MEDS11001 *Fundamentals of Ultrasound Practice*
Term 1 - 2022

Profile information current as at 24/04/2024 01:14 am

All details in this unit profile for MEDS11001 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 provides an insight into medical ultrasound by exploring the role and global scope of practice of the medical sonographer and the use of ultrasound in medical imaging, the types of examinations available and the provision of safe patient care as an allied health professional. The aim of this unit is to provide introductory knowledge and skills that will support your learning throughout the Medical Sonography course. Simulation exercises will enable you to apply theory to practice.

Details
Career Level: *Undergraduate*
Unit Level: *Level 1*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
There are no requisites for this unit.
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 - 2022

- 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 Undergraduate 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: 50%
2. **Practical Assessment**
Weighting: Pass/Fail
3. **Online Test**
Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

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 Have Your Say

Feedback
Students enjoyed and found the scanning activities in the residential school informative and helped bond previously taught concepts.

Recommendation
Continue to improve quantity and quality of scanning time during the residential school.

Feedback from Have Your Say

Feedback
The written assessment task was thought by some students to not complement the unit content with too much focus on graphic design.

Recommendation
Consider changing or re-working the assessment task.

Feedback from Have Your Say and 'Break week survey"

Feedback
Students considered the weekly tutorials to be informative, enjoyable and encouraging. Different learning styles could be better catered for with interactive games.

Recommendation
Continue weekly tutorials and consider incorporating more interactive games or quizzes to vary teaching style and make tutorials more engaging.

Feedback from ALC Meta-site feedback

Feedback
Students found the ALC support very helpful.

Recommendation
Continue the inclusion of the ALC Meta-site link and encourage to seek support from them.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Discuss the role and scope of practice of the medical sonographer, including professional and legal frameworks
2. Apply knowledge of ultrasound equipment, transducer / patient positioning and sonographic image appearance using appropriate medical and sonographic terminology
3. Discuss the role of diagnostic medical ultrasound and how it relates to other diagnostic imaging modalities and picture archiving communication systems
4. Demonstrate sonographic manual skill development in a simulated environment.

This unit will be one of the core units in the Medical Sonography Course which is externally accredited by the Australian Sonographers Accreditation Registry, an external professional regulatory body. This unit introduces students to the foundational knowledge and skills of medical sonography and enables an appreciation of the use of ultrasound in a national and international context and in the context of the other diagnostic imaging technologies available. The professional body entry level competencies of the accredited sonographer include consideration of safe practice and professional behaviour.

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	4
1 - Written Assessment - 50%	•		•	
2 - Practical Assessment - 0%		•		•
3 - Online Test - 50%	•	•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	2	3	4
1 - Communication	•	•	•	•
2 - Problem Solving	•	•	•	•
3 - Critical Thinking		•		•
4 - Information Literacy	•			
5 - Team Work				
6 - Information Technology Competence		•		•
7 - Cross Cultural Competence	•			
8 - Ethical practice	•			
9 - Social Innovation				
10 - Aboriginal and Torres Strait Islander Cultures				

Textbooks and Resources

Textbooks

There are no required textbooks.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

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

Teaching Contacts

Kathleen Sweeney Unit Coordinator
k.sweeney@cqu.edu.au

Schedule

Week 1 - 07 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Introduction to the Medical Imaging Department • The history of ultrasound • The Australian Health Care system		Zoom tutorial Tuesday 1pm AEST

Week 2 - 14 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Infection control • Vital signs		Zoom tutorial Tuesday 1pm AEST

Week 3 - 21 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Communication • Cultural awareness		Zoom tutorial Tuesday 1pm AEST

Week 4 - 28 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Sonographic & medical terminology		Zoom tutorial Tuesday 1pm AEST

Week 5 - 04 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Patient positioning in sonography • Scan planes in sonography		Zoom tutorial Tuesday 1pm AEST

Vacation Week - 11 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
• No lectures or new information.		No zoom tutorial.

Week 6 - 18 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Introduction to the basic principles of ultrasound.		**1a.Written Assessment Task due: Wednesday 4pm AEST** Zoom tutorial Tuesday 1pm AEST **Part a. Written Assessment (35%)** **Part b. Reflection report (15%)** Due: Week 6 Wednesday (20 Apr 2022) 4:00 pm AEST

Week 7 - 25 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
• The ultrasound machine and examination.		Zoom tutorial Tuesday 1pm AEST

Week 8 - 02 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Keeping you and your patient safe.		Zoom tutorial Tuesday 1pm AEST

Week 9 - 09 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Residential School **(compulsory)** Tuesday and Wednesday. For Covid-19 safe practice, students must attend campus for one day Residential School and attend a zoom session on the other day. Students **must be available to be on campus for both days** of the Residential School.		**Online Induction quiz to be completed prior to Residential school.** **Practical assessment task completed at Residential school.** No zoom tutorial. **Practical Residential School Assessment** Due: Week 9 Wednesday (11 May 2022) 4:00 pm AEST

Week 10 - 16 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Introduction to basic sonographic examinations		**1b.Reflection report due Wednesday 4pm AEST** Zoom tutorial Tuesday 1pm AEST

Week 11 - 23 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Medico-legal issues in health care		Zoom tutorial Tuesday 1pm AEST

Week 12 - 30 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Revision • Exam preparation		Zoom tutorial Tuesday 1pm AEST

Review/Exam Week - 06 Jun 2022

Module/Topic	Chapter	Events and Submissions/Topic
• Online test		**Complete a 2hr online test on Wednesday 1pm AEST** **Online test** Due: Review/Exam Week Wednesday (8 June 2022) 1:00 pm AEST

Exam Week - 13 Jun 2022

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

The unit coordinator is Kathleen Sweeney, based in Sydney. The best way to contact Kathleen is via email at: k.sweeney@cqu.edu.au
It is important to check your student email regularly as updates about the unit will be sent from the unit coordinator by email. Please ensure that your email correspondence is done via your CQU student email.
Kathleen works with CQU on Tuesdays, Wednesdays and Fridays and will endeavour to respond to emails within 24 hours. If you would like a phone conversation or zoom meeting then please email to organise a time for this.
Recorded lectures are provided by sonography lecturers: Kathleen Sweeney, Kirsty Mills, Jane Wardle, Paula Kinnane and Elaine Wang.
This unit is a 6 credit point unit which requires you to allocate around 12.5 hours per week for study.
This time includes:

- watching recorded lectures and attending tutorials,
- creating study notes to meet weekly learning objectives using lectures and readings,
- using additional resources via the eReading list to supplement your learning,
- attending weekly zoom tutorials or watch the recorded tutorials that will be available on the unit Moodle site to supplement your learning,
- researching and working on your assessments,
- completing formative and mock test questions.

The unit is graded. There are three assessment items. Please refer to the assessment information for more details. Tutorials will be offered to discuss the course content and assessment preparation. You will be able to ask questions and gain feedback. They will be recorded for later viewing if you are unable to attend. Live attendance at the tutorial is recommended. CQUniversity records lectures, video-conferencing sessions and teaching activities to aid student learning activities. This may involve the collection of personal information about you, if your image or voice is captured during participation. Recordings may be disseminated to other CQUniversity students. For more information, visit: https://www.cqu.edu.au/privacy
Break week is between weeks five and six (11-17 April 2021).

Assessment Tasks

1 Part a. Written Assessment (35%) Part b. Reflection report (15%)

Assessment Type
Written Assessment

Task Description
Task 1a: **Written assessment.**
You are required to complete a written assessment based on lecture material, tutorials and relevant material provided on the unit Moodle site. In addition to the unit materials provided, you must research current literature in order to discuss and respond to each question/topic.

Question 1
(Approximately 600 words)
Discuss the role and scope of sonographer reporting.

Question 2
(Approximately 900 words)
A 25 year old woman, Mai Nguyen, presents to her GP with a painful lump in her right breast. Mai is in Australia, on a student visa from Vietnam. Mai's GP sends her to the local Radiology clinic, and requests an ultrasound to image her breasts. The report returns to the GP, an excerpt of which reads "There is a 25 x 32x 18mm anechoic mass corresponding with the palpable lump. It has a smooth well-defined margin, and acoustic enhancement is demonstrated posteriorly. Sonographic appearances suggest a simple cyst."
You are to discuss the following topics as they refer to this case.
a) Why is ultrasound the modality of choice, rather than mammography for this patient? In your answer discuss:

- The electromagnetic spectrum and patient safety
- Why the pathology (simple cyst) is demonstrated with greater efficacy with ultrasound?

b) Using the description above and the provided request form, explain and describe an ISBAR communication.

Length: 1500 words (+/- 10%) Submissions outside of this range will be penalised. Reference list and figure captions are excluded.

Presentation: Inherent requirement is that it is written in appropriate academic language, and free of grammatical and spelling errors. Your assessment should be submitted as a Word document with 1.5 line spacing in 12 point Arial font.
Referencing: Your answers to each question must be supported by references. You are expected to research each question and to use references that have, and have not, been provided to you. A reference list must be provided and the CQU Sonography Vancouver referencing style must be used throughout your assessment. Ensure that your assessment is accurately referenced. References should clearly show where your information was obtained. Refer to the unit Moodle page and the CQU general website for further information. A minimum of 8 contemporary journal articles (less than 10 years old) must be used as references (additional to those provided on the the unit Moodle page) for this assessment. Figures and tables must be referenced.
One reference list in CQU Sonography Vancouver format should be provided for the whole assessment. Do not include separate reference lists for each question.

Task 1b. **Reflection report.**
This assessment task will assess your ability to critically evaluate:

- The role of a sonographer
- Your suitability to a sonographer role (including your strengths and weaknesses)
- What a patient experiences during an ultrasound examination

Assessment of each task will be relative to the assessment marking criteria, which will be made available on the unit Moodle site.

Assessment Due Date
Week 6 Wednesday (20 Apr 2022) 4:00 pm AEST
Assessment task 1b. Due week 10, Wednesday (12 May) 4:00 pm AEST

Return Date to Students

Two weeks after submission

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
You will be assessed on the following criteria:

- High quality submission addressing the topic questions clearly and concisely, with relevant and appropriate discussion and analysis of each topic
- Accuracy of spelling and grammar
- Correct use of medical and sonographic terminology
- Appropriateness of the reviewed literature
- Correct and accurate referencing
- Academic writing and expression
- All text, images, diagrams and tables correctly referenced and the word limit is adhered to.

A detailed marking rubric/criteria will be made available on the unit Moodle site.

Referencing Style

- Vancouver

Submission
Online

Submission Instructions
Part A: Your assessment should be submitted as a Word document, with 1.5 line spacing and using a 12-point Arial font (not including headings) online via Moodle. File names should follow the format:
Wardle_Jane_s0123456_MEDS11001_WrittenAssessment.doc Part B: Submission online via Moodle.

Learning Outcomes Assessed

- Discuss the role and scope of practice of the medical sonographer, including professional and legal frameworks
- Discuss the role of diagnostic medical ultrasound and how it relates to other diagnostic imaging modalities and picture archiving communication systems

2 Practical Residential School Assessment

Assessment Type
Practical Assessment

Task Description
During your attendance at the compulsory Residential School you will participate in practical activities, where you will observe, learn and practise techniques and skills relating to the sonography profession.
100% attendance for the residential school is mandatory. For COVID-19 safe practice, one day of the Residential School will be on campus and the other will be on-line. You must attend the Residential School at your enrolled campus. You will be automatically allocated to this campus, and appropriate staffing/resource arrangements will be made at that location. You must pass the practical assessment to pass the unit. Failure to attend the full residential school will mean that you will not pass this unit.

Following participation in the Residential School practical activities, you will be assessed on your ability to perform practical sonographic tasks relating to:

- Patient care and communication
- Body planes, ultrasound scanning planes and associated image recognition.

One re-sit of the practical assessment will be permitted.

Assessment Due Date
Week 9 Wednesday (11 May 2022) 4:00 pm AEST

Return Date to Students
Week 9 Wednesday (11 May 2022)
Students will receive results following the assessment on the same day.

Weighting
Pass/Fail

Assessment Criteria
The practical assessment will be conducted by a sonography lecturer or tutor, who will observe and assess your ability to carry out practical skills relating to:

- Patient care and communication
- Body planes, ultrasound scanning planes and associated image recognition.

Assessment of each task will be relative to the practical assessment marking criteria, which will be made available on the unit Moodle site.
You must pass the practical skills test to pass the practical assessment.

Assessment will be relative to the assessment marking criteria, which will be made available on the unit Moodle site.

Referencing Style

- Vancouver

Submission
Offline

Submission Instructions
Practical assessment, no submission required.

Learning Outcomes Assessed

- Apply knowledge of ultrasound equipment, transducer / patient positioning and sonographic image appearance using appropriate medical and sonographic terminology
- Demonstrate sonographic manual skill development in a simulated environment.

3 Online test

Assessment Type
Online Test

Task Description
To demonstrate the understanding and knowledge of the unit's content, and to assess whether the unit's learning outcome have been achieved, students are required to complete an end of the term online test. This online test will assess the content covered in the entire unit (weeks 1 to 12), including material covered in lectures, tutorials and any additional resources supplied during the term.
A good, stable internet connection is required for the online test.
The questions will involve a combination of question types, including short and long answer questions which require typed answers and multiple-choice questions.
Ensure you read the questions properly before beginning to formulate your answers and ensure you are using appropriate terminology at all times.
The end of term online test will be available on Moodle and two hours working time will be allocated. The test cannot be paused once started, or reattempted once finished.
This is an individual task. The online test must be completed by you, without assistance or collusion with others. Any evidence of collusion will be dealt with in adherence with the CQU student academic integrity policy and procedure.

Assessment Due Date
Review/Exam Week Wednesday (8 June 2022) 1:00 pm AEST

Return Date to Students

Two weeks after test closes.

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
Multiple choice questions (1 mark) will be automatically marked correct or incorrect.
Written response questions will vary in mark allocation. Each question will have the maximum marks allocated displayed next to the question.
Short and long answers will require:

- use of correct anatomic names of structures (including spelling) and recognition of their normal and abnormal sonographic appearances
- use of correct sonographic terminology (including spelling)
- evaluation of clinical information
- detail to demonstrate depth of understanding and critical thinking
- identification of sonographic imaging planes, protocols and conventions as relevant
- explanation of pre and post scanning requirements, including medico legal aspects and infection control standards

Referencing Style

- Vancouver

Submission
Online

Submission Instructions
Online via Moodle

Learning Outcomes Assessed

- Discuss the role and scope of practice of the medical sonographer, including professional and legal frameworks
- Apply knowledge of ultrasound equipment, transducer / patient positioning and sonographic image appearance using appropriate medical and sonographic terminology
- Discuss the role of diagnostic medical ultrasound and how it relates to other diagnostic imaging modalities and picture archiving communication systems

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