MEDS20015 *Procedural Ultrasound for Point of Care (PoCUS)*
Term 1 - 2019

Profile information current as at 18/05/2024 10:13 pm

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 1 - 2019

- Mixed Mode

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:
Click here to see your [Residential School Timetable](#).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Postgraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Written Assessment**
Weighting: Pass/Fail
2. **Portfolio**
Weighting: Pass/Fail

Assessment Grading

This is a pass/fail (non-graded) unit. To pass the unit, you must pass all of the individual assessment tasks shown in the table above.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

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

Feedback
The student appreciated the unit content, zoom content and residential school.

Recommendation
The zoom tutorials and residential school will be continued in the same format.

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 |

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

Additional Textbook Information
Copies are available to purchase at the CQUni Bookshop here: http://bookshop.cqu.edu.au (search on the Unit code)

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Microphone and camera to attend the Zoom sessions

Referencing Style

All submissions for this unit must use the referencing style: Vancouver
For further information, see the Assessment Tasks.

Teaching Contacts

Robyn Boman Unit Coordinator
r.boman@cqu.edu.au

Schedule

Week 1 - Infection control - 11 Mar 2019

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 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic

Module/Topic	Chapter	Events and Submissions/Topic
Vascular Access Cannulation of the Subclavian Vein	Course resources online. **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 19:00 AEST** **(for students in other time zones please convert this to your local time)**

Week 3 - Vascular Access - External Jugular vein - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Vascular Access Cannulation of the External Jugular Vein	Course resources online. **Textbook Reading - Vascular Access** Chapter 15 of the textbook: Cannulation of the external Jugular Vein section	

Week 4 - Foreign Bodies - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Foreign Bodies and their Localisation	Course resources online. **Textbook Reading - Foreign Bodies and Localisation.** Chapter 16 of the textbook: Foreign Bodies and Localisation section	**Zoom Tutorial: Tuesday 19:00 AEST** **(for students in other time zones please convert this to your local time)**

Week 5 - Ascites and paracentesis - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Ascites and Paracentesis Compulsory Online Induction required to be completed prior to Residential School.	Course resources online. **Textbook Reading - Ascites and Paracentesis.** Chapter 16 of the textbook: Ascites and Paracentesis section.	**Residential school.** **Saturday 13th and Sunday 14th April 2019** **10:00 -15:30** *CQUniversity Brisbane campus*

Break Week - 15 Apr 2019

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

Week 6 - Pleural Effusion and Thoracentesis - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Pleural Effusion and Thoracentesis	Course resources online. **Textbook Reading - Pleural Effusion and Thoracentesis** Chapter 16 of the textbook: Pleural effusion and Thoracentesis section.	**Zoom Tutorial: Tuesday 19:00 AEST** **(for students in other time zones please convert this to your local time)**

Week 7 - Joint Effusions and Arthrocentesis - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Joint Effusions and Arthrocentesis	Course resources online. **Textbook Reading - Joint Effusions and Arthrocentesis** Chapter 16 of the textbook: Joint Effusions and Arthrocentesis section.	

Week 8 Abscess drainage - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic

Abscess Drainage	Course resources online. **Textbook Reading - Abcess Drainage.** Chapter 16 of the textbook: Abscess drainage section.	**Zoom Tutorial: Tuesday 19:00 AEST** **(for students in other time zones please convert this to your local time)**

Week 9 - Brachial Plexus blocks - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Brachial Plexus blocks	Course resources online. **Textbook Reading - Brachial Plexus.** Please read chapter 16 of your textbook: Brachial Plexus section.	

Week 10 - Iliacus nerve block - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Iliacus Nerve Blocks	Course resources online. **Textbook Reading - Iliacus Nerve Blocks.** Chapter 16 of the textbook: Fascia Iliac Nerve Block section.	**Zoom Tutorial: Tuesday 19:00 AEST** **(for students in other time zones please convert this to your local time)** ***Residential school.*** **Saturday 25th and Sunday 26th May 2019** **10:00 -15:30** ***CQUniversity Brisbane campus***

Week 11 - Lumbar Puncture - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Lumbar Puncture	Course resources online. **Textbook Reading - Lumbar Puncture.** Chapter 16 of the textbook: Lumbar Puncture section.	

Week 12 - Bladder drainage - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Suprapubic Catheterisation and Bladder Drainage	Course resources online. **Textbook Reading - Suprabubic Catheterisation and Bladder Drainage.** Chapter 16 of the textbook: Suprapubic Catheterisation and Bladder Drainage section.	**Practical Competency Assessments** Due: Week 12 Friday (7 June 2019) 5:00 pm AEST **Portfolio of clinical cases** Due: Week 12 Friday (7 June 2019) 5:00 pm AEST

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

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

One (1) compulsory infection control quiz.
Seven (7) formative quizzes.
Four (4) summative competency assessments.
Portfolio of four (4) clinical cases.
There is a compulsory online induction required to be completed prior to attending campus.
There are two compulsory residential schools in weeks 5 and 10.

Assessment Tasks

1 Practical Competency Assessments

Assessment Type
Written Assessment

Task Description
In your professional life, you will come across difficult decision making regarding medical procedures. 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. However, it is operator dependent and training at a high level to use this technology is of paramount importance. Infection control and using an aseptic technique while performing the procedures is also important to reduce morbidity.

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

labs in week 10.

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 Week 1 Monday 09:00 and close Week 1 Friday

17:00.

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

Learners must obtain 100% marks in this quiz to PASS this assessment.
Multiple attempts are allowed. A Fail grade in this assessment will result in a Fail grade for the unit.
Assessment 2.

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 and can be attempted any time till they close on

Week 12 Friday at 17:00. 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 until 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 the 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 the 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)
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 12 Friday (7 June 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 (21 June 2019)

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 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

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 (jpeg file)
- NO video files of any sort should be uploaded.

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

Return Date to Students
Exam Week Friday (21 June 2019)
Portfolios will by 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 containing images (jpeg) obtained in each study. The USB 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 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.

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