



# ESSC12001 *Exercise and Sport Physiology*

## Term 1 - 2017

Profile information current as at 24/04/2024 05:49 pm

All details in this unit profile for ESSC12001 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

## General Information

### Overview

This unit is designed to provide you with a comprehensive overview of physiological mechanisms responsible for the body's responses to exercise in physical activity, sport and the workplace. You will be introduced to standard physiological laboratory and field measures to identify body adaptations to exercise.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Pre-requisites For CG85 Bachelor of Exercise and Sport Sciences students: BMSC11001 Human Body Systems 1 AND BMSC11002 Human Body Systems 2 AND ESSC11001 Physical Activity, Fitness and Health For CG93 Bachelor of Medical Science students: BMSC11001 Human Body Systems 1 AND BMSC11002 Human Body Systems 2 For CK22 Bachelor of Physiotherapy students: ALLH11005 Anatomy and Physiology for Health Professionals 1 AND ALLH11004 Anatomy and Physiology for Health Professionals 2 For CC13 Bachelor of Education (Secondary) students: ESSC11001 Physical Activity, Fitness and Health AND ESSC11003 Skill Acquisition and Movement

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

### Offerings For Term 1 - 2017

- Distance
- Mackay
- Rockhampton

### Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

### Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are: Click here to see your [Residential School Timetable](#).

### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Online Test**

Weighting: 20%

#### 2. **Practical Assessment**

Weighting: 40%

#### 3. **On-campus Activity**

Weighting: Pass/Fail

#### 4. **Examination**

Weighting: 40%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Course evaluation responses.

**Feedback**

For physiotherapy students, possibly ISL delivery of lectures to Bundaberg and semi-weekly delivery of laboratory sessions in Rockhampton.

**Recommendation**

The feasibility and logistics of delivering lectures via ISL to Bundaberg and semi-weekly labs in Rockhampton for physiotherapy students will be explored.

**Action**

Delivery of lectures to Bundaberg via ISL were not able to be implemented when pursued. Further, coordination and running of multiple on-campus lab sessions each week were not feasible.

#### Feedback from Course evaluation responses.

**Feedback**

The volume of content is difficult to grasp in some topics.

**Recommendation**

Course lectures will be reviewed, particularly the "heavy" course topics, with unneeded detail eliminated.

**Action**

Some lectures were more streamlined where possible to ensure necessary concepts were better grasped by students.

#### Feedback from Course evaluation responses.

**Feedback**

Residential school was close to the end of term, leaving less time to complete associated assessment.

**Recommendation**

The feasibility and logistics of alternative residential school dates earlier in term will be examined.

**Action**

The residential schools were conducted earlier in term, which seemed to allow sufficient time for students completing assessment tasks and preparing for the exam.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Understand the physiological mechanisms responsible for the body's responses to exercise in physical activity, sport and the workplace.
2. Interpret measurement data and review current literature in the area of exercise physiology.
3. Plan and perform laboratory and field physiological measurements safely and ethically, and examine responses during a variety of exercise situations.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Communication		•	•
2 - Problem Solving	•	•	•
3 - Critical Thinking	•	•	•
4 - Information Literacy	•	•	
5 - Team Work		•	•
6 - Information Technology Competence	•	•	•
7 - Cross Cultural Competence			
8 - Ethical practice		•	•
9 - Social Innovation			
10 - Aboriginal and Torres Strait Islander Cultures			

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Online Test - 20%		•	•			•				
2 - Practical Assessment - 40%	•	•	•			•		•		
3 - Examination - 40%	•	•	•	•				•		
4 - On-campus Activity - 0%	•	•	•	•	•	•		•		

## Textbooks and Resources

### Textbooks

ESSC12001

#### Prescribed

#### **Exercise physiology: nutrition, energy and human performance**

Edition: 8 (2015)

Authors: McArdle, WD, Katch, FL, Katch, VL

Lippincott Williams & Wilkins

New York, NY, USA

ISBN: 9781451191554

Binding: Hardcover

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

#### You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

## Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 6th Edition \(APA 6th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Aaron Scanlan** Unit Coordinator

[a.scanlan@cqu.edu.au](mailto:a.scanlan@cqu.edu.au)

## Schedule

### Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
<b>Introduction to exercise and sport physiology</b>		

### Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exercise metabolism:</b> Energy transfer during exercise		

### Week 3 - 20 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exercise metabolism:</b> Energy expenditure during exercise		

### Week 4 - 27 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
<b>Responses to exercise:</b> Pulmonary system		

**Week 5 - 03 Apr 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Responses to exercise:</b> Cardiovascular system		

**Vacation Week - 10 Apr 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Online test 1 will be made available from 9:00 am on Monday, April 10 until 5:00 pm on Tuesday, April 18		

**Week 6 - 17 Apr 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Responses to exercise:</b> Endocrine system		

**Week 7 - 24 Apr 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exercise performance:</b> Training principles and exercise prescription		

**Week 8 - 01 May 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exercise performance:</b> Fatigue and ergogenic aids		

**Week 9 - 08 May 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exercise performance:</b> Altered environments		

**Week 10 - 15 May 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Aging and disease prevention:</b> Clinical exercise physiology		

**Week 11 - 22 May 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exam preparation:</b> Term review and practice questions		
Online test 2 will be made available from 9:00 am on Monday, May 22 until 5:00 pm on Tuesday, May 30		

**Week 12 - 29 May 2017**

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exam preparation:</b> No lecture		

**Review/Exam Week - 05 Jun 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Exam to be scheduled during exam block		
<b>Practical Assessment Due:</b> Review/Exam Week Monday (5 June 2017) 11:45 pm AEST		

**Exam Week - 12 Jun 2017**

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

## Assessment Tasks

### 1 Online Tests

#### Assessment Type

Online Test

#### Task Description

You will be required to complete two online tests across term. Each test will contain multiple-choice questions based on unit content from lectures and course readings. Test 1 will cover material from lectures 1-5, while Test 2 will cover material from lectures 6-10.

#### Assessment Due Date

Online test 1 will be made available from 9:00 am on Monday, April 10 AEST until 5:00 pm on Tuesday, April 18 AEST. Online test 2 will be made available from 9:00 am on Monday, May 22 AEST until 5:00 pm on Tuesday, May 30 AEST.

#### Return Date to Students

Test results will be made available in Moodle upon completion with a full test review available in Moodle upon test closure.

#### Weighting

20%

#### Assessment Criteria

A selection of 40 randomly-generated questions equally distributed across lectures (8 questions from each lecture) will be provided in each test. Each test will be graded using the overall test score (out of 40 marks).

#### Referencing Style

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

#### Submission

Online

#### Submission Instructions

Tests will be accessed and completed via the unit Moodle site.

#### Learning Outcomes Assessed

- Understand the physiological mechanisms responsible for the body's responses to exercise in physical activity, sport and the workplace.
- Interpret measurement data and review current literature in the area of exercise physiology.

#### Graduate Attributes

- Problem Solving
- Critical Thinking
- Information Technology Competence

### 2 Practical Assessment

#### Assessment Type

Practical Assessment

#### Task Description

Attendance at laboratory sessions will involve completion of different learning components, including equipment use, skill demonstration, data acquisition, interpretation of results, and theoretical reasoning. You will be required to complete a laboratory workbook for all laboratory sessions to demonstrate knowledge and skills related to each laboratory component.

#### Assessment Due Date

Review/Exam Week Monday (5 June 2017) 11:45 pm AEST

#### Return Date to Students

The results for the laboratory workbook will be made available within 2 weeks of the due date.

**Weighting**

40%

**Assessment Criteria**

Grades for this assessment will be based on marks attained in each of the laboratory sessions. Specifically, the following laboratory sessions will be graded:

1. Screening for health and anthropometrical measurement
2. Determining exercise intensity, efficiency, and substrate utilisation using Douglas Bags
3. Examining physiological responses during exercise using spirometry and electrocardiography
4. Testing for anaerobic threshold, maximum oxygen uptake, and high-intensity exercise capacity
5. Assessing thermal and hydration responses during exercise

**Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

**Submission**

Online

**Submission Instructions**

The completed laboratory workbook must be submitted via the unit Moodle site.

**Learning Outcomes Assessed**

- Understand the physiological mechanisms responsible for the body's responses to exercise in physical activity, sport and the workplace.
- Interpret measurement data and review current literature in the area of exercise physiology.
- Plan and perform laboratory and field physiological measurements safely and ethically, and examine responses during a variety of exercise situations.

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Technology Competence
- Ethical practice

### 3 On-campus Activity

**Assessment Type**

On-campus Activity

**Task Description**

You must attend and participate in all laboratory sessions in this unit. On-campus laboratory sessions and residential schools will be held during specified weeks across term to deliver laboratory content.

**Assessment Due Date**

Attendance at laboratory sessions will be completed across specified weeks of term.

**Return Date to Students**

Inadequate attendance and/or participation will be made available during and following each laboratory session.

**Weighting**

Pass/Fail

**Minimum mark or grade**

Pass

**Assessment Criteria**

Attendance at all laboratory sessions with sufficient participation will result in a passing grade for this assessment.

**Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

**Submission**

Offline

**Learning Outcomes Assessed**



- Interpret measurement data and review current literature in the area of exercise physiology.
- Plan and perform laboratory and field physiological measurements safely and ethically, and examine responses during a variety of exercise situations.

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Ethical practice

## **Examination**

### **Outline**

Complete an invigilated examination.

### **Date**

During the examination period at a CQUniversity examination centre.

### **Weighting**

40%

### **Length**

180 minutes

### **Exam Conditions**

Closed Book.

### **Materials**

Calculator - non-programmable, no text retrieval, silent only

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?



#### Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem