



# ESSC12005 *Applied Exercise and Sport* *Physiology* Term 2 - 2020

Profile information current as at 05/05/2024 04:18 pm

All details in this unit profile for ESSC12005 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

In this unit, you will examine the application of physiological concepts and skills based on current trends in exercise and sport science settings. Furthermore, you will develop scientific knowledge and skills by undertaking an applied research project and disseminating the outcomes in verbal and written forms.

### 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: ESSC11002 Measurement and Evaluation in Health Science AND ESSC12001 Exercise and Sport Physiology For CG93 Bachelor of Medical Science students: BMSC11001 Human Body Systems 1 AND BMSC11002 Human Body Systems 2 AND ESSC11002 Measurement and Evaluation in Health Sciences For CC13 Bachelor of Education (Secondary) students: ESSC12001 Exercise and Sport Physiology

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 2 - 2020

- Cairns
- Mackay
- Mixed Mode
- 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. **Portfolio**

Weighting: 70%

#### 2. **Online Quiz(zes)**

Weighting: 30%

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

Weighting: Pass/Fail

### 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 Student feedback and self-reflection

##### Feedback

Alternative research topics should be considered for the projects completed in laboratory sessions.

##### Recommendation

Alternative research topics will be explored for implementation in the projects completed across term.

#### Feedback from Student feedback

##### Feedback

Some further guidance could be provided for presenting data and running statistical analyses for projects.

##### Recommendation

Additional information will be provided in lectures and tutorial videos to assist students in effectively presenting data and running statistical analyses.

## Unit Learning Outcomes

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

1. Recognise applications of exercise and sport physiology in practice
2. Collect and analyse research data in exercise and sport settings
3. Evaluate and disseminate research findings in verbal and written forms.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Portfolio - 70%	•	•	•
2 - Online Quiz(zes) - 30%	•		
3 - On-campus Activity - 0%		•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
1 - Communication	•	•	•

Graduate Attributes	Learning Outcomes		
	1	2	3
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 - Portfolio - 70%	•	•	•	•		•		•		
2 - Online Quiz(zes) - 30%		•	•	•		•		•		
3 - On-campus Activity - 0%	•	•	•	•	•	•	•	•		

## Textbooks and Resources

### Textbooks

**There are no required textbooks.**

### IT Resources

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

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Computer / laptop with webcam to allow videoconferencing.
- EndNote or similar bibliographic software is recommended. EndNote is available free of charge from CQUniversity via the Library or IT services.
- Microsoft Word and Excel (with Data Analysis Toolpak in Excel)
- Adobe Acrobat Reader (or similar) software for viewing PDF documents
- Zoom videoconferencing software (Free to download and use. A Zoom account is also available with your student credentials).
- Microphone and camera for use with Zoom.

## Referencing Style

All submissions for this unit must use the referencing styles below:

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)
- [Vancouver](#)

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 - 13 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Module 1: Introduction and research projects</b> 1. Unit introduction 2. Research project topics 3. Disseminating research	Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.	

### Week 2 - 20 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Module 2: The research process</b> 1. Information sources 2. Finding and reviewing the literature 3. Research designs 4. Data analysis	Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.	<b>Online quiz 1</b> Opens following the lecture.

### Week 3 - 27 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Module 3: Measurement and testing in exercise and sport physiology</b> 1. Measurement concepts 2. The testing process 3. Anaerobic fitness and performance tests 4. Aerobic fitness and performance tests	Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.	<b>Online quiz 2</b> Opens following the lecture.

### Week 4 - 03 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Module 4: Measurement of physiological attributes and responses</b> 1. Approaches to assess body composition 2. Approaches to assess cardiovascular responses 3. Approaches to assess oxygen utilisation 4. Approaches to assess thermoregulatory responses	Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.	<b>Online quiz 3</b> Opens following the lecture.

### Week 5 - 10 Aug 2020

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

### Module 5: Monitoring recovery and fatigue

1. The role of sleep in recovery from exercise
2. Approaches to enhance recovery from exercise
3. Neuromuscular approaches to measure fatigue
4. Physiological approaches to measure fatigue

Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.

**Online quiz 4** Opens following the lecture.

### Vacation Week - 17 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		<b>Portfolio component (research proposal)</b> Due: Vacation week Monday (17 August 2020) 9:00 am AEST.

### Week 6 - 24 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Module 6: Monitoring workloads and enhancing performance</b> <ol style="list-style-type: none"><li>1. Concepts in monitoring workloads</li><li>2. Approaches to measure internal workloads</li><li>3. Approaches to measure external workloads</li><li>4. Training modifications to enhance performance</li><li>5. Ergogenic practices to enhance performance</li></ol>	Various readings consisting of journal articles and textbook chapters with full-text library links available on the unit Moodle site.	<b>Online quiz 5</b> Opens following the lecture.

### Week 7 - 31 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Review 1</b> <ol style="list-style-type: none"><li>1. Data analyses for research projects</li><li>2. Interpretation of findings for research projects</li><li>3. Research manuscript preparation</li><li>4. Student questions</li></ol>		

### Week 8 - 07 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

### Week 9 - 14 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

### Week 10 - 21 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		<b>Portfolio component (research project manuscript)</b> Due: Week 10 Friday (25 October 2020) 5:00 pm AEST.

### Week 11 - 28 Sep 2020

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

## Review 2

1. General information on remaining assessment
2. Research presentation preparation and examples
3. Student questions

### Week 12 - 05 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		<b>Online quizzes</b> Due: Week 12 Friday (9 Oct 2020) 5:00 pm AEST

### Review/Exam Week - 12 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

### Exam Week - 19 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		<b>Portfolio component (research project presentation)</b> Due: Presented during a pre-selected online session between Monday (19 October 2020) and Wednesday (21 October 2020) this week. Presentation slides to be submitted by Wednesday (21 October 2020) 5:00 pm AEST.

## Term Specific Information

**Please be advised the attendance and participation at laboratory sessions attached to this unit (ESSC12005 Applied Exercise and Sport Physiology) will not occur in Term 2, 2020 due to government COVID-19 travel and social isolation restrictions at the time of preparing this unit profile. You will instead be provided with collected research data from previous terms to complete your research project. You will still be able to achieve all unit learning outcomes. The removal of attendance and participation at laboratory sessions will not impact accreditation.**

## Assessment Tasks

### 1 Research portfolio

#### Assessment Type

Portfolio

#### Task Description

In this unit, you will be provided with research data previously collected during laboratory sessions to complete a research project. You will be required to select ONE of the research project topics to develop a research portfolio on. The portfolio will consist of a research project proposal, research project manuscript, and research project presentation.

#### Component 1: Research project proposal

This assessment involves developing a written proposal related to your chosen research topic. You are recommended to include Background, Purposes and hypotheses, Study design and statistical analyses, Risk assessment, Milestones, and References sections. This assessment is to be completed individually using the template provided on the unit Moodle site.

#### General information

Word limit: 2000 words

Program: Microsoft Word is the preferred software program.

Font: Use Arial or Times New Roman, size eleven (11) point.

Layout: Double-spaced throughout with 2.5 cm margins all around. Number the pages consecutively at the bottom right corner.

## **Component 2: Research project manuscript**

This assessment involves developing a journal-style manuscript on your chosen research topic. You are recommended to include Title page, Abstract, Introduction, Methods, Results, Discussion, Conclusion, Practical Implications, References, and Tables/Figures sections. This assessment is to be completed individually using the template provided on the unit Moodle site.

### *General information*

Word limit: 3000 words (excludes abstract, tables/figures, references).

Reference limit: you should not exceed 30 references overall.

Program: Microsoft Word is the preferred software program.

Font: Use Arial or Times New Roman, size eleven (11) point.

Layout: Double-spaced throughout with 2.5 cm margins all around. Number the pages consecutively at the bottom right corner. Use headings for different sections, but use sub-headings sparingly.

Tables and figures: Do not include more than 3 tables and figures in total combined.

## **Component 3: Research project presentation**

This assessment involves developing and delivering a presentation of the findings for your chosen research topic. The presentation is to be completed individually and delivered at one of the scheduled online conferences using Zoom.

### *General information*

Time limit: Up to 10 minutes presenting (followed by 2-3 minutes of questions).

Slide volume: 15-20 slides is recommended; however this might vary with content and styles.

Program: Microsoft PowerPoint is the preferred software program.

The components of the portfolio will be due on different dates across term. Templates, guidelines, and grading rubrics will be made available for each component on the unit Moodle site. You should consider the information provided during the lecture series along with the detailed methods provided in templates when developing your portfolio.

## **Assessment Due Date**

Research project proposal due 9:00 am Monday 17 August 2020 (AEST); Research project manuscript due 5:00 pm Friday 25 September 2020 (AEST); Research project presentation to be presented during selected session between Monday-Wednesday 19-21 October 2020 (AEST) with submission of presentation slides due 5:00 pm Wednesday 21 October 2020 (AEST).

## **Return Date to Students**

Each component of the portfolio will be returned with feedback within 2 weeks of the due date.

## **Weighting**

70%

## **Assessment Criteria**

The research project proposal will be a written document assessed on the following areas: background of key concepts, review and interpretation of the related literature, development of the rationale for the project, aim(s) and hypotheses, study design and statistical analyses, risk assessment, milestones, and writing (15% of final grade).

The research project manuscript will be assessed on the following areas: introduction, methods, results, discussion, conclusion, practical implications, and writing (35% of final grade) in the format of a written journal article.

The presentation will be assessed on the following areas: introduction, methods, results, discussion, conclusion, practical implications, and presentation skills including duration, slide design, structure, use of cues for speech, use of eye contact and voice, professionalism, ability to answer questions, and participation (20% of final grade).

Each portfolio component will be graded using detailed assessment rubrics available on the unit Moodle site.

## **Referencing Style**

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)
- [Vancouver](#)

## **Submission**

Online

## **Submission Instructions**

The research project presentation will be presented online via Zoom. Please submit all portfolio components electronically via the unit Moodle site, preferably as a .doc or .docx file (or a .ppt or .pptx for the presentation). Please do not submit any components as a .pdf file.



## Learning Outcomes Assessed

- Recognise applications of exercise and sport physiology in practice
- Collect and analyse research data in exercise and sport settings
- Evaluate and disseminate research findings in verbal and written forms.

## Graduate Attributes

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

## 2 Online quizzes

### Assessment Type

Online Quiz(zes)

### Task Description

You will be required to complete five (5) online quizzes, with a separate quiz developed for each module (except Module 1). Online quiz 1 will assess knowledge on content covered in Module 2; Online quiz 2 will assess knowledge on content covered in Module 3; Online quiz 3 will assess knowledge on content covered in Module 4; Online quiz 4 will assess knowledge on content covered in Module 5; and Online quiz 5 will assess knowledge on content covered in Module 6. Each online quiz will consist of 20 randomly-selected questions from a wider bank of questions. Questions will be equally distributed across all topics in each module.

Each quiz will open following the lecture in their respective Module week and all quizzes will close on the same date (9 October 2020). You will have a 25-minute time limit to complete each online quiz upon commencing. Questions will be multiple choice and fill-in-the-blanks.

You must log onto Moodle when each online quiz is open and complete the quiz before the closing date. You can only attempt each online quiz once and each online quiz must be completed in a single session. Online quizzes should be completed on a computer, as attempting the test on a smartphone can result in your session being ended in the event of a phone call or notification. You cannot save your answers and return to the online quiz at a later time. In the absence of an approved extension, there will be no late submissions allowed for any of the online quizzes.

### Number of Quizzes

5

### Frequency of Quizzes

### Assessment Due Date

Week 12 Friday (9 Oct 2020) 5:00 pm AEST

In the absence of an approved extension, no attempts after the due date will be permitted and a score of zero (0) will be awarded.

### Return Date to Students

You will receive the overall result for each online quiz upon completion; however, you will see detailed feedback regarding the correct answers for each question in each online quiz upon quiz closure.

### Weighting

30%

### Assessment Criteria

Each online quiz will have an equal contribution to your overall unit grade. Together, the five (5) online quizzes will comprise 30% of your overall grade (6% per quiz).

There will be 20 questions per online quiz, with each question allocated 1 mark. Each question in each online quiz will be graded as correct or incorrect.

For questions with text-based responses ("fill-in-the-blank") you should take care to ensure accurate spelling (Australian English) and correct grammar are used given answers are spelling and grammar sensitive.

### Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

- [Vancouver](#)

#### **Submission**

Online

#### **Submission Instructions**

Attempting and submitting each online quiz is performed via the unit Moodle site.

#### **Learning Outcomes Assessed**

- Recognise applications of exercise and sport physiology in practice

#### **Graduate Attributes**

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

### **3 Attendance and participation in laboratory sessions**

#### **Assessment Type**

On-campus Activity

#### **Task Description**

**Please be advised the attendance and participation at laboratory sessions attached to this unit (ESSC12005 Applied Exercise and Sport Physiology) will not occur in Term 2, 2020 due to government COVID-19 travel and social isolation restrictions at the time of preparing this unit profile. You will instead be provided with collected research data from previous terms to complete your research project. You will still be able to achieve all unit learning outcomes. The removal of attendance and participation at laboratory sessions will not impact accreditation.**

#### **Assessment Due Date**

Not applicable.

#### **Return Date to Students**

Not applicable.

#### **Weighting**

Pass/Fail

#### **Assessment Criteria**

Not applicable.

#### **Referencing Style**

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)
- [Vancouver](#)

#### **Submission**

No submission method provided.

#### **Submission Instructions**

Not applicable.

#### **Learning Outcomes Assessed**

- Collect and analyse research data in exercise and sport settings
- Evaluate and disseminate research findings in verbal and written forms.

#### **Graduate Attributes**

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

## 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