COURSE OUTLINE

SPX306 Clinical Skills for Exercise Physiology

School: School of Health - Sport and Exercise Science

2026 | Trimester 1

UniSC Sunshine Coast | 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 this hands-on course, you'll develop essential clinical skills for working with cardiopulmonary, metabolic, and other clinical populations. Through practical labs and case-based learning, you'll gain experience in point-of-care testing, ECG and pulmonary function testing and interpretation, and other relevant exercise assessments used to evaluate health status and functional capacity. You'll be expected to demonstrate competency in these skills, aligned with Exercise and Sports Science Australia (ESSA) accreditation standards, preparing you for real-world clinical practice as an Exercise Physiologist.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Online materials presenting theoretical knowledge (pathophysiologies, pharmacology, professional association guidelines) and resources required to meet industry standards and external accreditation	1hr	Week 1	12 times
Laboratory 1 – Blended learning including practical clinical skills and competencies, and simulated learning, required by the external accrediting organisation to meet professional standards.	3hrs	Week 1	12 times

1.3. Course Topics

- Point-of-care testing.
- Case notes, patient history and risk stratification.
- Clinical cardiovascular assessments and testing protocols.
- Recognition and interpretation of electrocardiography abnormalities at rest and during exercise.
- Conducting clinical lung function testing.
- Interpretation of spirometry.
- Recognition of adverse pulmonary clinical signs and symptoms.
- Other relevant assessments and outcome measures used in clinical populations to assess health status and functional capaci

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 MAPPING	PROFESSIONAL STANDARD MAPPING *
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...	Exercise and Sports Science Australia
1 Conduct pre-test procedures and sub-maximal clinical exercise test protocols (including ECG & Spirometry), with an understanding of cultural sensitivity and record, interpret and evaluate client data and use laboratory equipment in a clinical setting.	Empowered Problem solving	1.2.1, 1.2.4, 2.2.1, 2.2.3, 3.2.1, 3.2.3, 3.2.4, 3.2.5, 3.2.8
2 Critically evaluate how commonly prescribed cardiac and pulmonary medications affect physiological responses to exercise, and apply this knowledge to inform safe and effective clinical decision-making.	Empowered	1.2.3, 2.2.1, 2.2.3, 2.2.4, 3.2.4
3 Assess and interpret cardiac ECG morphologies and lung spirometry tests in a clinical setting.	Empowered	1.2.4, 2.2.1, 2.2.3, 3.2.1, 3.2.3, 3.2.5, 3.2.8
4 Integrate clinical reasoning skills and demonstrate competency with cardiac exercise testing with a case study practical examination.	Ethical Communication	2.2.4, 2.2.6, 3.2.3, 3.2.4, 3.2.8

* Competencies by Professional Body

CODE	COMPETENCY
EXERCISE AND SPORTS SCIENCE AUSTRALIA	
1.2.1	Practise with integrity within the scope of practice for an AEP, the ESSA Code of Professional Conduct and Ethical Practice, and jurisdictional Codes of Conduct.
1.2.4	Develop effective, concise, respectful, and informative clinical documentation, including case notes and reports, and apply appropriate record keeping practices.
1.2.3	Differentiate and select verbal and non-verbal communication strategies that are contextually appropriate, timely, accessible, and respectful to clients, population groups, and relevant others.
2.2.1	Integrate knowledge of anatomy, physiology, pathophysiology, and other determinants of health and function and apply these to inform safe and effective movement, physical activity, and exercise-based interventions for individuals and population groups throughout all stages of their life.
2.2.3	Evaluate physiological responses and adaptations to acute and chronic exercise for clients across the full health spectrum.
2.2.4	Evaluate the effect of commonly prescribed medications, diagnostic procedures, medical, surgical, and other interventions on both resting and exercise-related physiological responses across the full health spectrum.

CODE	COMPETENCY
2.2.6	Apply clinical, ethical, and evidence-based decision-making to formulate appropriate interventions and recommendations and communicate the expected outcomes.
3.2.1	Formulate appropriate screening processes to evaluate and stratify risk for participation in assessments and interventions, including consideration of appropriate service modalities for clients.
3.2.3	Formulate appropriate assessments and outcome measures relevant to treatment and client goals, and evaluate health status, function, capacity, and progress, to inform clinical reasoning and to monitor the delivery and outcomes of interventions.
3.2.4	Distinguish, record, report, and appropriately action changing risk factors and adverse signs and symptoms that may arise before, during, and after assessments and interventions.
3.2.5	Evaluate and record assessment outcomes in a timely and accurate manner to inform practice and communicate outcomes and relevance to goals effectively to clients and relevant others.
3.2.8	Choose and use relevant technology and equipment efficiently, effectively, and safely.

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

SPX211 and HLT221 and SPX201 and enrolled in Program SC304

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

Weekly online quizzes will be provided as assisted learning and non-formal assessment each week so that students can work through these resources at their own pace through the trimester. These resources will provide additional learning and feedback as assistance for the practical and written examinations.

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	Practical / Laboratory Skills	Individual and Group	30%	1 hour	Refer to Format	In Class
All	2	Practical / Laboratory Skills	Individual	30%	Weeks 1 - 12	Week 12	In Class
All	3	Examination - not Centrally Scheduled	Individual	40%	2 hours	Week 12	Online Submission

All - Assessment Task 1: Practical Examination – Cardiac exercise test, case study-based

GOAL:	The goal of this assessment task is to conduct all pre-test procedures (including ECG and blood pressure), record and interpret client data at rest and during exercise and demonstrate competency to complete a sub-maximal exercise test, use laboratory equipment and apply clinical reasoning skills for a specific case.
PRODUCT:	Practical / Laboratory Skills
FORMAT:	Students will undertake a practical examination centered on a provided cardiac case study, conducted in a group setting. However, individual skill competency will be assessed for each student. To facilitate preparation, the case study will be distributed one week prior to the examination. The practical examination will be one hour in duration, with students rotating roles over a four-week period (mid semester). Case studies will encompass various cardiac conditions, including but not limited to coronary artery disease, post-myocardial infarction, and atherosclerosis. Immediately preceding the practical examination, the supervisor will designate one student to assume the role of the "client," while the remaining group members will be assigned roles to perform the exercise test. The group will also be required to answer specific questions pertinent to their given case. Students are permitted to bring notes into the laboratory. Due to the rotating roles, each student will demonstrate competency in different skills each week.
CRITERIA:	

No.		**Learning Outcome assessed**
1	Knowledge of the pathophysiology of the specific cardiac condition in the case study	1 2
2	Application of clinical reasoning skills to discuss the case and to make appropriate choices of clinical skills to test the “client”	1 2 3 4
3	Identification and explanation of the “client” medications and their interaction with exercise, if any	2
4	Explanation of signs and symptoms associated with sub-maximal exercise testing of a cardiac client, and when termination of an exercise test might be necessary	1 3 4
5	Measurement and recording of “client” details, blood pressure, heart rate and oxygen saturation at rest and during exercise	1 2 3 4
6	Analysis and Interpretation of 12-lead ECG during an exercise test	1 3 4
7	Correct use of clinical exercise equipment	1 3 4

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

All - Assessment Task 2: Clinical competency checklist portfolio

GOAL:	The goal of the clinical competency checklist portfolio is to demonstrate competency in selected cardio-pulmonary and musculoskeletal practical skills relevant to clinical exercise physiology as outlined by ESSA.
PRODUCT:	Practical / Laboratory Skills
FORMAT:	Completed sections of the skills competency checklist to be submitted in Week 12. The skills competency checklist can be found on the course Canvas site. You will complete this assessment task as an individual with the laboratory supervisor's signature and comments as evidence of completion of this assessment item. It is the student's responsibility to demonstrate the applicable competencies to the supervisor over the course of the trimester so that the completed competencies are listed in the final portfolio.
CRITERIA:	

No.		Learning Outcome assessed
1	Measurement of resting and exercise blood pressure, perceived exertion and oxygen saturation.	1 3
2	Demonstration of a sub-maximal treadmill and cycle graded exercise test.	1 3
3	Measurement of range of motion of the ankle, knee, hip, trunk and shoulder joints using a goniometer.	4
4	Grading of strength using manual muscle testing for the lower and upper limbs.	4
5	Conducting a posture, balance and gait assessment	4
6	Conduction of a lung function test using a spirometer	1

GENERIC SKILLS:	Communication, Problem solving, Applying technologies, Information literacy

All - Assessment Task 3: Written examination

GOAL:	To demonstrate understanding of the cardiac, pulmonary and metabolic pathophysiologies that are part of AEP scope of practice, and to demonstrate understanding of risks and contraindications for cardiopulmonary and musculoskeletal clinical exercise testing.
PRODUCT:	Examination - not Centrally Scheduled
FORMAT:	The 2-hour examination will be conducted in-class in Week 12. The exam will contain multiple choice and short answer questions. Students are expected to attend this exam.
CRITERIA:	

No.		Learning Outcome assessed
1	Understanding of client screening and risk assessment procedures; cardiopulmonary medications, side effects and interactions; electrocardiography	1 2 3
2	Identification of abnormal ECG morphologies; identification and interpretation of spirometry test measures	1 3
3	Contraindications for exercise testing and test termination criteria; normal and abnormal values for joint range of motion	1 3 4
4	Categorical grading of manual muscle testing	4

GENERIC SKILLS:	Problem solving, Information literacy

6.4. Assessment to competency mapping

PROGRAMME DELIVERY MODE	ASSESSMENT TYPE	TITLE	COMPETENCY	TEACHING METHODS
ESSA ACCREDITED EXERCISE PHYSIOLOGIST PROFESSIONAL STANDARDS 2021				

PROGRAMME DELIVERY MODE	ASSESSMENT TYPE	TITLE	COMPETENCY	TEACHING METHODS
All delivery modes	Examination - not Centrally Scheduled	Written examination	2.2.1	Taught, Practiced, Assessed
			2.2.4	Taught, Practiced, Assessed
			2.2.6	Taught, Practiced, Assessed
			3.2.1	Taught, Practiced, Assessed
			3.2.3	Taught, Practiced, Assessed
			3.2.5	Taught, Practiced, Assessed
			3.2.8	Taught, Practiced, Assessed
	Practical / Laboratory Skills	Practical Examination – Cardiac exercise test, case study-based	2.2.1	Taught, Practiced, Assessed
			2.2.4	Taught, Practiced, Assessed
			2.2.6	Taught, Practiced, Assessed
			3.2.1	Taught, Practiced, Assessed
			3.2.3	Taught, Practiced, Assessed
			3.2.5	Taught, Practiced, Assessed
			3.2.8	Taught, Practiced, Assessed
		Clinical competency checklist portfolio	2.2.1	Taught, Practiced, Assessed
			2.2.6	Taught, Practiced, Assessed
			3.2.1	Taught, Practiced, Assessed
			3.2.3	Taught, Practiced, Assessed
			3.2.5	Taught, Practiced, Assessed
			3.2.8	Taught, Practiced, Assessed

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	ACSM,Ozemek CEMAL	2025	ACSM's Guidelines for Exercise Testing and Prescription	12th edition	LWW

8.2. Specific requirements

We recommend that students purchase their own blood pressure cuff, stethoscope and a fingertip pulse oximeter.
There are some inherent requirements in this course that are aligned with the profession of Clinical Exercise Physiology, and that are expected competencies outlined by Exercise and Sports Science Australia (ESSA). In this course, you may voluntarily take part in practical exercise physiology and exercise science activities which may include: completion of risk assessment/screening tools which may require divulging of some personal information; undertaking sub-maximal exercise tests; physical contact with other students; partial disrobing for clinical test measurements or surface anatomy palpation; the wearing of specialist sports clothing; the use of sports and diagnostic equipment.
It is imperative that if you do not wish, or cannot, take part in any activity, that you make this known to the Course Coordinator, lecturer and laboratory supervisor/demonstrator before opting out of the activity.
This course includes assessment of professional competency tasks deemed necessary to meet the ESSA Professional Standards. Therefore, your attendance and participation in practicals/laboratory's 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 lab activity.

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is 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

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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 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