



MEDS20012 Musculoskeletal Ultrasound (Lower Body)

Term 2 - 2018

Profile information current as at 21/05/2024 05:21 pm

All details in this unit profile for MEDS20012 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 cover the theory and practice of basic soft tissue ultrasound imaging (lower body) and is appropriate for science graduates and allied health professionals wishing to use ultrasound as a focused diagnostic tool at the point of care. The unit will interest students engaged in managing soft tissue injury and pathology, or science graduates interested in lower body musculoskeletal imaging. You will develop knowledge of lower body musculoskeletal ultrasound with emphasis on interpretation of anatomical structures, biomechanics, and pathology. You will differentiate musculoskeletal pathology from that of other body structures. You will apply techniques for obtaining, interpreting and assessing optimised ultrasound images in the university ultrasound scanning facilities.

Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Co-requisites MEDS20009 Science and Instrumentation of Ultrasound

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 - 2018

- Distance

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 Postgraduate 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: Pass/Fail

2. **Written Assessment**

Weighting: Pass/Fail

Assessment Grading

This is a pass/fail (non-graded) unit. To pass the unit, you must pass all of the individual assessment tasks shown in the table above.

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 By email

Feedback

Zoom collaborate sessions.

Recommendation

Maintain informal nature of Zoom sessions allowing students the freedom and time to discuss sonography as it relates to their clinical practice.

Feedback from In class

Feedback

Residential school delivery.

Recommendation

Keep residential schools in the unit and ensure the day is structured to allow students time to ask questions and explore the answers in a supported environment.

Unit Learning Outcomes

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

1. Describe anatomy, biomechanics and pathophysiology specific to the musculoskeletal system of the lower body
2. Differentiate normal from abnormal ultrasound appearance of the musculoskeletal system of the lower body
3. Apply safe ultrasound techniques to generate and optimise diagnostic images of the musculoskeletal system of the lower body
4. Interpret ultrasound images to provide a differential diagnosis, including reference to safety and the diagnostic limitations of ultrasound
5. Recommend appropriate management decisions based on the clinical situation, clinical knowledge and ultrasound findings.

The unit will not require external accreditation but will apply to appropriate profession specific bodies for recognition for Continuing Professional Development (CPD) related to Basic Soft Tissue Ultrasound.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Online Test - 0%	•	•		•	•
2 - Written Assessment - 0%			•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Knowledge	○	○	○	○	○
2 - Communication	○	○	○	○	○
3 - Cognitive, technical and creative skills	○	○	○	○	○
4 - Research					○
5 - Self-management			○	○	○
6 - Ethical and Professional Responsibility				○	○
7 - Leadership					○
8 - 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
1 - Online Test - 0%	○	○	○	○	○	○	○	
2 - Written Assessment - 0%	○	○	○		○	○		

Textbooks and Resources

Textbooks

MEDS20012

Prescribed

Ultrasound of the Musculoskeletal System

Edition: 1 (2001)

Authors: Stefano Bianchi and Carlo Martinoli

Springer-Verlag Berlin Heidelberg

New York , New York , USA

ISBN: ISBN-13.978-3540422679

Binding: Hardcover

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Supplementary

Oxford Dictionary of Sports Science and Medicine

Edition: 3rd (2012)

Authors: Michael Kent

Oxford University Press

Croydon , UK

ISBN: ISBN-978-019-921089-3

Binding: Paperback

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Suitable storage media, such as a removeable USB stick (4gb or greater)
- Microphone and camera to attend the Zoom sessions

Referencing Style

All submissions for this unit must use the referencing style: [Vancouver](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Erika Gosney Unit Coordinator

e.gosney@cqu.edu.au

Schedule

Week 1 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Revision of sonographic tissue types and tear classification

Textbook
Ultrasound of the Musculoskeletal System 1 (2007)
Authors: Stefano Bianchi and Carlo Martinoli
Springer-Verlag Berlin Heidelberg
New York, New York, USA
ISBN ISBN-13.978-3540422679

Digital copy available from the library, prescribed text chapters 3 and 4.

Zoom tutorial Monday 6pm Australian Eastern Standard Time (AEST). During this tutorial, scheduling for future Zoom tutorials will be determined. The residential school will be one day during term with the date and location to be determined during the first Zoom tutorial (6 pm Monday 9th July 2018) with attendance at the residential school being compulsory.

Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Hip sonography part 1: Paediatric hip	Digital copy available from the library, prescribed text chapter 19.	Zoom tutorial, time and date to be determined in week 1 Zoom collaborate.

Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Hip sonography part 2: Adult hip,	Digital copy available from the library, prescribed text chapter 12.	

Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Anterior and posterior thigh sonography	Digital copy available from the library, prescribed text chapter 13.	Zoom tutorial, time and date to be determined in week 1

Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Knee sonography	Digital copy available from the library, prescribed text chapter 14.	Zoom tutorial, time and date to be determined in week 1 Zoom collaborate.

Vacation Week - 13 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Week 6 - 20 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Ankle sonography	Digital copy available from the library, prescribed text chapter 16.	

Week 7 - 27 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Foot sonography	Digital copy available from the library, prescribed text chapter 17.	Zoom tutorial, time and date to be determined in week 1 Zoom collaborate.

Week 8 - 03 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
		Residential school Friday 7th September 2018 See term specific information for additional information related to residential school.

Week 9 - 10 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal wall sonography.	Additional readings on Moodle site.	Zoom tutorial, time and date to be determined in week 1 Zoom collaborate.

Week 10 - 17 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Gluteal sonography.	Additional readings on Moodle site.	Zoom tutorial, time and date to be determined in week 1 Zoom collaborate. Residential School Assessment Task Due: Week 10 Friday (21 Sept 2018) 10:00 am AEST

Week 11 - 24 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Lower limb interventional techniques: Indications, applications and efficacy.	Additional readings on Moodle site.	

Week 12 - 01 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
		Zoom tutorial, time and date to be determined in week 1 Zoom collaborate. Online Test open: Week 12 Monday (1st October 2018) 9:00 am AEST Online Test Due: Week 12 Friday (5 Oct 2018) 9:00 am AEST

Review/Exam Week - 08 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 15 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Term Specific Information

The unit coordinator for Musculoskeletal Ultrasound (Lower Body) in Term 2, 2018 is Erika Gosney. The preferred method of contact is via email: e.gosney@cqu.edu.au; alternatively my phone number is 03 9616 0520.

Your study of Musculoskeletal Ultrasound (Lower Body) will build upon your previous anatomical and ultrasound knowledge of the lower body and help you apply this clinically.

Access to the internet is required to undertake this unit, as unit materials, tutorials and updates will be provided via Moodle, email and Zoom. It is important that you access your CQU emails regularly as important information including any updates will be sent via email. The prescribed text and additional readings will be used to supplement lecture content with an e-book copy of this text being available via CQU library.

Live tutorials are scheduled throughout the term which will be undertaken via Zoom. Times for these tutorials will be in Australian Eastern Standard Time (AEST) with the initial Zoom collaborate session scheduled for the Monday of week 1 at 6 pm (AEST). Further Zoom collaborate sessions will be based upon consultation and determined during the initial Zoom collaborate session. It is important that you attend the Zoom tutorial sessions as a way of deepening your understanding of the unit material and support your success in this course. As a suggestion, students should spend 12.5 hours of study per week in each 6 credit unit course.

The residential school will be one day with the date and location to be determined during the first Zoom tutorial (6 pm Monday 9th July 2018) with attendance being compulsory.

As a reminder the on-line test is only open for a limited time and you will need to sit the test at that time so please schedule your time accordingly.

Assessment Tasks

1 Online Test

Assessment Type

Online Test

Task Description

Every health professional needs to possess a body of knowledge that is relevant to their scope of practice whereby the fundamentals are required to be understood which you will build upon clinically. To demonstrate your understanding and knowledge of this course you are required to complete an online test.

- This test will be online and accessed through the assessment tab on Moodle and will comprise questions that will require typed answers related to sonographic image interpretation and material covered in this course
- The test will be open for 90 minutes (allowing 9 minutes per question) with only ONE attempt being allowed
- Once started the test cannot be paused, stopped, re-started or re-taken
- Questions will be drawn from a pool of questions to allow tests to be different for each student.
- Questions will be in the form of short answer covering topics related to anatomical recognition, image critique and diagnosis.
- Image viewing questions may be included and you are required to be familiar with normal and pathological sonographic imaging of the areas discussed in this course with 2 to 4 questions related to each image
- As this test is online and open book, you will find it useful if you have produced your own notes from the lectures and tutorials and that you are familiar with the course information
- You may benefit from having a calculator available when sitting the test
- The test will be open from the Monday of Week 12 (1st October 2018) at 9 am (AEST) and will close on Friday 5th October 2018 at 9 am (AEST)
- You will need to allocate a 90 minute period throughout the time the test is open in order to complete the test. Please note: You MUST start the test before 7:30 am (AEST) on Friday 5th October 2018 as the test will automatically close at 9 am (AEST) Friday 5th October 2018.

This assessment is to be undertaken as an individual. As with all other university examinations, colluding with other students on non-group work tasks is considered academic misconduct and may lead to action being taken by the Deputy Dean of Learning and Teaching.

Assessment Due Date

Week 12 Friday (5 Oct 2018) 9:00 am AEST

The test will be open from Monday of week 12 at 9 am (AEST) and will close on Friday of week 12 at 9 am (AEST). The on-line test will be automatically uploaded at the completion of the test or once the time limit is reached, whichever occurs first.

Return Date to Students

Review/Exam Week Friday (12 Oct 2018)

Results will be available in the course Moodle site with feedback.

Weighting

Pass/Fail

Minimum mark or grade

While this is a pass/fail assessment a minimum standard of 50% of the available marks is required in order to pass the unit.

Assessment Criteria

You must provide short to medium length typed responses to a series of online questions.

Image viewing questions may be included and you are required to be familiar with both normal and pathological sonographic imaging.

The test will comprise 10 questions with each question worth 10 marks (giving a maximum of 100 marks available)

Responses will be assessed according to:

- use of appropriate terminology and descriptors as well as grammar, spelling, relevance of response and competence in addressing all elements of the question
- the student's ability to appropriately interpret sonographic images/ graphs/ tables and then to succinctly compose an appropriate response based on their learning from the unit.

No referencing style is required in the online test.

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

Test will be online, accessed through the assessment tab on Moodle and will comprise 10 questions requiring answers. Test will be open for 90 minutes and once started cannot be paused or retaken. Submission will need uploaded when the time limit is reached or once all questions have been answered.

Learning Outcomes Assessed

- Describe anatomy, biomechanics and pathophysiology specific to the musculoskeletal system of the lower body
- Differentiate normal from abnormal ultrasound appearance of the musculoskeletal system of the lower body
- Interpret ultrasound images to provide a differential diagnosis, including reference to safety and the diagnostic limitations of ultrasound
- Recommend appropriate management decisions based on the clinical situation, clinical knowledge and ultrasound findings.

Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility
- Leadership

2 Residential School Assessment Task

Assessment Type

Written Assessment

Task Description

Within your scope of practice as a health practitioner, you will apply knowledge and skills learnt in this unit to your clinical decision making processes. In this assessment, you start this process by recording and critiquing your own and others images.

In every health professional needs to possess a body of knowledge that is relevant to their scope of practice whereby the fundamentals are required to be understood which you will build upon clinically. This task will apply your knowledge with live scanning and image interpretation which you will be undertaking in your future clinical role. You will record and critique these images along with images supplied by the lecturer.

In order to successfully complete this unit, attendance is compulsory at the residential school. The residential school will be one day in duration which is compulsory, the date and location to be determined during the first Zoom tutorial (6 pm Monday 9th July 2018). The tasks you will perform at the residential school will provide an opportunity for you to develop your knowledge of machine instrumentation and controls under the guidance of your tutor. You will also have the opportunity to begin the development of motor skills necessary for the successful generation of sonographic images of the musculoskeletal system including the use of dynamic assessment techniques.

During the residential school you are required to generate and annotate four images specifically related to the course content.

These four images will be:

- longitudinal anterior adult hip joint
- longitudinal joint line medial knee
- longitudinal anterior talo-navicular ligament and,
- longitudinal second plantar plate.

- With each image you are required to clearly annotate the anatomical structures and a description of the imaging plane as specified on the marking Rubric found on the unit Moodle site in week one.
- Images will then be saved onto your USB portable storage device.
- The images you generate and label in the residential school combined with the three images provided by the lecturer in week one of the unit Moodle site will need to be converted into a .pdf file to form the basis of your assessment.

Assessment Due Date

Week 10 Friday (21 Sept 2018) 10:00 am AEST

Return Date to Students

Review/Exam Week Monday (8 Oct 2018)

Results will be available in the unit Moodle site with feedback.

Weighting

Pass/Fail

Minimum mark or grade

This is a pass/ fail assessment with a minimum requirement of obtaining at least 50% of the available marks to the pass this course.

Assessment Criteria

The residential school assessment task is designed to examine your ability to correctly interpret sonographic anatomy and critically assess the images you generate with respect to equipment settings and anatomy displayed.

You will also be required to critically assess the image quality of your and the lecturers images with respect to image:

- Depth
- Gain - both overall and focally
- Focal zone position
- Image plane accuracy
- Image accuracy
- Anatomical accuracy
- Image preset appropriate
- Ultrasound probe appropriate.

Referencing Style

- [Vancouver](#)

Submission

Online

Learning Outcomes Assessed

- Apply safe ultrasound techniques to generate and optimise diagnostic images of the musculoskeletal system of the lower body
- Interpret ultrasound images to provide a differential diagnosis, including reference to safety and the diagnostic limitations of ultrasound

Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Self-management
- Ethical and Professional Responsibility

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