



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

## Term 3 - 2019

Profile information current as at 03/05/2024 03:28 pm

All details in this unit profile for MEDS20013 have been officially approved by CQU University 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 - 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](#).

## 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 Feedback from students at residential school.

**Feedback**

Zoom tutorials.

**Recommendation**

The students enjoyed the interaction of the zoom tutorials Tutorial format will be continued due to the demands of the shift working students.

#### Feedback from Student unit evaluation.

**Feedback**

Residential schools.

**Recommendation**

Current residential school format will remain unchanged as the students find the practical aspect of the course essential for the practical aspect of the unit.

#### Feedback from Student unit evaluation.

**Feedback**

Pearl and pitfall discussions.

**Recommendation**

Students have suggested more videos of pearls and pitfalls. Consider recording an additional series of scanning videos of practical scanning tips and tricks.

## 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

#### 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

The textbook is available online to assist you in your learning.

### 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)

**Kathleen Sweeney** Unit Coordinator

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

## Schedule

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

Module/Topic	Chapter	Events and Submissions/Topic
Infection Control	Course resources online.	Infection Control Quiz (Compulsory). <ul style="list-style-type: none"><li>• To continue with this unit you must complete and pass the infection control quiz.</li></ul>

### Week 2 - Abdominal Aortic Aneurysm Ultrasound - 18 Nov 2019

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal Aortic Aneurysm (AAA) <ul style="list-style-type: none"><li>• Anatomy</li><li>• Disease process</li><li>• AAA ultrasound techniques</li></ul>	Course resources online and chapter 5 of the textbook: Noble V & E. & Nelson B. Manual of Emergency and Critical Care Ultrasound 2nd Ed. 2011.	Formative quiz. Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time)

### Week 3 - Focused Assessment Sonography for Trauma - 25 Nov 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Focused Assessment with Sonography for Trauma (FAST) <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Emergency ultrasound techniques</li> </ul>	Online lectures and reading material. Textbook Reading - <ul style="list-style-type: none"> <li>• Chapter 2.</li> <li>• Chapter 14</li> </ul>	Formative quiz. Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time)
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#### Week 4 - Deep Vein Thrombosis Ultrasound and Residential School - 02 Dec 2019

Module/Topic	Chapter	Events and Submissions/Topic
Deep Vein Thrombosis (DVT) <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Disease process</li> <li>• DVT ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading - Chapter 8.	Formative quiz. Compulsory Online Induction for your campus is required to be completed prior to Residential School. Residential school: the specific days and campus sites will be staff and student location dependent. Contact the unit coordinator for further information as soon as you enrol. If you are enrolled in MEDS20009 the residential schools will be held contiguously if possible.

#### Break Week - 09 Dec 2019

Module/Topic	Chapter	Events and Submissions/Topic
Time for a break.		

#### Week 5 - Renal Ultrasound - 16 Dec 2019

Module/Topic	Chapter	Events and Submissions/Topic
Renal Ultrasound <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Disease process</li> <li>• Renal ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading - Chapter 6	Formative quiz.

#### Week 6 - Gallbladder Ultrasound - 23 Dec 2019

Module/Topic	Chapter	Events and Submissions/Topic
Gallbladder Ultrasound <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Disease process</li> <li>• Gallbladder ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading - Chapter 7	Formative quiz. CQU campuses are closed from 25th December 2019 to 1st January 2020

#### Week 6 - Gallbladder Ultrasound continued - 30 Dec 2019

Module/Topic	Chapter	Events and Submissions/Topic
Gallbladder Ultrasound continued <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Disease process</li> <li>• Gallbladder ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading - Chapter 7	CQU campuses are closed from 25th December 2019 to 1st January 2020

#### Week 7 - First Trimester Ultrasound - 06 Jan 2020

Module/Topic	Chapter	Events and Submissions/Topic
First trimester Ultrasound <ul style="list-style-type: none"> <li>• Ultrasound recognition of first trimester</li> <li>• First trimester ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading - Chapter 4	Formative quiz.

#### Week 8 - Lung Ultrasound - 13 Jan 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lung Ultrasound <ul style="list-style-type: none"> <li>• Anatomy</li> <li>• Disease process</li> <li>• Lung ultrasound technique</li> </ul>	Online lectures and reading material. Textbook Reading: Chapter 9	Formative quiz. Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time)

#### Week 9 - Ocular Ultrasound - 20 Jan 2020

Module/Topic	Chapter	Events and Submissions/Topic

Ocular Ultrasound		Formative quiz.
• Anatomy	Online lectures and reading material.	Zoom Tutorial: Tuesday 19:00 AEST
• Disease process	Textbook Reading: Chapter 10	(for students in other time zones please convert this to your local time)
• Orbit ultrasound technique		

### Week 10 - Residential school - 27 Jan 2020

Module/Topic	Chapter	Events and Submissions/Topic
Residential school	Online lectures and preparation for residential school.	Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time) Residential school: location and dates will be aligned to our location and staff availability. Four (4) summative competency assessments during residential school.
		<b>Practical Competency Assessments</b> Due: Week 10 Friday (31 Jan 2020) 11:55 pm AEST

### Week 11 Musculoskeletal - 03 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
Musculoskeletal Ultrasound		
• Anatomy	Online lectures and reading material.	
• Trauma process	Textbook Reading - Chapter 11.	
• MSK ultrasound technique overview		

### Week 12 Portfolio due - 10 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
Portfolio		Twelve (12) clinical cases due by Friday week 12. <b>Portfolio of clinical cases.</b> Due: Week 12 Friday (14 Feb 2020) 11:55 pm AEST

### Review week - 17 Feb 2020

Module/Topic	Chapter	Events and Submissions/Topic
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### Exam week - 24 Feb 2020

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

The unit coordinators for MEDS20013 are Robyn Boman and Kathleen Sweeney. Both coordinators have extensive ultrasound knowledge.

The best way to contact Robyn is by email: r.boman@cqu.edu.au. Robyn's CQUniversity phone number is (02) 9324 5057.

The best way to contact Kathleen is by email: k.sweeney@cqu.edu.au. Kathleen's CQUniversity number is (02) 9324 5093.

Please contact us via email whenever possible.

The online zoom tutorials are an opportunity to ask questions, gain feedback and join in discussions concerning theoretical concepts and completion of assessment tasks.

Access to the internet is required to undertake this unit, as unit materials, tutorials and updates will be provided via Moodle, email and Zoom tutorials. It is important to check your student email regularly as updates about the unit will be sent from the unit coordinators via email.

## 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.

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 AEST and close on Week 1 Friday 2019 at 17:00 AEST.

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.

- Abdominal aorta ultrasound assessment
- Deep venous system of a leg ultrasound assessment
- Focused ultrasound assessment for trauma
- Lung ultrasound assessment

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.

The residential school skills labs will be delivered in weeks 4 and 10. Practical assessment of competency skills will take place at the second compulsory residential school.

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 10 Friday (31 Jan 2020) 11:55 pm AEST

The assessments will occur during the second residential school in Week 10.

#### Return Date to Students

Exam Week Friday (21 Feb 2020)

Feedback will be provided at residential school



**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 first residential school in week 4.

Each set of documents will contain:

- Ultrasound images
- Your report from ultrasound imaging and further medical imaging if available
- Self evaluation of imaging
- Self reflections which are informed by the literature
- Each set of documents should be uploaded as 12 separate word documents. (Not PDF)
- NO video files of any sort should be uploaded.

**Assessment Due Date**

Week 12 Friday (14 Feb 2020) 11:55 pm AEST

**Return Date to Students**

Exam Week Friday (21 Feb 2020)

**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 the role of ultrasound in point of care patient management and its limitations.

The clinical portfolio will include a hard copy of the portfolio template which will have to be uploaded to Moodle as twelve (12) separate files. 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
- Critique of the images
- Self reflection - what have you done well or could improve upon

**Referencing Style**

- [Vancouver](#)

**Submission**

Offline Online

**Submission Instructions**

Submit online via the unit Moodle site assessment block as twelve (12) individual word files.

**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