiac output and blood distribution and exercise
- Muscular system and exercise
- Nervous system and exercise
- Endocrine system and exercise

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		GRADUATE QUALITIES
On successful completion of this course, you should be able to...		Completing these tasks successfully will contribute to you becoming...
1	Demonstrate an understanding of the function, regulation and integration of the energy transfer, respiratory, cardiovascular, muscular, neural and endocrine systems during exercise	Knowledgeable
2	Understand the role, function, and food sources of the macronutrients and micronutrients involved in exercise.	Knowledgeable
3	Use literature, information, and learning resources from multiple sources	Creative and critical thinker
4	Understand the scientific method, and assess and discuss the research literature on exercise physiology	Creative and critical thinker
5	Demonstrate an understanding of how to conduct tests and measurements of physiological function during exercise, which are valid, accurate, and reliable	Knowledgeable
6	Compare and discuss results from laboratory experiments	Engaged

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 or SPX103

5.2. Co-requisites

Not applicable

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

This course includes an assessment of a professional competency task deemed necessary to meet the Exercise and Sports Science Australia (ESSA) Professional Standards. Therefore, your attendance and participation in practicals/laboratory's and tutorials is expected. Feedback will be provided to you during each of your classes and will provide you with support and guidance to become competent in the ESSA Professional Standards addressed in this course. For any work that is missed you will need to demonstrate to your course provider that you have covered the required material. This will usually take the form of a detailed summary and reflection of the directed study activities and practical skills for the missed class or placement.

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	20%	30 minutes per quiz.	Refer to Format	Online Submission
All	2	Practical / Laboratory Skills	Individual	40%	30 minutes per practical skill.	Refer to Format	In Class
All	3	Examination - Centrally Scheduled	Individual	40%	2 hours.	Exam Period	Online Test (Quiz)

All - Assessment Task 1: Laboratory and Research Quizzes

GOAL:	The Laboratory and Research Quizzes are designed to assess your understanding and application of the theory components from the laboratory classes and associated required reading.																					
PRODUCT:	Quiz/zes																					
FORMAT:	Submit in Weeks 4, 8, 12. Multiple choice and or short answer questions.																					
CRITERIA:	<table><tr><th>No.</th><th></th><th colspan="6">Learning Outcome assessed</th></tr><tr><td>1</td><td>Correct answers to multiple choice and or short answer questions based on the understanding and application of the theory components from the laboratory classes and associated required reading.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>						No.		Learning Outcome assessed						1	Correct answers to multiple choice and or short answer questions based on the understanding and application of the theory components from the laboratory classes and associated required reading.	1	2	3	4	5	6
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GENERIC SKILLS:																						

All - Assessment Task 2: Practical Skills

GOAL:	The Practical Skills assessments are designed to assess your ability to conduct the practical skills component of the course from the laboratory classes.		
PRODUCT:	Practical / Laboratory Skills		
FORMAT:	Conducted in Weeks 3, 7, 10. Conduct of practical skills.		
CRITERIA:	No.		Learning Outcome assessed
	1	Correctly conduct the practical skills component of the course from the laboratory classes.	5
GENERIC SKILLS:			

All - Assessment Task 3: Final Exam

GOAL:	The Final Exam is designed to assess your understanding and application of the theory components of the course from the learning materials and required reading from Weeks 1 - 12.					
PRODUCT:	Examination - Centrally Scheduled					
FORMAT:	Multiple choice and or short answer questions.					
CRITERIA:	No.					Learning Outcome assessed
	1	Correct answers to multiple choice and or short answer questions based on the understanding and application of the theory components of the course from the learning materials and required reading from Weeks 1 - 12.				<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>
GENERIC SKILLS:						

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.

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	William D. McArdle, Frank I. Katch, Victor L. Katch	2015	Exercise Physiology	n/a	Lippincott Williams & Wilkins

8.2. Specific requirements

According to the Health and Safety policies and procedures applicable within campus areas

9. How are risks managed in this course?

Risk assessments have been performed for all studio and laboratory classes and a low level of health and safety risk exists. Some risk concerns may include equipment, instruments, and tools; as well as manual handling items within the laboratory. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the 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

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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 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](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