



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

## Term 1 - 2019

Profile information current as at 18/05/2024 11:10 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 1 - 2019

- 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

## 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
1 - Written Assessment - 0%	•	•	•
2 - Portfolio - 0%	•	•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
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 - Written Assessment - 0%	○	○	○		○	○		
2 - Portfolio - 0%	○	○	○	○	○	○	○	

## Textbooks and Resources

### Textbooks

MEDS20013

#### Prescribed

#### Manual of Emergency and Critical Care Ultrasound

Edition: 2nd (2011)

Authors: Vicki E. Noble & Bret P. Nelson

Cambridge University Press

New York, New York, United States of America

ISBN: 978-0-521-17091-8

Binding: eBook

#### Additional Textbook Information

Copies are available to purchase from the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

### IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- 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

**Robyn Boman** Unit Coordinator

[r.boman@cqu.edu.au](mailto:r.boman@cqu.edu.au)

## Schedule

### Week 1 - Infection Control - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Infection Control</b>	Readings and lectures posted on Moodle. (You may have already completed this test if you have taken MEDS20015. If you have completed this test you are still required to take this test for this unit (MEDS20013))	<b>Zoom Tutorial: Tuesday 19:00 AEST</b> (for students in other time zones please convert this to your local time) Infection Control Quiz (Compulsory)

### Week 2 - Abdominal Aortic Aneurysm - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
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<b>Abdominal Aortic Aneurysm</b>	Readings and lectures on the Moodle <b>Textbook Reading AAA</b> Chapter 5 of the textbook: Noble V & E. & Nelson B. Manual of Emergency and Critical Care Ultrasound 2nd Ed. 2011.
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### Week 3 - FAST - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Focused Assessment with Sonography for Trauma (FAST)</b>	Textbook Reading - FAST and Patient in Shock FAST: Chapter 2 of the textbook. Patient in Shock: Chapter 14 of the textbook.	<b>Zoom Tutorial: Tuesday 19:00 AEST</b> (for students in other time zones please convert this to your local time)

### Week 4 - DVT - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Deep Vein Thrombosis (DVT)</b>	Readings and lectures on the Moodle <b>Textbook Reading - DVT.</b> Chapter 8 of the textbook	Residential school.  Saturday 6th and Sunday 7th April 2019  09:00 -15:30  <i>CQUniversity Brisbane campus</i>

### Week 5 - Renal - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Kidneys and Bladder</b>  <b>Compulsory Online Induction required to be completed prior to Residential School.</b>	Readings and lectures on the Moodle <b>Textbook Reading - Renal and Bladder.</b> Chapter 6 of the textbook	

### Break Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Take a break.</b>		

### Week 6 - Gallbladder - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Gallbladder</b>	Readings and lectures on the Moodle <b>Textbook Reading - Gallbladder Ultrasound.</b> Chapter 7 of the textbook	<b>Zoom Tutorial: Tuesday 19:00 AEST</b> (for students in other time zones please convert this to your local time)

### Week 7 - Early Obstetrics - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>First Trimester Ultrasound</b>	Readings and lectures on the Moodle <b>Textbook Reading - First Trimester Ultrasound.</b> Chapter 4 of the textbook	

### Week 8 - Lung - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Lung</b>	Readings and lectures on the Moodle <b>Textbook Reading Lung Ultrasound.</b> Chapter 4 of the textbook	<b>Zoom Tutorial: Tuesday 19:00 AEST</b> (for students in other time zones please convert this to your local time)

### Week 9 - Eye - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
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**Eye** Readings and lectures on the Moodle  
**Textbook Reading Eye Ultrasound.**  
 Chapter 10 of the textbook

#### Week 10 - Musculoskeletal - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Musculoskeletal</b>	Readings and lectures on the Moodle <b>Textbook Reading - MSK Ultrasound.</b> Chapter 11 of the textbook	<b>Zoom Tutorial: Tuesday 19:00 AEST</b> (for students in other time zones please convert this to your local time)

#### Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Residential School</b>	Review of learnt skills.	<b>Residential school.</b>  <b>Saturday 1st June and Sunday 2nd June 2019</b>  <b>10:00 -15:30</b>  <b>CQUniversity Brisbane campus</b>

#### Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
<b>Complete the portfolio</b>		<b>Practical Competency Assessments</b> Due: Week 12 Friday (7 June 2019) 5:00 pm AEST <b>Portfolio of clinical cases.</b> Due: Week 12 Friday (7 June 2019) 5:00 pm AEST

#### Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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#### Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
		Portfolio and assessments results returned by Friday 17:00

## Term Specific Information

One (1) compulsory infection control quiz.  
 Four (4) summative competency assessments.  
 Portfolio of four (12) clinical cases.  
 There is a compulsory online induction required to be completed prior to attending campus.  
 There are two compulsory residential schools. Weeks 4 and 11.

## Assessment Tasks

### 1 Practical Competency Assessments

#### Assessment Type

Written Assessment

#### Task Description

In your professional clinical life you come across difficult decisions making. Ultrasound is a modality that aids your clinical decision making as it is readily available, cheap, accessible and portable, with good diagnostic accuracy. However, it is operator dependent and a high level of training to use this technology is of paramount importance.

Practical competency assessments will be performed during week 1 (infection control) and the residential practical skills

labs in Weeks 11.

You will have the opportunity to receive formative feedback and attempt summative assessments at the residential labs.

There are two competency assessments:

### **Assessment 1.**

There is one (1) infection control online quiz. The quiz will be open in Week 1 Monday at 09:00 and close on Week 1 Friday 2019 at 17:00.

The questions are a mixture of short answer, matching, drag and drop, and true/false.

Learners must obtain 100% marks in this quiz to PASS this assessment.

Multiple attempts are allowed. A Fail grade in this assessment will result in a Fail grade for the unit.

### **Assessment 2.**

You will attempt the following four regions of interest. You must PASS these regions of interest to acquire COMPETENCY to meet the minimum requirements to pass this assessment.

- AAA
- DVT
- FAST
- Lung

The assessment criteria and standards for the attainment of competency are outlined in documents available on the unit Moodle site and will be demonstrated and practiced during the first residential school.

Practical assessment of competency skills will take place at the second compulsory residential school. These residential school skills labs will be delivered on the Brisbane campus in weeks 5 and 11.

Please note the following excerpt from the University Assessment of Coursework Procedures:

'...students who fail a single assessment task in a pass-fail unit, or who fail a pass-fail component of a graded unit will be deemed to have failed that unit'

([https://staffnet.cqu.edu.au/tools-resources/policies/Documents/Assessment Policy and Procedure \(Higher Education Coursework\) \(current version - from Term 1, 2018\).pdf](https://staffnet.cqu.edu.au/tools-resources/policies/Documents/Assessment Policy and Procedure (Higher Education Coursework) (current version - from Term 1, 2018).pdf))

Non-attendance will need to be supported by a Medical Certificate or equivalent.

A Pass/ Fail grade will be given.

**A Fail grade in this assessment will result in a Fail grade for the unit.**

### **Assessment Due Date**

Week 12 Friday (7 June 2019) 5:00 pm AEST

Completed during second residential school

### **Return Date to Students**

Exam Week Friday (21 June 2019)

Immediate written and verbal feedback will be provided.

### **Weighting**

Pass/Fail

### **Minimum mark or grade**

Pass/Fail

### **Assessment Criteria**

**For the online quiz of infection control module**, the answers will be tabulated as correct or incorrect by computer system.

A PASS grade for the summative assessments of any region will be based on competency criteria developed at CQU by experienced clinical sonographers.

Detailed competency criteria documents are provided on the unit Moodle site.

### Referencing Style

- [Vancouver](#)

### Submission

Offline Online

### Submission Instructions

Development of competency documents will be completed during clinical assessment performed on campus during second residential school.

### 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 of clinical cases.

### Assessment Type

Portfolio

### Task Description

Ultrasound is a practical health profession, hence practical experience is vital to being able to develop the skills required to acquire and optimise an image. The clinical portfolio serves as a record of the experience that students have obtained during the unit.

You will collect twelve (12) sets of documentation for an ultrasound study either done by yourself in clinical practice or acquired during the residential practical skills labs.

Each set will contain:

- Ultrasound images
- Formal report
- Self evaluation of performance
- Self reflections must be informed by the literature
- Each set of documents should be created in a unique folder on a USB. (Format jpeg)
- NO video files of any sort should be uploaded.

### Assessment Due Date

Week 12 Friday (7 June 2019) 5:00 pm AEST

### Return Date to Students

Exam Week Friday (21 June 2019)

### Weighting

Pass/Fail

### Minimum mark or grade

Pass/Fail

### Assessment Criteria

By the second residential school, each student will have a minimum of twelve (12) cases in their portfolio. This will include a mix of cases to ensure exposure to a range of studies and enhance understanding of role of ultrasound in point of care patient management and its limitations. Each case must be reviewed and signed by your clinical supervisor. Students will bring their clinical portfolio with them to the second residential school for review. This will include a hard copy of the portfolio template duly filled in and signed by the student and the supervisor, and a USB thumb drive containing images obtained in each study. The USB thumb drive will be retained for marking. Please make sure that patient privacy is adhered to by de-identifying all images.

Each case should address the following:

- A brief demographic of patient
- Clinical context
- Description of the study performed and findings
- Most appropriate images
- Self reflection

### **Referencing Style**

- [Vancouver](#)

### **Submission**

Offline Online

### **Submission Instructions**

Bring all the documents of the portfolio on a USB thumb drive. Submit online via the unit moodle site assessment block

### **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