MEDS20013 *Diagnostic Ultrasound for Point of Care (PoCUS)*
Term 3 - 2018

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 - 2018

- 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 In Class

Feedback

Residential School was helpful and well organised.

Recommendation

The Residential school is to be continued and expanded as the student numbers increase.

Feedback from In Class

Feedback

More opportunities for live scanning should be available

Recommendation

As the student numbers increase, more residential schools with increased time for live scanning will be arranged.

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

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: ISBN 978-0-521-17091-8
Binding: eBook

Additional Textbook Information

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

Aamer Aziz Unit Coordinator
a.aziz@cqu.edu.au

Schedule

Week 1 - Infection Control - 05 Nov 2018

Module/Topic	Chapter	Events and Submissions/Topic
Infection Control	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)	**Zoom tutorial Tuesday 6/11/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time)** **Infection control online Quiz (Compulsory)**

Week 2 - Abdominal Aortic Aneurysm - 12 Nov 2018

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal Aortic Aneurysm	Readings and lectures on the Moodle **Textbook Reading AAA** Chapter 5 of the textbook: Noble V & E. & Nelson B. Manual of Emergency and Critical Care Ultrasound 2nd Ed. 2011.	

Week 3 - FAST - 19 Nov 2018

Module/Topic	Chapter	Events and Submissions/Topic
Focused Assessment with Sonography for Trauma (FAST)	Readings and lectures on the Moodle **Textbook Reading - FAST and Patient in Shock** **FAST**: Chapter 2 of the textbook. **Patient in Shock**: Chapter 14 of the textbook.	**Zoom tutorial Tuesday 20/11/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time)**

Week 4 - DVT - 26 Nov 2018

Module/Topic	Chapter	Events and Submissions/Topic
Deep Vein Thrombosis (DVT)	Readings and lectures on the Moodle **Textbook Reading - DVT.** Chapter 8 of the textbook	**Residential school Thursday 29th and Friday 30th November 2018 9:00 am to 3:30 pm - CQUniversity Brisbane campus**

Break Week - 03 Dec 2018

Module/Topic	Chapter	Events and Submissions/Topic
Break Week: Don't forget to revise the material from weeks 1 to 4.		

Week 5 - Renal - 10 Dec 2018

Module/Topic	Chapter	Events and Submissions/Topic
Kidneys and Bladder	Readings and lectures on the Moodle **Textbook Reading - Renal and Bladder.** Chapter 6 of the textbook	

Week 6 - Gallbladder - 17 Dec 2018

Module/Topic	Chapter	Events and Submissions/Topic
Gallbladder	Readings and lectures on the Moodle **Textbook Reading - Gallbladder Ultrasound.** Chapter 7 of the textbook	**Zoom tutorial Tuesday 18/12/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time)**

Vacation Week - 24 Dec 2018

Module/Topic	Chapter	Events and Submissions/Topic
A week for you to relax but don't forget to keep revising and work on your assessment items		

Week 7 - Early Obstetrics - 02 Jan 2019

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

Week 8 - Lung - 07 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Lung	Readings and lectures on the Moodle **Textbook Reading Lung Ultrasound.** Chapter 4 of the textbook	**Zoom tutorial Tuesday 08/01/2019 - 7:00 pm AEST (for students in other time zones please convert this to your local time)**

Week 9 - Eye - 14 Jan 2019

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

Week 10 - Musculoskeletal - 21 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Musculoskeletal	Readings and lectures on the Moodle **Textbook Reading - MSK Ultrasound.** Chapter 11 of the textbook	**Zoom tutorial Tuesday 22/01/2019 - 7:00 pm AEST (for students in other time zones please convert this to your local time)**

Week 11 - 28 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Residential School	Review of learnt skills	**Residential school** Saturday 2nd and Sunday 3rd February 2019 9:00 am to 3:30 pm - at CQUniversity Brisbane Campus **Practical Competency Assessments** Due: Week 11 Friday (1 Feb 2019) 5:00 pm AEST **Portfolio of clinical cases.** Due: Week 11 Friday (1 Feb 2019) 5:00 pm AEST

Week 12 - 04 Feb 2019

Module/Topic	Chapter	Events and Submissions/Topic
Work on the portfolio		

Exam Week - 11 Feb 2019

Module/Topic	Chapter	Events and Submissions/Topic

Residential Schools

Module/Topic	Chapter	Events and Submissions/Topic
Two compulsory residential schools	More information about the residential schools will be provided on Moodle site and during zoom tutorials	Residential School 1: Week 4 - Thursday 29th November and Friday 30th November 2018 from 9 am to 3:30 pm at the sonography labs in CQUniveristy Brisbane campus Residential School 2: Week 11 - Saturday 2nd February and Sunday 3rd February 2019 9:00 am to 3:30 pm - at the sonography labs in CQUniversity Brisbane Campus

The unit coordinator for MEDS20013 is **Dr. Aamer Aziz**
The best way to contact Aamer is by email at a.aziz@cqu.edu.au.
Aamer's CQU telephone number is 07 4940 7478.
Aamer's office hours are Monday to Friday 9 am to 5 pm. Please use email whenever possible.
Access to the internet is required to undertake this unit, as unit materials, tutorials and updates will be provided via Moodle, email and Zoom.
Resources will include access to relevant websites, activities and readings provided. To give yourself the best chance of success with this course please ensure that you undertake all the readings and activities.
There will be Zoom tutorials in Weeks 1, 3, 6, 8 and 10. These will be recorded and available for review.
The residential clinical skills labs are in Weeks 5 (10th and 11th December 2018) and 11 (28th and 29th January 2019) at the CQUniversity Brisbane campus sonography labs. Please make travel and accommodation arrangements well in advance.
The residential clinical skills labs are mandatory. Non-attendance must be documented with a Medical Certificate or equivalent.
Dr. Aamer Aziz (MBBS, MSc (Nuc Med), PhD (Radiology), GradDipMedSonography, AMS) has worked extensively as a radiologist, nuclear medicine specialist and sonographer in Australia and internationally. He holds a PhD in medical imaging as well. He is a Senior Lecturer in Medical Sonography at CQU and is the Head of Course for postgraduate sonography. He is also a supervisor for higher education degrees. His areas of interest include developing new technologies in augmented and virtual reality, developing intelligent radiology systems and remote radiology teaching. His hobbies include playing tennis and cricket, riding motorbikes, flying and travel.
Ms. Saheeda Zotter will be the tutor in the unit. She is a senior sonographer working in Wollongong. She has a background of radiography as well. She has extensive experience as a PoCUS tutor with many years of teaching at various institutions. She will supervise the teaching, Zoom tutorials and residential schools. Email is the best way to contact her saheeda.zotter@gmail.com

Assessment Tasks

1 Practical Competency Assessments

Assessment Type
Written Assessment

Task Description
As a clinician you come across difficult decision making in your everyday professional life. Ultrasound is a modality that aids your clinical decision making as it is readily available, cheap, accessible and portable, with fairly good diagnostic accuracy. However, it is operator dependent and training in adequate use of 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 from Monday 5th November 2018 at 9 am and close

on Friday 8th February 2019 at 5 pm.

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 attainment of competency are outlined in documents available on the unit

Moodle site and will be demonstrated / 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 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)

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 11 Friday (1 Feb 2019) 5:00 pm AEST
Completed during second residential school

Return Date to Students
Week 12 Friday (8 Feb 2019)
Immediate written and verbal feedback will be provided.

Weighting
Pass/Fail

Minimum mark or grade
Pass/Fail

Assessment Criteria
F**or 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
- NO video files of any sort should be uploaded.

Assessment Due Date
Week 11 Friday (1 Feb 2019) 5:00 pm AEST

Return Date to Students
Exam Week Monday (11 Feb 2019)
Portfolios will be marked by Friday of exam week

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