



MEDS13010 *Quality Practice in Diagnostic Imaging*

Term 2 - 2023

Profile information current as at 03/05/2024 05:12 pm

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 - 2023

- 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 and tutorials

Feedback

It was noted that some of the breast imaging lecture material needs refreshing due to industry advances.

Recommendation

Explore current peer-reviewed literature with a view to the improvement of comparative breast imaging content and resources.

Feedback from SUTE data

Feedback

Some students felt that there needs to be a clear guideline on the modality being assessed with assessment 2. They noted that there needs to be clear guidelines on ultrasound being the main modality being assessed.

Recommendation

Consider revising the current marking rubric and ensure it addresses ultrasound as the main modality being assessed.

Feedback from Self reflection

Feedback

Students noted that the content within week 5 required refreshing to align with current industry guidelines.

Recommendation

Consider rewriting week 5 lectures using current ASAR guidelines and the newly prescribed textbook.

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



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Portfolio - 40%	•	•			
2 - Written Assessment - 20%			•	•	•

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
3 - Online Test - 40%	•		•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	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	Graduate Attributes									
	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

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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

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Supplementary

Leading and Managing Health Services: An Australasian Perspective

(2015)

Authors: Gary E. Day and Sandra G. Leggat

Cambridge

ISBN: 9781316161777

Binding: eBook

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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

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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 - 10 Jul 2023

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 - 17 Jul 2023

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 - 24 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Risk Management and Adverse Events	Readings: eReading List	

Week 4 Change management - 31 Jul 2023

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	

Week 5 - 07 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Safety Culture Safe Sonographic Practice	Readings: eReading List	

Vacation Week - 14 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Break Week		

Week 6 - 21 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Medical Imaging Modalities and Safety Considerations	Readings: eReading List	Quality Management Report Due: Week 6 Friday (25 Aug 2023) 5:00 pm AEST

Week 7 - 28 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Appearances of Common Structures in Multiple Modalities. Contrast Media Use in Imaging Modalities (A)	Readings: eReading List	

Week 8 - 04 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
Contrast Media in Imaging Modalities (B)	Readings: eReading List	

Week 9 - 11 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
Abdomen and Pelvis Imaging	Readings: eReading List	

Week 10 - 18 Sep 2023

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

Week 11 - 25 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
Comparative Breast Imaging Breast Disease	Readings: eReading List	Daylight Saving begins 1st October 2023. Multimodality ePoster Due: Week 11 Wednesday (27 Sept 2023) 5:00 pm AEST

Week 12 - 02 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
Revision		

Review/Exam Week - 09 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
		The online test opens Thursday the 12th of October at 11 am AEST and closes on Thursday the 19th of October at 11 am.

Exam Week - 16 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Term Specific Information

Welcome to MEDS13010 - Quality Practice in Diagnostic Imaging. The unit coordinator for this unit is Mina Shenouda and his availability throughout the term will be on Monday, Tuesday and Thursday. Please utilise the forums on the unit Moodle site for any questions relating to the unit content or assessment items. If you have a query of a personal nature, you can email Mina at m.shenouda@cqu.edu.au.

Each week the Moodle site will be devoted to a different aspect of this unit. Weeks 1 to 5 will be devoted to Quality Practice and weeks 6 -11 will be focused 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, the recordings are not a substitute for active participation. Students that have attended live tutorials are found to have a deeper understanding of the unit content. To attain a passing grade in this unit, students must meet the minimum marks specified in each assessment task and an overall grade of 50% or greater.

Assessment Tasks

1 Quality Management Report

Assessment Type

Portfolio

Task Description

As explored through the content in this unit, quality improvement is a wide umbrella under which many processes exist to improve the quality and safety of care and improve efficiency for healthcare organisations. As a part of this assessment, you will be required to demonstrate your understanding of these processes and concepts through practical application throughout the three sections. Successful completion of this written report is a course requirement of the Australian Sonographers Accreditation Registry (ASAR).

There are three sections within this assessment:

Section 1: Adverse Events

This section will focus on adverse events in ultrasound. Three parts to this section will test students' ability to correctly identify and mitigate adverse events within the ultrasound field. For students to correctly mitigate adverse events, they will be required to create a flow chart based on the fishbone diagram. Examples of adverse events can be obtained from personal experiences whilst on placement, oral recollections by colleagues, incident reports from placement facilities or written accounts. There is a maximum word limit of 500 in this section.

Section 2: Risk Management

Students are required to discuss the importance of a risk management process and are required to create a risk management cycle based on their main adverse event in section 1. All aspects of the cycle require a sub-heading. The maximum word count for this section is 1000 words.

Section 3: Change Management

In section 1 of this assessment, you will have identified contributing factors and potential root causes that lead to your chosen adverse event. This section will require students to adopt one of the change management models (listed on Moodle), and apply it to your selected adverse event from section 1. This section has a word limit of 500 words.

Your final report will include:

1. Cover page
2. Contents page
3. Section 1
4. Section 2
5. Section 3
6. Reference list

Length: maximum 2000 words +/- 10%; additional words over 10% leeway for each section will not be marked. The contents page, 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 peer-reviewed references. 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. For further information, refer to the unit Moodle page and the CQU general website.

Assessment Due Date

Week 6 Friday (25 Aug 2023) 5:00 pm AEST

Return Date to Students

Week 8 Friday (8 Sept 2023)

Results will be available two weeks after due date.

Weighting

40%

Minimum mark or grade

50%

Assessment Criteria

Your assessment will be evaluated using the following criteria

- Complete quality management portfolio which is organised (has a clear introduction, outline of cases, discussion and conclusion) and concisely outlines events and is informed by literature which is cited in-text
- Data is collected and analysed
- Relevant and feasible plans for improvement are proposed
- The portfolio is written in a coherent and cohesive manner and there is adherence 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 a specific clinical scenario.

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

The poster will showcase your chosen pathology and describe the best two modalities to image and demonstrate the pathology. **Ultrasound has to be one of the modalities discussed.** Include why the pathology is well demonstrated on a particular modality and any patient safety considerations for these modalities. Imaging appearances of the pathology should be described along with any differential diagnoses with an adequate patient pathway plan.

ePoster Design

Submitted only as a Microsoft PowerPoint presentation.

Must include title, content and reference list slides. There are to be 8 slides in total.

All slides to be in a 'landscape' format:

- Font style to be Arial and size of font 14-point.
- 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 (27 Sept 2023) 5:00 pm AEST

Results will be available two weeks after due date.

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 1000 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
- Assessment 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 Powerpoint 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

You will complete an online quiz to assess your understanding of the concepts delivered in MEDS13010. The quiz can be accessed through the assessment tab on Moodle.

It will comprise of short and medium answer and multiple-choice questions. Students will need to note opening and closing times to complete the quiz during this time period.

The quiz goes for 60 minutes and only ONE attempt is allowed. Once started, the quiz cannot be paused or restarted.

All unit content for MEDS13010 may be examined.

This assessment is to be undertaken as an individual. As with all other university assessments, colluding with other students on non-group work tasks is considered academic misconduct, and will be reported to the Academic Integrity Unit.

Assessment Due Date

Online test closes Thursday (19 Oct 2023) 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