



MEDS20015 *Procedural Ultrasound for Point of Care (PoCUS)*

Term 3 - 2018

Profile information current as at 18/05/2024 07:25 pm

All details in this unit profile for MEDS20015 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.

General Information

Overview

This unit aims to develop your knowledge and understanding of point of care ultrasound (PoCUS) during interventional procedures. To enrol in this unit you must have access to ultrasound facilities to undertake ultrasound scans in a clinical environment with appropriate supervision. You will use PoCUS to identify anatomical structures and pathology prior to procedures. You will learn to use PoCUS dynamically to guide treatment and procedures. You will learn ultrasound interventional techniques and skills to optimise ultrasound images for documentation. You will apply your knowledge in the university and clinical context to accurately perform and document ultrasound procedures.

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

Residential school 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 utilising medical ultrasound guidance during a medical procedure
2. Apply medical ultrasound techniques to generate optimal visibility of the region of interest (ROI) for safe performance of a medical procedure
3. Apply safe medical ultrasound techniques to generate appropriate ultrasound images for documentation purposes.

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

MEDS20015

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 on Moodle. (You may have already completed this test if you have taken MEDS20013. If you have completed this test you are still required to take this test for this unit (MEDS20015))	Infection control online Quiz (Compulsory)

Week 2 - Vascular Access - Subclavian vein - 12 Nov 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Vascular Access Cannulation of the Subclavian Vein	Readings and lectures on Moodle. Textbook Reading - Vascular Access Chapter 15 of the textbook: Cannulation of the Subclavian Vein section. Noble V & E. & Nelson B. Manual of Emergency and Critical Care Ultrasound 2nd Ed. 2011.	Zoom tutorial - Tuesday 13/11/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time)
Week 3 - Vascular Access - External Jugular vein - 19 Nov 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Vascular Access Cannulation of the External Jugular Vein	Readings and lectures on Moodle. Textbook Reading - Vascular Access Chapter 15 of the textbook: Cannulation of the external Jugular Vein section	
Week 4 - Foreign Bodies - 26 Nov 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Foreign Bodies and their Localisation	Readings and lectures on Moodle. Textbook Reading - Foreign Bodies and Localisation. Chapter 16 of the textbook: Foreign Bodies and Localisation section	Zoom tutorial - Tuesday 27/11/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time) Residential school Saturday 1st and Sunday 2nd December 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 - Ascites and paracentesis - 10 Dec 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Ascites and Paracentesis	Readings and lectures on Moodle. Textbook Reading - Ascites and Paracentesis. Chapter 16 of the textbook: Ascites and Paracentesis section.	Zoom tutorial - Tuesday 11/12/2018 - 7:00 pm AEST (for students in other time zones please convert this to your local time)
Week 6 - Pleural Effusion and Thoracentesis - 17 Dec 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Pleural Effusion and Thoracentesis	Readings and lectures on Moodle. Textbook Reading - Pleural Effusion and Thoracentesis Chapter 16 of the textbook: Pleural effusion and Thoracentesis section.	
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 - Joint Effusions and Arthrocentesis - 31 Dec 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Joint Effusions and Arthrocentesis	Readings and lectures on Moodle. Textbook Reading - Joint Effusions and Arthrocentesis Chapter 16 of the textbook: Joint Effusions and Arthrocentesis section.	

Week 8 Abscess drainage - 07 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Abscess Drainage	Readings and lectures on Moodle. Textbook Reading - Abscess Drainage. Chapter 16 of the textbook: Abscess drainage section.	

Week 9 - Brachial Plexus blocks - 14 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Brachial Plexus blocks	Readings and lectures on Moodle. Textbook Reading - Brachial Plexus. Please read chapter 16 of your textbook: Brachial Plexus section.	Zoom tutorial Tuesday 15/01/2019 - 7:00 pm AEST (for students in other time zones please convert this to your local time)

Week 10 - Iliacus nerve block - 21 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Iliacus Nerve Blocks	Readings and lectures on Moodle. Textbook Reading - Iliacus Nerve Blocks. Chapter 16 of the textbook: Fascia Iliac Nerve Block section.	

Week 11 - Lumbar Puncture - 28 Jan 2019

Module/Topic	Chapter	Events and Submissions/Topic
Lumbar Puncture	Readings and lectures on Moodle. Textbook Reading - Lumbar Puncture. Chapter 16 of the textbook: Lumbar Puncture section.	Residential school Thursday 31st January and Friday 1st 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 - Bladder drainage - 04 Feb 2019

Module/Topic	Chapter	Events and Submissions/Topic
Suprapubic Catheterisation and Bladder Drainage	Readings and lectures on Moodle. Textbook Reading - Suprapubic Catheterisation and Bladder Drainage. Chapter 16 of the textbook: Suprapubic Catheterisation and Bladder Drainage section.	Zoom tutorial Tuesday 05/02/2019 - 7:00 pm AEST (for students in other time zones please convert this to your local time)

Exam Week - 11 Feb 2019

Module/Topic	Chapter	Events and Submissions/Topic
Portfolio Results returned Friday 15th February 2019		
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 - Saturday 1st and Sunday 2nd December 2018 9:00 am to 3:30 pm - CQUniversity Brisbane campus Residential School 2: Week 11 - Thursday 31st January and Friday 1st February 2019 9:00 am to 3:30 pm - at CQUniversity Brisbane Campus

Term Specific Information

The unit coordinator for MEDS20015 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 2, 4, 9 and 12. These will be recorded and available for review.

The residential clinical skills labs are in Weeks 5 (12th and 13th December 2018) and 11 (30th and 31st 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 regarding medical procedures in your everyday professional life. There is evidence that image guided procedures have better outcomes for patients. Ultrasound is a modality that can aid in performing safe image guided procedures as it is readily available, cheap, accessible and portable, with fairly good temporal and spatial resolution. However, it is operator dependent and training in adequate use of this technology is of paramount importance. Infection control and using aseptic technique while performing the procedures is also important to reduce the morbidity.

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.

There are seven (7) formative assessment quizzes covering the following topics:

- Vascular access
- Ultrasound guided injections
- Pleural effusion
- Paracentesis
- Brachial plexus nerve blocks
- Femoral and Fascia Iliaca compartment nerve block
- Suprapubic catheterization and bladder drainage

These formative assessment quizzes will be open on Week 1 Monday 5th November 2018 and can be attempted any time till they close on Week 12 Friday 8th February 2019 at 5 pm. For best chance of success, you should attempt these quizzes after the relevant topic is covered during the course. You MUST attempt all the quizzes and secure 100% marks in each. Each quiz can be taken multiple times till all the answers are correct.

There are two (2) mandatory summative practical competency assessments, both of which MUST be passed to a "competency" level in order to pass the unit.

The mandatory regions of interest are:

- Vascular access
- Guided Injections

The assessment criteria and standards for attainment of competency are outlined in documents available on the unit Moodle site.

Practical competency tests will take place at the second compulsory residential skills lab. These skills labs will be delivered on Brisbane campus.

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 any of the assessments will result in a Fail grade for the unit.

Assessment Due Date

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

Formative assessment quizzes are online. Summative competency assessment will be completed during second residential skills labs.

Return Date to Students

Exam Week Friday (15 Feb 2019)

Immediate written and verbal feedback will be provided for formative assessment quizzes

Weighting

Pass/Fail

Minimum mark or grade

Pass/Fail

Assessment Criteria

A PASS grade for the summative assessments of any region will be based on competency criteria developed at CQUni by experienced clinical sonographers. Competency criteria reference documents are provided on the unit specific moodle site.

Competency will be focused on the correct knowledge for:

- Appropriate explanation of procedure and obtain informed consent
- Patient positioning
- Correct infection control technique
- Appropriate equipment for examination
- Correct patient details
- Correct choice of machine probe and presets
- Correct optimisation of image
- Correct optimisation of access for image
- Recognises anatomical relations
- Appropriate time for procedure with good patient care
- Ability to reduce image artifact
- Correct annotation
- Provides appropriate images
- Demonstrates the ability to integrate findings into the clinical care
- Ensures patient confidentiality
- Correct infection control
- Safe practice

Referencing Style

- [Vancouver](#)

Submission

Offline Online

Submission Instructions

Summative assessment competency documents will be completed during clinical examinations performed on campus during second residential school.

Learning Outcomes Assessed

- Evaluate the benefits and limitations of utilising medical ultrasound guidance during a medical procedure
- Apply medical ultrasound techniques to generate optimal visibility of the region of interest (ROI) for safe performance of a medical procedure
- Apply safe medical ultrasound techniques to generate appropriate ultrasound images for documentation purposes.

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, and safely perform a guided procedure. The clinical portfolio serves as a record of the experience that students have obtained during the unit.

You will collect Four (4) sets of documentation for an ultrasound study either done by yourself in clinical practice.

Each set will contain:

- Ultrasound images
- Formal report
- Self evaluation of performance
- Each set of documents should be created in a unique folder on a USB or uploaded on the Moodle

- NO video files of any sort should be uploaded.

Assessment Due Date

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

You may submit the portfolio, either on the USB drive or uploaded on Moodle, at the completion of the second residential practical skills lab.

Return Date to Students

Exam Week Friday (15 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 four cases in their portfolio. This will include a mix of cases to ensure exposure to a range of procedures and enhance understanding of image guided procedure advantages and limitations. Each case must be reviewed and signed by your clinical supervisor. You can collect these cases at the site of your clinical work or during the residential school labs.

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. You can also upload the portfolio through the Moodle site. Each case should address the following:

- A brief demographic of patient
- Clinical context
- Description of the procedure performed
- Most appropriate image
- 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 utilising medical ultrasound guidance during a medical procedure
- Apply medical ultrasound techniques to generate optimal visibility of the region of interest (ROI) for safe performance of a medical procedure
- Apply safe medical ultrasound techniques to generate appropriate ultrasound images for documentation purposes.

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