



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

Term 1 - 2020

Profile information current as at 03/05/2024 05:53 am

All details in this unit profile for MEDS20013 have been officially approved by CQUUniversity 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.

Corrections

Unit Profile Correction added on 30-03-20

Essential face-to-face teaching and associated assessments have been rescheduled. Please see your Moodle site for details of the changes.

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 - 2020

- 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

Paper copies are available for purchase at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

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

Michelle Fenech Unit Coordinator

m.fenech@cqu.edu.au

Schedule

Week 1 - Infection Control - 09 Mar 2020

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

Week 2 - Abdominal Aortic Aneurysm Ultrasound - 16 Mar 2020

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

Week 3 - Focused Assessment Sonography for Trauma - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

<p>Focused Assessment with Sonography for Trauma (FAST)</p> <ul style="list-style-type: none"> • Anatomy • Emergency ultrasound techniques 	<p>Online lectures and resources. Textbook Reading -</p> <ul style="list-style-type: none"> • Chapter 2. • Chapter 14 	<p>Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time). Formative Quiz.</p>
--	---	--

Week 4 - Deep Vein Thrombosis Ultrasound and Residential School (1) - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
<p>Deep Vein Thrombosis (DVT) and Residential School (1)</p> <ul style="list-style-type: none"> • Anatomy • Disease process • DVT ultrasound technical 	<p>Online lectures and resources. Textbook Reading - Chapter 8.</p>	<p>Compulsory Online Induction for your campus is a prerequisite for Residential School. Residential school (1): 4th and 5th April. Residential school location 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 or MEDS20015 the residential schools will be held contiguously if possible. Formative Quiz.</p>

Week 5 - Renal and Bladder Ultrasound - 06 Apr 2020

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

Break Week - 13 Apr 2020

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

Week 6 - Gallbladder Ultrasound - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
<p>Gallbladder Ultrasound</p> <ul style="list-style-type: none"> • Anatomy • Disease process • Gallbladder ultrasound technique 	<p>Online lectures and resources. Textbook Reading - Chapter 7</p>	<p>Formative quiz.</p>

Week 7 - First Trimester Obstetric Ultrasound - 27 Apr 2020

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

Week 8 - Lung Ultrasound - 04 May 2020

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

Week 9 - Ocular Ultrasound - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
<p>Ocular Ultrasound</p> <ul style="list-style-type: none"> • Anatomy • Disease process • Ocular ultrasound technique 	<p>Online lectures and resources. Textbook Reading: Chapter 10</p>	<p>Zoom Tutorial: Tuesday 19:00 AEST (for students in other time zones please convert this to your local time). Formative Quiz.</p>

Week 10 - Rapid Ultrasound for Shock and Hypertension (RUSH) Scan and Residential School (2) - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic

RUSH Scan
Residential school (2)

Online lectures and preparation for residential school.

Residential school (2): 23rd and 24th May.

Residential school location will be aligned to location and staff availability.

Summative scanning assessments during residential school.

Practical Competency

Assessments Due: Week 10 Friday (22 May 2020) 9:00 pm AEST

Week 11 Musculoskeletal and Soft Tissue Ultrasound - 25 May 2020

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

Week 12 Portfolio Due - 01 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
Portfolio		Twelve (12) clinical cases due by Friday 5th June 17:00 AEST. Portfolio of clinical cases. Due: Week 12 Friday (5 June 2020) 11:45 pm AEST

Review/Exam week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

Exam week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
		Portfolio returned by Friday 19th June 17:00 AEST

Term Specific Information

The unit coordinator for MEDS20013 is Robyn Boman.

Please use email whenever possible, r.boman@cqu.edu.au alternatively my CQU phone number is (02) 9324 5093.

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

Access to the internet is required to undertake this unit, as unit materials, tutorials and unit 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.

Requirements to complete this unit are:

- One (1) compulsory infection control quiz in week 1.
- Nine (9) formative quizzes.
- There is a compulsory online induction required to be completed prior to attending residential school.
- There are two (2) compulsory residential schools in Week 4 and Week 10.
- Four (4) summative competency assessments in Week 10.
- Opportunities for resits on the day will be available if your initial competency assessment in week 10 is not successful.
- Portfolio of twelve (12) clinical cases submitted in Week 12.

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 for this quiz are a mixture of short answer, matching, drag and drop, and true/false.

Students 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 (22 May 2020) 9:00 pm AEST

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

Return Date to Students

Week 12 Monday (1 June 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 (5 June 2020) 11:45 pm AEST

Return Date to Students

Exam Week Friday (19 June 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 different 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