



PODI12010 Advanced Anatomy and Podiatric Biomechanics

Term 2 - 2022

Profile information current as at 14/12/2025 06:35 am

All details in this unit profile for PODI12010 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 will provide you with comprehensive knowledge in functional anatomy and biomechanics of the lower limb specifically required in the profession of podiatry. A strong focus will be on the integration of anatomical structures and functions and how these both influence, and are influenced by the manner in which the skeletal, muscular, nervous, and circulatory systems work together. You will learn to use biomechanical terminology relating to the lower extremity that describes motion, position and structural abnormality. Theoretical principles, measurement techniques and gait analysis will also be investigated.

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

Prerequisites: ALLH11005 Anatomy and Physiology for Health Professionals 1 and ALLH11004 Anatomy and Physiology for Health Professionals 2. PODI12006 Fundamentals of Pre-Clinical Podiatry Practice. Corequisite: PODI12009 Podiatry Clinical Practice 1.

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 - 2022

- 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).

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 Quiz(zes)**

Weighting: 30%

2. **Presentation**

Weighting: 40%

3. **Written Assessment**

Weighting: 30%

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 Lecturer reflection

Feedback

The lectures and tutorials were conducted via zoom which was challenging when teaching anatomy and biomechanics content. Some students had poor internet connection. Recorded lectures were helpful for students to revise content or anything they may have missed due to poor internet connection. Innovative technology was also used such as "Glass board" to deliver lectures.

Recommendation

It is recommended that students continue to be provided with recorded lectures so that they can review the content at their own pace. Teaching tools such as "Glass board" should continue to be used.

Feedback from Informal student feedback

Feedback

Although biomechanical theories were difficult to grasp, students enjoyed the practical session where they utilised a motion capture app to analyse their walking gait. The theories started to make more sense when applied in a clinical setting.

Recommendation

Students should continue to be exposed to the use of technology to conduct objective biomechanical assessments and analysis.

Unit Learning Outcomes

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

1. Describe and explain the functional anatomy of all muscle, tendon and joint units of the lower limb
2. Interpret the mechanical, physiological and anatomical concepts in the context of human physical performance
3. Use the key biomechanical terms and principles relating to the lower extremity, which describe motion, position and/or deformity
4. Perform a range of biomechanical assessments using quantitative measurement techniques, including assessment of their validity
5. Analyse the gait cycle, its determinants and the related phases of human locomotion.

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

| Assessment Tasks | Learning Outcomes | | | | |
|------------------------------|-------------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 1 - Online Quiz(zes) - 30% | • | • | | • | |
| 2 - Presentation - 40% | • | • | • | • | • |
| 3 - Written Assessment - 30% | | | • | | • |

Alignment of Graduate Attributes to Learning Outcomes

| Graduate Attributes | Learning Outcomes | | | | |
|---|-------------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 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 Quiz(zes) - 30% | | • | • | • | | • | | | | |
| 2 - Presentation - 40% | • | • | • | • | | | • | • | | |
| 3 - Written Assessment - 30% | • | • | • | • | | | | | | |

Textbooks and Resources

Textbooks

PODI12010

Prescribed

Clinical Biomechanics of the Lower Extremities

(1996)

Authors: Ronald Valmassy

Mosby Elsevier

St Louis , Missouri , USA

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 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Malia Ho Unit Coordinator

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Schedule

Week 1 - 11 Jul 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|---------|------------------------------|
| Overview of the unit The skeletal system - development, function and repair Review anatomy of the hip and thigh | | |

Week 2 - 18 Jul 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| The muscular system - development, function and repair Review anatomy of the leg and foot | | |

Week 3 - 25 Jul 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------------------|---------|------------------------------|
| Kinematic concepts of human movement | | |

Week 4 - 01 Aug 2022

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

Kinetic concepts of human movement

Week 5 - 08 Aug 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| Practical session 1: Non weight bearing assessments Hip, knee, ankle joint assessment Subtalar joint, mid-tarsal joint, 1st and 5th rays, metatarso-phalangeal joints assessment | | |

Vacation Week - 15 Aug 2022

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

Week 6 - 22 Aug 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|--|
| Overview of podiatric biomechanics Foot type classification | | Online quiz Due: Week 6 Monday (22 Aug 2022) 4:00 pm AEST |

Week 7 - 29 Aug 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| The walking gait cycle: Part 1 Kinematic assessment | | |

Week 8 - 05 Sep 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| The walking gait cycle: Part 2 Kinetic assessment | | |

Week 9 - 12 Sep 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|---|
| | | Presentation Due: Week 9 Monday (12 Sept 2022) 11:59 pm AEST |

Week 10 - 19 Sep 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|---------|------------------------------|
| Practical session 2: Weight bearing assessments Neutral & relaxed calcaneal stance positions 2D video gait analyses | | |

Week 11 - 26 Sep 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|---------------|---------|------------------------------|
| Revision Week | | |

Week 12 - 03 Oct 2022

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|--|
| | | Written assessment Due: Week 12 Monday (3 Oct 2022) 11:59 pm AEST |

Term Specific Information

Attendance: As per the University's recommendation that "All on-campus students are expected to attend scheduled classes," students should also be aware that there is clear evidence to show that attendance rates are directly related to academic progress. It is therefore in the student's interest and it is strongly recommended that students attend all scheduled learning activities to support their learning.

Uniform: In all practical classes, students are required to wear the nominated uniform. Students must purchase their uniform from the bookshop. This uniform is separate to the mandatory clinical uniform. Please refer to the Podiatry Course Handbook for further details.

Assessment Tasks

1 Online quiz

Assessment Type

Online Quiz(zes)

Task Description

The Online Quiz in Week 6 will consist of multiple choice, short and long answer questions and cover content from Weeks 1 - 5.

The quiz will have a time limit of 60 minutes and will be conducted during the tutorial time. The quiz will take place in a computer lab. If a computer lab is not available, the quiz may be conducted as a paper based quiz.

This is a closed book task. Access to books, notes, websites (other than the quiz) and the use of other electronic devices are prohibited during the quiz.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

Week 6 Monday (22 Aug 2022) 4:00 pm AEST

Return Date to Students

Week 8 Monday (5 Sept 2022)

Weighting

30%

Assessment Criteria

The assessment will be marked according to a purpose made answer guide designed specifically for this assessment task.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Describe and explain the functional anatomy of all muscle, tendon and joint units of the lower limb
- Interpret the mechanical, physiological and anatomical concepts in the context of human physical performance
- Perform a range of biomechanical assessments using quantitative measurement techniques, including assessment of their validity

Graduate Attributes

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

2 Presentation

Assessment Type

Presentation

Task Description

This presentation worth 40% can be presented 'live' or as a pre-recorded video and will cover content from Weeks 1-8. The presentation will be no longer than 15 minutes with a 'live' 5-minute of question and answer session at the end. The presentation will be conducted during the lecture/ tutorial time in Week 9. The topic of the presentation will be provided to you at the start of the term. This is an individual assessment task.

Assessment Due Date

Week 9 Monday (12 Sept 2022) 11:59 pm AEST

After your presentation, please submit your powerpoint slides or video recording before the due date/ time as evidence of completion of this assessment task.

Return Date to Students

Week 10 Monday (19 Sept 2022)

Weighting

40%

Assessment Criteria

The assessment will be marked according to a marking rubric designed specifically for this assessment task. The assessment rubric for the oral presentation will be provided to you at the start of term. If the presentation exceeds the 15 minute time limit, you may opt to complete the presentation but any additional content that is over the time limit will not be assessed by the examiner.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Describe and explain the functional anatomy of all muscle, tendon and joint units of the lower limb
- Interpret the mechanical, physiological and anatomical concepts in the context of human physical performance
- Use the key biomechanical terms and principles relating to the lower extremity, which describe motion, position and/or deformity
- Perform a range of biomechanical assessments using quantitative measurement techniques, including assessment of their validity
- Analyse the gait cycle, its determinants and the related phases of human locomotion.

Graduate Attributes

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

3 Written assessment

Assessment Type

Written Assessment

Task Description

This written assessment worth 30% will consist of a report of an analysis of walking gait. The details of the requirements of this written assessment will be provided to you at the start of the term. This is an individual assessment task.

Assessment Due Date

Week 12 Monday (3 Oct 2022) 11:59 pm AEST

Return Date to Students

Exam Week Monday (17 Oct 2022)

Weighting

30%

Assessment Criteria

The written assessment will be marked according to a purpose made marking rubric for this assessment task. The marking rubric will be made available to you at the start of the term. Your written assessment must include:

- A cover page which includes assessment title, student's name and number, Unit Coordinators name, course code and title, due date.
- The gait analysis report
- Referencing (if any) should follow APA format. Please also ensure that each page of your report has a page number and your student number. The text should be in Size 12 Arial font, 1.5 cm spacing with 2 cm page margins. All tables and figures must be labelled and referenced appropriately in the text.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Use the key biomechanical terms and principles relating to the lower extremity, which describe motion, position and/or deformity
- Analyse the gait cycle, its determinants and the related phases of human locomotion.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

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