



# MEDS20013 *Diagnostic Ultrasound for Point of Care (PoCUS)*

## Term 3 - 2023

Profile information current as at 23/04/2024 08:15 pm

All details in this unit profile for MEDS20013 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 aims to develop your knowledge and understanding of point of care ultrasound (PoCUS) to provide information to assist patient management. To enrol in this unit you must be a graduate of a science or health / medical course. To successfully complete all assessments, you must be able to undertake ultrasound scans in a clinical environment with appropriate supervision. You will use PoCUS to identify anatomical structures and rule out pathology. You will learn transducer manipulation techniques and skills to optimise ultrasound images for documentation.

### 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-requisite: 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 3 - 2023

- Mixed Mode

### 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. **Written Assessment**

Weighting: Pass/Fail

#### 2. **Portfolio**

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](#).

## Unit Learning Outcomes

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

1. Evaluate the benefits and limitations of using medical ultrasound for diagnosis in emergency or point of care (PoC) medicine
2. Apply safe medical ultrasound techniques to generate optimised diagnostic images of regions of interest (ROI)
3. Integrate diagnostic medical images into the clinical decision making process and patient management.

**The International Federation for Emergency Medicine (IFEM) Point of care curriculum guidelines**

3.3 Demonstration of how to generate and optimise an image- 2 and 3

3.4 Demonstration of good practice in point-of-care ultrasound- 1.2 and 3



## Textbooks and Resources

### Textbooks

MEDS20013

#### Supplementary

##### **Emergency Point of Care Ultrasound**

Edition: 2nd (2017)

Authors: Melniker, Lawrence A., Connolly, James A.

Wiley Blackwell

Chichester, England

ISBN: 9781119072874

Binding: eBook

MEDS20013

#### Supplementary

##### **Point of Care Ultrasound Made Easy**

Edition: 1st (2020)

Authors: John McCafferty, James M. Forsyth

Taylor & Francis Group

Oxfordshire, England

ISBN: 9781000039511

Binding: eBook

### 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

**Kathleen Sweeney** Unit Coordinator

[k.sweeney@cqu.edu.au](mailto:k.sweeney@cqu.edu.au)

**Michelle Fenech** Unit Coordinator

[m.fenech@cqu.edu.au](mailto:m.fenech@cqu.edu.au)

## Schedule

### **Week 1: Introduction to POCUS and the FAST scan - 06 Nov 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to POCUS and the FAST scan.	Lectures and notes provided	

### **Week 2: Ultrasound of the lungs and the E-FAST scan - 13 Nov 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Ultrasound of the lungs and the E-FAST scan.	Lectures and notes provided	

**Week 3: Ultrasound of the abdominal aorta and IVC - 20 Nov 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Ultrasound of the abdominal aorta and IVC.	Lectures and notes provided	

**Week 4: Deep vein thrombosis (DVT) - 27 Nov 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Deep vein thrombosis (DVT).	Lectures and notes provided	

**Vacation Week - 04 Dec 2023**

Module/Topic	Chapter	Events and Submissions/Topic
No new content.		

**Week 5: Ultrasound in shock (Rush protocol) - 11 Dec 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Ultrasound in shock (Rush protocol).	Lectures and notes provided	

**Week 6: Ultrasound of the scrotum and testes - 18 Dec 2023**

Module/Topic	Chapter	Events and Submissions/Topic
Ultrasound of the scrotum and testes.	Lectures and notes provided	<b>Residential school</b> Tuesday 9am-3pm AEST Sydney CQU campus. <b>Compulsory</b> online induction required to be completed before attending res school.

**Vacation Week - 25 Dec 2023**

Module/Topic	Chapter	Events and Submissions/Topic
No new content.		

**Week 7: Ocular ultrasound - 01 Jan 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Ocular ultrasound.	Lectures and notes provided	

**Week 8: Abdominal ultrasound: Kidneys and bladder - 08 Jan 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal ultrasound: Kidneys and bladder.	Lectures and notes provided	<b>Assessment 1.</b> (e-poster) Due Wednesday 4pm AEST <b>Written Assessment</b> Due: Week 8 Wednesday (10 Jan 2024) 4:00 pm AEST

**Week 9: Abdominal ultrasound: Liver and gallbladder - 15 Jan 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal ultrasound: Liver and gallbladder.	Lectures and notes provided	

**Week 10: Abdominal ultrasound: Spleen and pancreas - 22 Jan 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal ultrasound: Spleen and pancreas.	Lectures and notes provided	

**Week 11: Basic soft tissue ultrasound - 29 Jan 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Basic soft tissue ultrasound.	Lectures and notes provided	

**Week 12: Infection control and relevance to sonography - 05 Feb 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Infection control and relevance to sonography.	Lectures and notes provided	

## Exam Week - 12 Feb 2024

Module/Topic	Chapter	Events and Submissions/Topic
Revision.		<b>Assessment 2.</b> portfolio (4 procedural cases). Due Wednesday 4pm AEST <b>Portfolio</b> Due: Exam Week Friday (16 Feb 2024) 4:00 pm AEST

## Term Specific Information

Your unit coordinator for this term is Kathleen Sweeney. Kathleen is based in Sydney and works with CQU on Tuesdays, Wednesdays and Fridays. The most efficient way to contact her is via email: k.sweeney@cqu.edu.au  
Zoom tutorials will be held throughout the term. They are not compulsory but are recommended. They give an opportunity for interaction and discussion with the tutor and other students. The tutorials will be recorded for later viewing (if there are live attendees). Tutorial times will be confirmed at the beginning of the term.

## Assessment Tasks

### 1 Written Assessment

#### Assessment Type

Written Assessment

#### Task Description

In this assessment task, you will develop an educational **e-poster** outlining the use of a specific component of point of care sonography.

The poster is limited to eight (8) slides excluding the title and reference slides. An abstract is required to accompany the e-poster but is not included within the poster.

The e-poster should be written at a level suitable for presentation at a conference to your professional peers.

The poster will consist of:

Slide 1: Title slide - containing the title of the presentation, your name and qualifications.

8 content slides: Each content slide is required to have a clear heading. The e-poster must be organized cohesively and coherently, and use images to help reader interpretation. You will need to research, critically analyse and synthesize current medical literature from peer-reviewed sources to assist you to complete this e-poster. A clear take-home message should be provided at the conclusion of your poster.

Last slide: References.

Slides are required to be submitted in 'landscape' format.

#### Assessment Due Date

Week 8 Wednesday (10 Jan 2024) 4:00 pm AEST  
via Moodle

#### Return Date to Students

Week 10 Friday (26 Jan 2024)  
via Moodle

#### Weighting

Pass/Fail

#### Minimum mark or grade

50%

#### Assessment Criteria

The e-poster should contain relevant, organized, logical and coherent content with a clear and concise message relevant to your selected audience.

The purpose of the poster should be clear and relevant to the field of point of care ultrasound.

In-text references and the reference list must be accurate, complete and high quality and appropriate sources utilized to support your statements.

A marking rubric is available on Moodle.

#### Referencing Style

- [Vancouver](#)

### **Submission**

Online

### **Submission Instructions**

Submit via the Assessment tab on MEDS20013 Moodle page.

### **Learning Outcomes Assessed**

- Evaluate the benefits and limitations of using medical ultrasound for diagnosis in emergency or point of care (PoC) medicine
- Apply safe medical ultrasound techniques to generate optimised diagnostic images of regions of interest (ROI)
- Integrate diagnostic medical images into the clinical decision making process and patient management.

### **Graduate Attributes**

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

## **2 Portfolio**

### **Assessment Type**

Portfolio

### **Task Description**

You are required to develop and submit a portfolio consisting of **5 POCUS ultrasound examinations** performed by yourself. This will assist you to develop proficiency in performing point of care ultrasound, including defining an appropriate indication for the sonographic imaging, imaging obtained, image optimization performed, recognition of anatomy and any pathology if demonstrated appropriate documentation of the results of the sonographic examination, and integration of findings into patient management.

A portfolio of five (5) sonographic examinations that you have conducted or observed in clinical practice is required to be submitted.

The portfolio will consist of:

1. Introduction to five cases
2. Outline of each of the five cases including:
  - Clinical indications for the examination
  - Description of the sonographic protocol used, and an outline of the ultrasound imaging obtained (real-time scanning and stored static images and cine clips for documentation). Static images will be labelled to identify structures for educational purposes. The acquisition plane of the image must be described. All sonographic imaging must be de-identified.
  - Justification for the extent of sonographic imaging performed and what anatomy and pathology (if present) was demonstrated
  - Critique of the imaging
  - Report of the sonographic findings using correct sonographic terminology
  - Patient management post sonographic imaging
  - Reflection on what went well, how the sonographic imaging may have been improved, what you could have done to improve the quality of the imaging produced (if needed) and what you may do differently in future studies to aid a diagnosis

3. Summary and learning points from the portfolio

4. References

**Assessment Due Date**

Exam Week Friday (16 Feb 2024) 4:00 pm AEST  
via Moodle

**Return Date to Students**

Exam Week Friday (16 Feb 2024)  
via Moodle

**Weighting**

Pass/Fail

**Minimum mark or grade**

50%

**Assessment Criteria**

Your portfolio will be assessed on:

- \* Academic writing including the layout and flow from beginning to end, succinct and relevant descriptions of the patient history, sonographic imaging and findings, critique of imaging performed and identification of areas for improvement if required and impact of imaging of patient management
- \* Use of evidence based information to support statements used
- \* Inclusion of images which are de-identified and labelled. All images must be referred to in-text and figure numbers provided
- \* Insight must be demonstrated with self-reflection and identification of learning points to enhance future practice.

**Referencing Style**

- [Vancouver](#)

**Submission**

Online

**Learning Outcomes Assessed**

- Evaluate the benefits and limitations of using medical ultrasound for diagnosis in emergency or point of care (PoC) medicine
- Apply safe medical ultrasound techniques to generate optimised diagnostic images of regions of interest (ROI)
- Integrate diagnostic medical images into the clinical decision making process and patient management.

**Graduate Attributes**

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



## 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