



ESSC12005 *Applied Exercise and Sport* *Physiology* Term 2 - 2023

Profile information current as at 10/04/2024 10:55 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 - 2023

- Cairns
- Mackay City
- 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 Self-reflection and student feedback via discussion.

Feedback

Some new original studies have been conducted on some topics covered in the practical research projects, making them less novel.

Recommendation

It is recommended that some topics covered in the practical research projects be altered to ensure originality.

Feedback from Self-reflection and student feedback via discussion.

Feedback

The presentation sessions were long and difficult to coordinate due to technical issues.

Recommendation

It is recommended that the presentation sessions be run across more frequent, shorter sessions.

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.
- Microphone and camera for use with Zoom
- Adobe Acrobat Reader (or similar) software for viewing PDF documents
- Endnote bibliographic software. This is optional for formatting references.
- Zoom videoconferencing software. A Zoom account is available with your student credentials
- Microsoft Office (Word, Excel, PowerPoint) or similar software such as Open Office

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

Schedule

Week 1 - Module 1 - 10 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Unit introduction and research projects Topic 1. Unit introduction Topic 2. Research project topics Topic 3. Disseminating research	Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.	

Week 2 - Module 2 - 17 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: The research process Topic 1. Information sources Topic 2. Finding and reviewing the literature Topic 3. Research designs Topic 4. Data analysis	Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.	Online quiz 1 opens on Tuesday 18 July 5:00 pm AEST.

Week 3 - Module 3 - 24 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: Measurement and testing in exercise and sport physiology Topic 1. Measurement concepts Topic 2. The testing process Topic 3. Anaerobic fitness and performance tests Topic 4. Aerobic fitness and performance tests	Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.	Online quiz 2 opens on Tuesday 25 July 5:00 pm AEST.

Week 4 - Module 4 - 31 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Module 4: Measuring physiological attributes and responses Topic 1. Assessing body composition Topic 2. Assessing cardiovascular responses Topic 3. Assessing oxygen utilisation Topic 4. Assessing thermoregulatory responses	Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.	Online quiz 3 opens on Tuesday 1 August 5:00 pm AEST.

Week 5 - Module 5 - 07 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Module 5: Monitoring recovery and fatigue

Topic 1. Sleep as recovery from exercise
Topic 2. Enhancing recovery from exercise
Topic 3. Neuromuscular approaches to measure fatigue
Topic 4. Physiological approaches to measure fatigue

Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.

Online quiz 4 opens on Tuesday 8 August 5:00 pm AEST.

Portfolio - Research project proposal Due: Week 5 Friday 11 August 5:00 pm AEST.

Vacation Week - 14 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Week 6 - Module 6 - 21 Aug 2023		
Module 6: Monitoring load and enhancing performance Topic 1. Concepts in monitoring load Topic 2. Approaches to measure internal load Topic 3. Approaches to measure external load Topic 4. Training modifications to enhance performance Topic 5. Ergogenic practices to enhance performance	Various readings consisting of journal articles and websites with links will be made available on the unit Moodle site.	Online quiz 5 opens on Tuesday 22 August 5:00 pm AEST. Practical block 1 for Mackay-based students on Tuesday and Wednesday 22-23 August. Practical block 2 for Rockhampton and mixed-mode students on Friday and Saturday 25-26 August.
Week 7 - 28 Aug 2023		
Module/Topic No lecture	Chapter	Events and Submissions/Topic Practical block 3 for Cairns-based students on Tuesday and Wednesday 29-30 August.
Week 8 - Preparation - 04 Sep 2023		
Module/Topic Preparing your research manuscript Topic 1. Data analyses for research projects Topic 2. Interpretation of findings for research projects Topic 3. Research manuscript preparation	Chapter	Events and Submissions/Topic
Week 9 - 11 Sep 2023		
Module/Topic No lecture	Chapter	Events and Submissions/Topic Online quizzes Due: Week 9 Friday (15 Sept 2023) 5:00 pm AEST
Week 10 - 18 Sep 2023		
Module/Topic No lecture	Chapter	Events and Submissions/Topic Portfolio - Research project manuscript Due: Week 10 Friday 22 September 5:00 pm AEST.
Week 11 - Preparation - 25 Sep 2023		
Module/Topic	Chapter	Events and Submissions/Topic

Preparing your research presentation

Topic 1. Presentation preparation
Topic 2. Presentation examples
Topic 3. Presentation sessions and student questions

Week 12 - 02 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

Review/Exam Week - 09 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		Portfolio - Research project presentation Due: Presented during a pre-selected 2-hour online Zoom session on either Wednesday 11 October (9:00 am, 1:00 pm, or 4:00 pm) or Thursday 12 October (9:00 am or 12:00 pm) AEST. Presentation slides to be submitted by Thursday 12 October 5:00 pm AEST.

Exam Week - 16 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
No lecture		

Term Specific Information

This unit includes compulsory on-campus practical activities. You must attend the practical block specific to your mode of enrolment as outlined below. If you prefer to attend an alternate session to that specified for your enrolment mode, please contact the Unit Coordinator to discuss attendance at an alternative practical block.

Mackay-based students are required to attend the practical block scheduled on the Mackay City Campus (Building 4, Exercise and Sport Sciences Laboratories) on Tuesday 22 August (9:00 am to 5:00 pm AEST) and Wednesday 23 August (9:00 am to 2:00 pm AEST). Please see the CQUniversity Handbook and the unit Moodle site for up-to-date information.

Rockhampton-based students and mixed-mode students are required to attend the practical block scheduled on the Rockhampton North Campus (Building 81, Exercise and Sport Sciences Laboratories) on Friday 25 August (9:00 am to 5:00 pm AEST) and Saturday 26 August (9:00 am to 2:00 pm AEST). Please see the CQUniversity Handbook and the unit Moodle site for up-to-date information.

Cairns-based students are required to attend the practical block scheduled on the Cairns campus (Exercise and Sport Sciences Laboratories located at Cairns Basketball facilities on Aumuller St) on Tuesday 29 August (9:00 am to 5:00 pm AEST) and Wednesday 30 August (9:00 am to 2:00 pm AEST). Please see the CQUniversity Handbook and the unit Moodle site for up-to-date information.

Assessment Tasks

1 Research portfolio

Assessment Type

Portfolio

Task Description

In this unit, you will apply knowledge and skills related to exercise and sport physiology to complete various research projects during the practical sessions. You are required to actively participate in data collection for all research projects and select ONE of the research project topics to develop your research portfolio. The portfolio will consist of a research proposal, research presentation, and research manuscript.

1. Research project proposal

This assessment involves developing a written proposal related to your chosen research topic and should include background, purposes and hypotheses, study design, statistical analyses, risk assessment, milestones, and references sections. This assessment is to be completed individually using the template provided (which contains correct formatting) on the unit Moodle site.

General information

Word limit: 2000 words (excluding tables for the risk assessment and Gantt chart, as well as the reference list).

Program: Microsoft Word.

Font: Use Times New Roman, size eleven font.

Layout: Double-spaced throughout with 2.54 cm margins on all sides. Number the pages consecutively at the bottom right corner. Set the text alignment to justified.

2. Research project manuscript

This assessment involves developing a journal-style manuscript on your chosen research topic and should include title page, abstract, introduction, methods, results, discussion, conclusion, practical implications, and references sections. This assessment is to be completed individually using the template provided (which contains correct formatting) on the unit Moodle site.

General information

Word limit: 3000 words (excludes abstract, tables/figures, and reference list).

Reference limit: 30 references.

Program: Microsoft Word.

Font: Use Times New Roman, size eleven font.

Layout: Double-spaced throughout with 2.54 cm margins on all sides. Number the pages consecutively at the bottom right corner. Set the text alignment to justified.

Tables and figures: No more than 3 tables and figures combined in total should be included.

3. Research project presentation

This assessment involves developing and delivering a presentation on 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 of presenting (followed by 2-3 minutes of questions).

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

Program: Microsoft PowerPoint .

Portfolio items will be due on different dates across term. Templates, guidelines, and assessment rubrics will be made available for each item on the unit Moodle site. You should consider the information provided during the lectures when developing your portfolio.

Assessment Due Date

Research project proposal due Week 5 Friday 11 August 5:00 pm AEST; Research project manuscript due Week 10 Friday 22 September 5:00 pm AEST; Research project presentation to be presented during selected session on Wednesday 11 October or Thursday 12 October with submission of presentation slides due by 12 October 5:00 pm AEST.

Return Date to Students

Each portfolio item will be returned with feedback within two weeks of the due date.

Weighting

70%

Assessment Criteria

The research project proposal will be a written document assessed in 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 in 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 in 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 item 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

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

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 online quizzes, with a separate quiz developed each for Modules 2-6. Online quiz 1 will assess knowledge of content covered in Module 2; Online quiz 2 will assess knowledge of content covered in Module 3; Online quiz 3 will assess knowledge of content covered in Module 4; Online quiz 4 will assess knowledge of content covered in Module 5; and Online quiz 5 will assess knowledge of content covered in Module 6. Each online quiz will consist of 16 randomly-selected questions from a wider bank of questions. Questions will be appropriately distributed across all topics in each module.

Each quiz will open on the Tuesday at 5:00 pm AEST following the corresponding lecture in weeks 2-6 and all quizzes will close on the same date (15 September 5:00 pm AEST). You will have a 25-minute time limit to complete each online quiz upon commencing. Questions will be in multiple choice and fill-in-the-blank formats.

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 9 Friday (15 Sept 2023) 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 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 or when all students have completed each individual quiz (whichever occurs earliest).

Weighting

30%

Assessment Criteria

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

There will be 16 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 practical block

Assessment Type

On-campus Activity

Task Description

This assessment involves compulsory attendance and active participation in the on-campus practical activities of the unit delivered in a practical block. You are required to attend and actively participate in ONE of the on-campus practical blocks. Different blocks are available depending on your mode of enrolment (Mackay, Rockhampton, Cairns, or mixed-mode). Further details regarding these practical blocks can be found in the Term Specific Information section of the ESSC12005 Unit Profile, on the unit Moodle site, and via the CQUniversity Handbook.

Assessment Due Date

You will successfully complete this task following attendance and participation at your designated practical block.

Return Date to Students

You will immediately pass this assessment following attendance and participation at your designated practical block.

Weighting

Pass/Fail

Minimum mark or grade

You must pass this assessment item to pass the unit.

Assessment Criteria

Attendance at the on-campus practical block, with sufficient participation and completion of skills, will result in a passing grade for this assessment. Failure to attend and adequately participate may result in a fail grade for this assessment item, and being unable to pass this unit. Attendance at the on-campus activities will be assessed through attendance records documented by staff members managing the sessions as well as a competent demonstration of key skills including participant screening, anthropometry assessment, test administration, use of a metabolic analysis system, and capillary blood sampling.

If you miss any part of the practical block without an approved reason, there will NOT be an opportunity to simply 'catch up' at any time. The Assessment Policy and Procedure (Higher Education Coursework) outlines acceptable reasons for adjusting assessment. If you do not attend one of the practical blocks and provide a valid reason with supporting

documentation, then an attempt to make alternate arrangements will be made in consultation with the Deputy Dean Learning and Teaching or equivalent manager.

Referencing Style

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

Submission

Offline

Submission Instructions

Attendance and participation will involve competent completion of practical activities. No documentation is required to be submitted.

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