



MEDS13007 Musculoskeletal Sonography

Term 1 - 2018

Profile information current as at 10/04/2024 10:40 pm

All details in this unit profile for MEDS13007 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 introduces you to musculoskeletal ultrasound. In the unit you will acquire knowledge of the anatomy, pathophysiology, sonographic appearance, scanning protocols and techniques relevant to the musculoskeletal system. You will demonstrate problem solving strategies to formulate differential diagnoses and produce a sonographic report. You will plan for the provision of safe and ethical patient care.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Prerequisites: MEDS12001 Physics of Ultrasound AND MEDS12003 Superficial Structures in Ultrasound AND MEDS12004 Sonographic Skills Development 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 1 - 2018

- Brisbane
- Mackay
- Melbourne
- Sydney

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. **Written Assessment**

Weighting: 40%

2. **Practical Assessment**

Weighting: Pass/Fail

3. **Examination**

Weighting: 60%

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 teaching staff self-evaluation.

Feedback

No hands-on scanning component included in the unit.

Recommendation

Include a hands-on scanning component in the unit.

Feedback from Student feedback

Feedback

Assignment expectations not clearly explained.

Recommendation

Week one Zoom collaborate will provide an overview of assignment expectations. Examples of appropriate assignments supplied on Moodle site.

Unit Learning Outcomes

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

1. Describe musculoskeletal anatomy and body mechanics.
2. Differentiate the variance of normal and abnormal sonographic appearances of the musculoskeletal system.
3. Perform sonographic techniques and protocols appropriate to musculoskeletal ultrasound image generation.
4. Analyse clinical scenarios to provide a differential diagnosis and produce a sonographic report.
5. Formulate strategies for the provision of safe and ethical patient care.

The learning outcomes for this unit have been linked to:

ASAR Required Graduate Competency Outcomes for General Sonography Accreditation Standards 1.2. 1,2,3,4, 5 and 9

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 - Written Assessment - 40%	•	•	•	•	•
2 - Examination - 60%	•	•	•	•	•
3 - Practical Assessment - 0%			•		•

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 - Written Assessment - 40%	•	•	•	•		•	•			
2 - Examination - 60%	•	•	•	•						
3 - Practical Assessment - 0%	•	•	•		•			•		

Textbooks and Resources

Textbooks

MEDS13007

Prescribed

Fundamentals of Musculoskeletal Ultrasound

Edition: 3rd (2017)

Authors: Jon A Jacobson

Elsevier

Atlanta , Georgia , United States

ISBN: 9780323445252

Binding: Paperback

Additional Textbook Information

Please note for the 2018 delivery of this unit the prescribed text will be the newly released 3rd edition of Jacobson - Fundamentals of Musculoskeletal Ultrasound. While the 2nd edition will be suitable please be aware, if purchasing a second hand copy, that chapters 1 and 2 of the 2nd edition are online only with the access code only being able to be activated by one person.

This book can be purchased through the CQUniversity Bookshop and is available as an eBook.

[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: [Vancouver](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Brendan Goode Unit Coordinator

b.goode@cqu.edu.au

Schedule

Week 1 - 05 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Basics of Musculoskeletal (MSK) Ultrasound.	Chapter 1 of prescribed text.	Zoom collaborate Thursday 11:30 am Qld time, 12:30 pm NSW and Vic time for weeks one to four. After which 11:30 am all states due to end of daylight savings in NSW and Vic. Lab induction to be held on each campus Monday the 5th of March.

Week 2 - 12 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Common Pathologies.	Chapter 2 of prescribed text.	Zoom collaborate Thursday 11:30 am Qld time, 12:30 pm NSW and Vic time for weeks one to four. After which 11:30 am all states due to end of daylight savings in NSW and Vic.
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Week 3 - 19 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Shoulder.	Chapter 3 of prescribed text.	Zoom collaborate Thursday 11:30 am Qld time, 12:30 pm NSW and Vic time for weeks one to four. After which 11:30 am all states due to end of daylight savings in NSW and Vic.

Week 4 - 26 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Elbow.	Chapter 4 of prescribed text.	Zoom collaborate Thursday 11:30 am Qld time, 12:30 pm NSW and Vic time for weeks one to four. After which 11:30 am all states due to end of daylight savings in NSW and Vic. Residential school practical assessment Monday 26th March. In Lab Practical Assessment Due: Week 4 Monday (26 Mar 2018) 1:00 pm AEST

Week 5 - 02 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Wrist Part One	Chapter 5 of prescribed text.	Zoom collaborate Thursday 11:30 am all states.

Vacation Week - 09 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Week 6 - 16 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Wrist Part Two.	Chapter 5 of prescribed text.	Zoom collaborate Thursday 11:30 am all states.

Week 7 - 23 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Ankle.	Chapter 8 of prescribed text.	Zoom collaborate Thursday 11:30 am all states. Assignment due Tuesday 24th April 1:00 pm. Written Assessment Due: Week 7 Tuesday (24 Apr 2018) 1:00 pm AEST

Week 8 - 30 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Knee.	Chapter 7 of prescribed text.	Zoom collaborate Thursday 11:30 am all states. Residential school Monday 30th April. Second attempt at practical assessment due if initial assessment unsuccessful in week 4.

Week 9 - 07 May 2018

Module/Topic	Chapter	Events and Submissions/Topic
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The Hip and Thigh.	Chapter 6 of prescribed text.	Zoom collaborate Thursday 11:30 am all states.
Week 10 - 14 May 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Hernia Sonography.	Chapter 6 pp 276-280 of prescribed text.	Zoom collaborate Thursday 11:30 am all states.
Week 11 - 21 May 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Interventional Techniques.	Chapter 9 of prescribed text.	Zoom collaborate Thursday 11:30 am all states.
Week 12 - 28 May 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Revision week.		Zoom collaborate Thursday 11:30 am all states.
Review/Exam Week - 04 Jun 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Exam Week - 11 Jun 2018		
Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Welcome to MEDS13007 Musculoskeletal Ultrasound my name is Brendan Goode and I will be the unit coordinator. For those of you who don't know I am based on the Melbourne campus, email b.goode@cqu.edu.au. Each week the Moodle site will be devoted to a different aspect of this specialty sonographic field as outlined in the schedule section of the e-profile. In addition to the readings, lectures and revision questions it is expected that you will attend the weekly Zoom collaborate sessions with the times outlined on the Moodle site and in this e-profile. While Zoom tutorial sessions will be recorded, these recordings are not a substitute for active participation as I find students develop a deeper understanding of the unit content and what is required to effectively interact with other health professionals in the medical field if they attend Zoom sessions rather than watching recordings.

In order to pass this unit, students must attain at least 50% overall, and meet the minimum mark specified for each assessment.

As part of this unit there are three assessment tasks; 1/ a practical assessment during Residential School Monday of week 4, 2/ a written assessment due Tuesday of week 7 and 3/ an examination held during the examination period at the end of term 1. Please note further information related to the practical and written assessment is available on the Moodle site, during the week 1 Zoom session and this unit e-Profile.

Students are reminded that it is a requirement of the university that they attend a lab induction day on Monday the 5th of March held at their local campus in order to participate in the compulsory Residential School component of this unit. This is the same lab induction you are required to attend for the scanning skills two unit and must be attended in order to participate in any lab based components of the program. This lab induction must be attended each year, having attended a lab induction on previous years will not exclude you from having to attend a lab induction this year. Please check with your local campus what time the lab induction will be held.

Assessment Tasks

1 Written Assessment

Assessment Type

Written Assessment

Task Description

In order to successfully complete this unit, submission of a written assessment is required. This assessment task is due Tuesday in week 7 at 1:00 pm and will involve you answering questions related to **either** shoulder or elbow sonography.

Both the shoulder and elbow assessment tasks will require you to answer four questions which relate to the practical application of sonography in the region you have chosen. Questions will assess your understanding of image interpretation, scan protocol, spatial understanding and the clinical applications of sonography. Please note when describing images sonographic terminology must be used. For example terms such as 'white' or 'black' should be replaced with 'hyperechoic' and 'anechoic'. Image descriptions should be clear and concise bearing in mind that you are trying to communicate an abnormal finding succinctly to another health care professional. The assignment word limit is 1500 +/- 10% with marks being allocated for remaining within the word limit, references are not included in word count.

Further information related to this assessment can be found on the Moodle site, with an outline of the assessment being provided during the Week 1 Zoom Collaborate session on Thursday.

Assessment Due Date

Week 7 Tuesday (24 Apr 2018) 1:00 pm AEST

Submit via Turnitin.

Return Date to Students

Week 9 Tuesday (8 May 2018)

Posted in Gradebook.

Weighting

40%

Minimum mark or grade

A minimum mark of 50 out of 100 is required in order to pass this assessment.

Assessment Criteria

The written assessment task is designed to examine your ability related to various aspects of musculoskeletal sonography. From image interpretation to communication and the clinical application of sonography in the region you have selected. You will be required to critically assess the provided sonographic images in order to arrive at a diagnosis and then communicate this diagnosis in a succinct fashion utilizing sonographic terminology. The assessment task will be comprised of four questions with marks being awarded for each question as outlined below;

a/ Describe, using sonographic terminology, what abnormalities of the shoulder/elbow are being depicted and provide a diagnosis justifying your decision. 25 marks

b/ Indicate five sonographic views which are included as part of a routine shoulder/elbow examination. 5 marks

c/ For the above views you have specified, include images depicting; ultrasound probe placement on the patient and the anatomy being displayed on each image. Please note the anatomy you have mentioned must be accurately and clearly indicated on the images. 20 marks

d/ Describe 5 separate shoulder/elbow abnormalities which can be assessed accurately utilizing ultrasound. Please note each abnormality indicated must include at least 3 peer reviewed references supporting the assessment of the abnormality you have specified. Please note different references must be used for each of the 5 abnormalities specified. 30 marks.

Marks will be awarded for correct referencing and assignment mechanics such as spelling and grammar.

An assignment rubric is available in the week 1 Moodle site with further information being provided during the week one Zoom collaborate session on Thursday.

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

Online via unit Moodle site.

Learning Outcomes Assessed

- Describe musculoskeletal anatomy and body mechanics.
- Differentiate the variance of normal and abnormal sonographic appearances of the musculoskeletal system.
- Perform sonographic techniques and protocols appropriate to musculoskeletal ultrasound image generation.
- Analyse clinical scenarios to provide a differential diagnosis and produce a sonographic report.
- Formulate strategies for the provision of safe and ethical patient care.

Graduate Attributes

- Communication
- Problem Solving

- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence

2 In Lab Practical Assessment

Assessment Type

Practical Assessment

Task Description

In the scanning labs, you must, under the supervision of your tutor, produce a true longitudinal image of the supraspinatus tendon. This image will form the basis of your assessment with marks allocated based upon the diagnostic quality of your image taking into consideration; imaging plane, image depth, image gain and focal zone position. Furthermore, using the image you have acquired, you must correctly indicate the subacromial/subdeltoid bursa and the acromion to your supervising tutor. You must save your image to the ultrasound unit, annotating the image with your name, student number and the date of assessment.

Assessment Due Date

Week 4 Monday (26 Mar 2018) 1:00 pm AEST

During the week 4 residential school day.

Return Date to Students

Week 5 Monday (2 Apr 2018)

Results posted in gradebook after moderation of the marks.

Weighting

Pass/Fail

Minimum mark or grade

A minimum mark of 5 out of 10 is required in order to pass this assessment. Any student who does not meet the minimum requirement in week 4 will be eligible for one further attempt in week 8.

Assessment Criteria

This is a non-graded (pass/fail) assessment with this practical assessment task being designed to examine your ability to correctly interpret sonographic anatomy and critically assess the image you have generated with respect to equipment settings and anatomy displayed. Your image and your anatomical identification will be assessed on the following criteria:

True longitudinal image of the supraspinatus tendon

Image depth

Correct identification of required structures to supervising tutor.

Image gain

Focal zone adjustment

A detailed marking rubric is available on week one of the Moodle site with further information related to the assessment outlined in the week one Zoom collaborate.

Referencing Style

- [Vancouver](#)

Submission

Offline

Submission Instructions

Assessed by your supervising tutor during the week 4 residential school held in the sonography scanning labs by the supervising tutors.

Learning Outcomes Assessed

- Perform sonographic techniques and protocols appropriate to musculoskeletal ultrasound image generation.
- Formulate strategies for the provision of safe and ethical patient care.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Team Work
- Ethical practice

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

60%

Length

120 minutes

Minimum mark or grade

50

Exam Conditions

Closed Book.

Materials

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

Academic Integrity Statement

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

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

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

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

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

What is a breach of academic integrity?

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

Why is academic integrity important?

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

Where can I get assistance?

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

What can you do to act with integrity?

**Be Honest**

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

**Seek Help**

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

**Produce Original Work**

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