MEDS13010 *Quality Practice in Diagnostic Imaging*
Term 2 - 2024

All details in this unit profile for MEDS13010 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

In this unit, you will apply quality management principles in health care to undertake a limited clinical audit of a medical sonography department. You will propose reasons for adverse events, prioritise action and describe appropriate intervention as part of a quality improvement strategy. Medical Imaging departments utilise multiple imaging modalities. Quality practice requires an understanding of the function and use of each imaging modality to appreciate the diagnostic journey for each patient. You will evaluate the complementary role and safety of a range of medical imaging modalities. The unit will utilise multi-modality cases to provide you with an opportunity to practice and develop critical thinking and image interpretation skills for specified disease processes.

Details

Career Level: *Undergraduate*
Unit Level: *Level 3*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

Prerequisite MEDS12007 Medical Sonography Clinical Unit 1
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 2 - 2024

- Online

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).

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. **Portfolio**
Weighting: 40%
2. **Written Assessment**
Weighting: 20%
3. **Online Test**
Weighting: 40%

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 SUTE data

Feedback

Some students suggested further clarity on Assessment 1 requirements.

Recommendation

Consider rewriting the Assessment 1 information document to provide clear guidance on how to complete the assigned questions.

Feedback from SUTE data

Feedback

Students noted that week 9 MSK lectures required to be refreshed to accommodate for industry advances.

Recommendation

Explore current peer-reviewed literature with a view to rewrite week 9 lectures.

Unit Learning Outcomes

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

1. Discuss key aspects of clinical governance, quality improvement, risk management and patient safety cultures in Medical Imaging.
2. Employ quality improvement tools and strategies in the context of a clinical sonography environment.
3. Describe the safe application of various medical imaging modalities.
4. Identify, compare and describe complementary imaging pathways in specified pathologies.
5. Correlate the multi-modality image appearance with a disease process.

Linked to National Standards.
ASAR Accreditation Standards for Sonography - Units 1-5, 6, 7, 9, 10, 12, 13.

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	5
1 - Portfolio - 40%	●	●			
2 - Written Assessment - 20%			●	●	●
3 - Online Test - 40%	●		●	●	●

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes — Learning Outcomes

Graduate Attributes	1	2	3	4	5
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					

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	1	2	3	4	5	6	7	8	9	10
1 - Portfolio - 40%	•	•	•	•		•	•	•		
2 - Written Assessment - 20%	•	•	•	•		•				
3 - Online Test - 40%	•	•	•	•		•				

Textbooks and Resources

Textbooks
MEDS13010

Supplementary

Clinical Governance: Improving the Quality of Healthcare for Patients and Service Users
First edition (2014)
Authors: Gottwald M. and Lansdown E.
Open University Press
Maidenhead , Berkshire , England
ISBN: 978-0-335-26281-6
Binding: eBook
MEDS13010

Supplementary

Craig's Essentials of Sonography and Patient Care
Edition: 4th (2018)
Authors: Robert de Jong M.
Elsevier
St Louis , Missouri , USA
ISBN: 9780323545877
Binding: eBook
MEDS13010

Supplementary

Leading and Managing Health Services: An Australasian Perspective
(2015)
Authors: Gary E. Day and Sandra G. Leggat
Cambridge
ISBN: 9781316161777
Binding: eBook
MEDS13010

Supplementary

Sectional Anatomy for Imaging Professionals
4th edition (2018)
Authors: Kelley, L.L., Petersen, C.M.,
Mosby Elsevier
St Louis , MO , USA
ISBN: 9780323414877
Binding: eBook
MEDS13010

Supplementary

Workbook for Sectional Anatomy for Imaging Professionals
4th edition (2013)
Authors: Kelley & Peterson
Mosby Elsevier
St Louis , MO , USA
ISBN: 9780323655903
Binding: eBook

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

Mina Shenouda Unit Coordinator
m.shenouda@cqu.edu.au

Schedule

Week 1 Clinical Governance - 08 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Clinical Governance	**Textbook**: Leading and Managing Health Services: An Australasian Perspective. Chapter 11 pg. 126-135 **Readings:** eReading List	

Week 2 Quality Improvement - 15 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Quality Improvement: Clinical Audit and System Redesign	**Textbook:** Understanding the Australian Health Care System. Chapter 21 pg. 349-350. Leading and Managing Health Services: An Australasian Perspective. Chapter 27 pg. 309-315. **Readings:** eReading List	

Week 3 Risk Management Part 1 - 22 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Risk Management and Adverse Events	**Textbook:** Understanding the Australian Health Care System. Chapter 21 pg. 349-350. Leading and Managing Health Services: An Australasian Perspective. Chapter 27 pg. 309-315. **Readings:** eReading List	

Week 4 Risk Management Part 2 - 29 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
Risk Management and Adverse Events Part 2	**Textbook:** Understanding the Australian Health Care System. Chapter 21 pg. 349-350. Leading and Managing Health Services: An Australasian Perspective. Chapter 27 pg. 309-315. **Readings:** eReading List	

Week 5 Change Management - 05 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Closing the Gaps in Care through a Practical Framework	**Textbook:** Leading and Managing Health Services: An Australasian Perspective. Chapter 27 pg. 295-302. **Readings:** eReading List	

Vacation Week - 12 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Break Week		

Week 6 Safety Culture - 19 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Safety Culture Safe Sonographic Practice	**Readings:** eReading List	**Quality Management Report** Due: Week 6 Friday (23 Aug 2024) 5:00 pm AEST

Week 7 Introduction to Medical Imaging Modalities - 26 Aug 2024

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Medical Imaging Modalities and Safety Considerations	**Readings:** eReading List	

Week 8 Appearances of Common Structures in Multiple Modalities - 02 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Appearances of Common Structures in Multiple Modalities	**Readings:** eReading List	

Week 9 Contrast Media and Abdominal/Pelvic Imaging - 09 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Contrast Media Use in Imaging Modalities (A) Contrast Media in Imaging Modalities (B) Abdomen and Pelvis Imaging	**Readings:** eReading List	

Week 10 Musculoskeletal Comparative Imaging - 16 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Musculoskeletal Comparative Imaging	**Readings:** eReading List	

Week 11 Comparative Breast Imaging - 23 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Comparative Breast Imaging Breast Disease	**Readings:** eReading List	**Multimodality ePoster** Due: Week 11 Wednesday (25 Sept 2024) 5:00 pm AEST

Week 12 Revision Week - 30 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Revision		Daylight Saving begins on 6th October, 2024.

Review/Exam Week - 07 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic
		The online test opens Thursday the 10th of October at 11 am AEST and closes on Thursday the 17th of October at 11 am. **Online test** Due: Review/Exam Week Thursday (10 Oct 2024) 11:00 am AEST

Exam Week - 14 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic

Welcome to MEDS13010 - Quality Practice in Diagnostic Imaging. The unit coordinator for this unit is Mina Shenouda. He will be available throughout the term on Mondays, Tuesdays and Thursdays. Please use the forums on the unit Moodle site for questions related to unit content or assessment items. If you have a personal query, you can email Mina at m.shenouda@cqu.edu.au.

Each week the Moodle site will focus on a different aspect of the unit. The first six weeks will be dedicated to Quality Practice, and weeks seven to eleven will focus on Comparative Imaging. The learning activities for this unit include pre-recorded lectures, weekly reading material and fortnightly tutorials. All students are expected to attend the tutorials; the timing will be outlined on Moodle. While Zoom tutorials will be recorded, these recordings are not a substitute for active participation. Students who attend live tutorials allow themselves to develop a deeper understanding of the unit content. To attain a passing grade in this unit, you must meet the minimum marks specified in each assessment task and an overall grade of 50% or greater. Be sure to check the Moodle site regularly for updates and detailed schedules. Engage with the resources and participate actively to make the most out of this unit.

Assessment Tasks

1 Quality Management Report

Assessment Type
Portfolio

Task Description
As examined in this unit, quality improvement encompasses a wide range of processes designed to enhance the quality and safety of care while increasing the efficiency of healthcare organisations. This assessment requires you to demonstrate your understanding of these processes and concepts through practical applications across three sections. Completing this written report is a mandatory course requirement of the Australian Sonographers Accreditation Registry (ASAR).

A study will be provided on Moodle for you to read and you will be required to create a scenario of an adverse event based on the themes explored in the study. The scenario you create will inform your answers throughout the assessment. This assessment is divided into three sections:

Section 1: Adverse Events
This section requires you to focus on the adverse event described in your chosen case study. You will be evaluated on your ability to identify and mitigate the adverse event by creating a flow chart based on a fishbone diagram. The word limit for this section is 500 words.

Section 2: Risk Management
Discuss the importance of a risk management process and create a risk management cycle based on the main adverse event identified in your case study. Each aspect of the cycle should be under a sub-heading. The word limit for this section is 800 words.

Section 3: Change Management
Building on Section 1, where you identified contributing factors and potential root causes of the adverse event, you are required to apply one of the change management models (listed on Moodle) to address the adverse event. This section has a word limit of 500 words.

Your final report will include:
1. Cover page
2. Contents page
3. Case Study Title
4. Section 1
5. Section 2
6. Section 3
7. Reference list

Length: The report should not exceed 1,800 words, with a permissible deviation of ±10%. Any content exceeding this will not be marked. The contents page, reference list, and figure captions are excluded from the word count.

Presentation: The report must be written in appropriate academic language, without grammatical and spelling errors.

Submit your assessment as a Word document, formatted with 1.5 line spacing and 12-point Arial font.

Referencing: Support your responses to each question with peer-reviewed references. Include a reference list using the CQU Sonography Vancouver referencing style throughout your assessment. Ensure that all references clearly indicate the sources of your information. For additional guidance, refer to the unit Moodle page and the Academic Learning Centre (ALC) resources.

Assessment Due Date
Week 6 Friday (23 Aug 2024) 5:00 pm AEST

Return Date to Students
Week 8 Friday (6 Sept 2024)

Results will be available two weeks after due date.

Weighting
40%

Minimum mark or grade
50%

Assessment Criteria
Your assessment will be evaluated based on the following criteria:

- Quality Management Portfolio: The portfolio must be well-organized, including a clear introduction, an outline of the cases, a comprehensive discussion, and a conclusion. It should concisely outline events and be informed by relevant literature, which must be cited in-text.
- Data Collection and Analysis: Data must be accurately collected and thoroughly analyzed.
- Improvement Plans: Propose relevant and feasible plans for improvement based on the analysis.
- Writing and Presentation: The portfolio must be written coherently and cohesively, adhering to academic writing conventions.

Referencing Style

- [Vancouver](#)

Submission
Online

Submission Instructions
Online; Include a title page with student's surname and given name, student number, unit and assessment details and word count. Files need to be uploaded in Word format. Files should be titled as such:
Shenouda_Mina_s0123456_MEDS13010_Portfolio.doc (.doc or .docx)

Learning Outcomes Assessed

- Discuss key aspects of clinical governance, quality improvement, risk management and patient safety cultures in Medical Imaging.
- Employ quality improvement tools and strategies in the context of a clinical sonography environment.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

2 Multimodality ePoster

Assessment Type
Written Assessment

Task Description
In the early stages of their careers, medical doctors are equipped with a great deal of theoretical knowledge but still have a steep learning curve when it comes to the different types of medical imaging modalities and which modality should be requested in specific clinical scenarios.

You are to produce a poster for the orientation day for radiology fellow doctors on their first day at a large metropolitan hospital within the Emergency Department (ED).

In the poster, you will showcase a chosen pathology and describe the best two modalities to image and demonstrate the pathology. **It is a requirement that ultrasound is one of the modalities discussed**.

The content of the poster should include:

- Why the pathology is well demonstrated in both modalities and which of the two modalities is the gold standard for the chosen pathology.
- Aetiology and patient presentation with this pathology.
- Patient safety considerations for both modalities.
- A description of the imaging appearances of the pathology.
- Any differential diagnoses.
- An adequate patient pathway plan for your chosen pathology

These may be used as your subheadings.

The formatting of the poster (in line with ASA poster guidelines):

- Orientation: Portrait.
- Size: A1
- Format to be submitted: PDF
- Must include a title, content and references. The content may follow the subheadings as listed above.
- Font style: Arial.
- Font sizing:
    - Title: >80 points.
    - Headings: >60 points.
    - Body and content: 24-32 points.
    - References: 16 points.
- Length: Strictly one page.
- Word count: 500 maximum (with a permissible deviation of ±10%).
- Minimum resolution for graphics and images (72 dpi).
- Remember to consider that your colour scheme selection should be easy to read from a distance (contrast of text content with background colour).
- Maximum of 10 peer-reviewed references.

Further details and a marking rubric can be found on Moodle.

Assessment Due Date
Week 11 Wednesday (25 Sept 2024) 5:00 pm AEST

Return Date to Students

Results will be available two weeks after due date.

Weighting
20%

Minimum mark or grade
50%

Assessment Criteria
Your ePoster will be assessed on:

- Spelling, grammar, formatting, academic writing
- Relevant, accurate and complete referencing
- Adherence to the word count of 500 words +/- 10%; additional words over 10% leeway will not be marked

The following assessment supports can be found on the unit Moodle site

- Marking rubric
- Welcome video
- Vancouver referencing information
- Link to ePosters submitted to the Australian Sonographer's Association (ASA) national conference.

Referencing Style

- Vancouver

Submission
Online

Submission Instructions
Online: Include a title slide with student, unit and assessment details. Files need to be uploaded in PDF format

Learning Outcomes Assessed

- Describe the safe application of various medical imaging modalities.
- Identify, compare and describe complementary imaging pathways in specified pathologies.
- Correlate the multi-modality image appearance with a disease process.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

3 Online test

Assessment Type
Online Test

Task Description
Assessment Overview:
Students will complete an online quiz designed to assess their understanding of the concepts covered in MEDS13010. The online test will include a variety of question types, including short answer, medium answer, and multiple-choice questions.

Assessment Instructions:
The test can be accessed through the assessment tab on Moodle. Students must complete the assessment within a designated 60-minute timeframe, and only one attempt is allowed. Once the test is started, it cannot be paused or restarted, so students must ensure they have a stable internet connection and are in an environment free from interruptions before beginning.

Content Coverage:
All unit content for MEDS13010 is eligible for examination in the online test. Students are advised to thoroughly review all lectures, readings, and materials provided throughout the course to prepare for the assessment.

Academic Integrity:
This assessment must be completed individually. Collaboration or collusion with other students is considered academic misconduct and will be reported to the Academic Integrity Unit. Ensure that all responses are your own work.

Timing:
The online test will be available during a specific period, as noted below. Students must complete the test within this window. Late submissions or attempts outside the designated timeframe will not be accepted.

Key Points to Remember:

- Access the online test via the assessment tab on Moodle.
- The test duration is 60 minutes.
- Only one attempt is permitted.
- The test cannot be paused or restarted once begun.
- All unit content may be examined.
- Complete the online test individually to adhere to academic integrity standards.
- Note the opening and closing times for the test and plan accordingly

Support and Resources:
Please contact the unit coordinator or technical support team via Moodle for any questions or technical issues related to the online test. Review all relevant course materials and utilize available study resources to ensure preparedness for the test.

Assessment Due Date
Review/Exam Week Thursday (10 Oct 2024) 11:00 am AEST

Online test closes Thursday (17 Oct 2024) 11:00 am AEST

Return Date to Students

Results will be available at Certification of Grades

Weighting
40%

Minimum mark or grade
50%

Assessment Criteria
For multiple choice and short answer questions, the answers will be either correct or incorrect and tabulated by the unit's online Moodle system. The remainder will be marked accordingly.
Students must achieve a minimum mark of 50% to pass this assessment.

Referencing Style

- [Vancouver](#)

Submission
Online

Learning Outcomes Assessed

- Discuss key aspects of clinical governance, quality improvement, risk management and patient safety cultures in Medical Imaging.
- Describe the safe application of various medical imaging modalities.
- Identify, compare and describe complementary imaging pathways in specified pathologies.
- Correlate the multi-modality image appearance with a disease process.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

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