



MEDS13001 *Obstetric and Breast Ultrasound*

Term 1 - 2019

Profile information current as at 03/05/2024 10:07 pm

All details in this unit profile for MEDS13001 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 advances your study of obstetric ultrasound from MEDS12006 into the second trimester as well as building on breast ultrasound foundations which were created in MEDS12003. You will explore the sonographic assessment of normal and pathological obstetric ultrasound and breast ultrasound cases. You will participate in simulated scanning sessions to facilitate the identification of normal sonographic appearance of the second trimester fetus as well as basic breast scanning techniques and lesion localisation. Clinical scenarios are used to engage you in the sonographic decision-making process which culminates in the creation of sonographer reports.

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: MEDS12003 Superficial Structures in Ultrasound and MEDS12006 Ultrasound in Obstetrics and Gynaecology 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 1 - 2019

- Brisbane
- Mackay
- Melbourne
- Perth
- Sydney

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. **Practical and Written Assessment**

Weighting: 40%

2. **Examination**

Weighting: 60%

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 Student Evaluation

Feedback

Lecture format, pace and content depth is well received by students

Recommendation

Ensure any new or updated lectures keep the same general format of existing lectures

Feedback from Student Evaluation

Feedback

Tutorial format with pop quiz questions is well received by students

Recommendation

Tutorials were increased from fortnightly to weekly in 2018. Keep this frequency and ensure pop quiz questions remain part of the delivery as a revision tool.

Feedback from Student Evaluation

Feedback

A video of a morphology scan (or parts of this) could be included to enhance learning

Recommendation

This has been attempted before, but with little success as it is dependent on patients being available to scan. A video of a morphology scan will be attempted again as it would be a good resource for the students if it can be achieved.

Unit Learning Outcomes

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

1. Analyse normal and abnormal obstetric ultrasound findings with reference to embryology, clinical presentation, sonographic appearance and aetiology
2. Analyse normal and abnormal breast ultrasound findings with reference to anatomy, clinical presentation, sonographic appearance, aetiology and correlation with other breast imaging modalities
3. Analyse clinical scenarios to provide a differential diagnosis and produce sonographic reports
4. Formulate strategies for the provision of safe and ethical patient care
5. Apply sonographic techniques, appropriate to obstetric and breast ultrasound respectively, to produce limited examinations in a simulated environment.

The learning outcomes for this unit relate to the requirements of the Australian Sonographers Association Competency Standards for the Entry Level Sonographer as listed here.

Unit 1-3, 7 & 10.

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

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Practical and Written Assessment - 40%	•	•			•
2 - Examination - 60%	•	•	•	•	

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 - Practical and Written Assessment - 40%	•	•	•	•		•				
2 - Examination - 60%	•	•					•	•		

Textbooks and Resources

Textbooks

MEDS13001

Supplementary

Before We Are Born, Essentials of Embryology and Birth Defects

Edition: 9th (2016)

Authors: Moore, KL, Persaud, TVN, & Torchia MG

Elsevier

Philadelphia , PA , USA

ISBN: 9780323313377

Binding: Paperback

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Supplementary

Callen's Ultrasonography in Obstetrics and Gynecology

Edition: 6th (2017)

Authors: Mary E. Norton, Leslie M. Scutt, Vickie A. Feldstein

Elsevier

Philadelphia , PA , USA

ISBN: 978-0-323-32834-0

Binding: Hardcover

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Supplementary

Textbook of Diagnostic Sonography

Edition: 8th (2018)

Authors: Hagen-Ansert, S

Elsevier

Philadelphia , PA , USA

ISBN: 9780323353755

Binding: Hardcover

Additional Textbook Information

Any of the above texts can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

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

Deanne Chester Unit Coordinator

d.chester@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
The Fetal Environment	Content provided in lectures and reading items on Moodle page	Online Safety Induction to be completed prior to 12 March 2019 COMPULSORY

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fetal Age and Size in the Second and Third Trimester Fetal Reports and Graphs	Content provided in lectures and reading items on Moodle page	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fetal Neural Tube Structures	Content provided in lectures and reading items on Moodle page	Formative Moodle Quiz Lab #1 Wednesday 27/03/2019

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fetal Heart	Content provided in lectures and reading items on Moodle page	Practice Sonographer Worksheet

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fetal Heart...continued	Content provided in lectures and reading items on Moodle page	Mock Exam

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Normal Fetal Chest, Abdomen and Pelvis	Content provided in lectures and reading items on Moodle page	Formative Moodle Quiz Lab #2 Wednesday 24/04/2019

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Abnormal Fetal Chest, Abdomen and Pelvis	Content provided in lectures and reading items on Moodle page	Practice Sonographer Worksheet

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Normal and Abnormal Fetal Limbs Fetal Anomalies	Content provided in lectures and reading items on Moodle page	Lab #3 Wednesday 08/05/2019

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Multiple Gestations	Content provided in lectures and reading items on Moodle page	Formative Moodle Quiz Ultrasound Images and Discussion Due: Week 9 Monday (13 May 2019) 10:00 am AEST

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Breast Anatomy US Appearance of Normal Breast Tissue	Content provided in lectures and reading items on Moodle page	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
US Appearance of Breast Pathology Correlation of Breast US with Other Imaging Modalities	Content provided in lectures and reading items on Moodle page	Mock Exam

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Review week		

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 17 Jun 2019

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

Unit coordinator details:

The unit coordinator for MEDS13001 is Deanne Chester. The best way to contact Deanne is via email at d.chester@cqu.edu.au. Deanne's office number is 07 3295 1175 although she has sonography lab commitments and is often away from her desk. It is often best to email and request a scheduled meeting (over the phone or in person) if necessary.

Additional unit information:

This unit includes three practical sonography lab sessions. During these sessions you will be simulating a limited 2nd trimester morphology ultrasound examination (2 sessions) and a limited breast ultrasound examination (1 session). These sessions will also enable you to produce the images required for the Practical & Written Assessment item due in week 9 (Monday 13 May 2019).

Please note you **MUST** undergo the Lab Safety Induction to be permitted access to the labs during the term. If the induction has not been completed you will be excluded from the lab sessions.

Access to the internet is required to undertake this unit, as unit materials, tutorials and updates will be provided via Moodle, email and Zoom.

Weekly resources will include access to relevant websites, activities and readings. To give yourself the best chance of success please ensure that you undertake all readings and activities that are provided to you. There will be several opportunities for formative assessment and feedback during the term. Due to previous student feedback, there is no prescribed text set for this unit. If you are interested in having a reference text for your studies and to assist you in your early years as a graduate, please see recommendations under 'Additional Resources' on the Moodle page.

Assessment Tasks

1 Ultrasound Images and Discussion

Assessment Type

Practical and Written Assessment

Task Description

This assessment item is designed to allow you to **solve clinical problems** in a sonographic context **and critically evaluate the process and product**.

This will be based around the following components:

Practical component - Acquisition of images

Part A

Using the 2nd trimester obstetric phantoms in the CQU sonography lab, you will personally acquire the following relevant and appropriately optimised images:

1. Placental location / cord insertion
2. Fetal situs and lie (split screen)
3. Bi-parietal diameter (BPD) / head circumference (HC)
4. Abdominal circumference (AC)

5. Femoral length (FL)
6. 4 Chamber Heart (4CH)
7. Aortic root / left ventricular outflow tract (LVOT)
8. Pulmonary artery root / right ventricular outflow tract (RVOT)

ONE image only from each of 1 - 8 above are submitted.

Multiple measurements of parameters should be performed and this will be evident in the report page data. Report pages and graphs (as relevant to the above listed images) are to be included in the submission.

Part B

Using the breast phantoms in the CQU sonography lab, you will personally acquire the following:

1. A short video including audio (using smart phone or similar) demonstrating how to perform cross hatch survey scanning technique
2. A short video including audio demonstrating how to perform radial and anti-radial survey scanning technique
3. 4 x o'clock US images taken at 12, 3, 6 and 9 positions, appropriately optimised, annotated and using body marker
4. Choose ONE lesion within the breast phantom and image it with appropriate optimisation, annotation and body marker in TWO orthogonal planes

Written component - Discussion of image series

You will provide a reflective discussion on your imaging series (1500 words total).

Part A

For EACH image submitted:

- discuss the clinical purpose or importance of each image and/or measurement (Why do we take the image/measurement? How is the information used clinically?). *Include citations/referencing for this section as required.*
- critique the image quality (specifically any aspects needing improvement)
- summarise any difficulties encountered (If it was challenging, why? Do you think it would be different on a patient compared to the phantom? Would there be different challenges on a live fetus?).
- provide suggestions for future improvement when you next attempt this in a clinical setting (be specific and reflective in your thoughts).

Part B

For the images of your chosen lesion ONLY:

- critique the image quality (specifically any aspects needing improvement)
- describe the lesion using appropriate terminology (appearance, size, location, etc)
- based on the appearances of the lesion you have chosen, determine the BIRADS classification

Referencing

Referencing is a vital component of any academic work and plagiarism is taken seriously by the university. Please refer to the *Academic Misconduct Procedure* available on the [IMPortal available HERE](#).

In the medical field (in which sonography is included), journals use a numbered style of referencing for citing references. This can be Vancouver style, AMA, or other combinations. This often depends on the publication.

Hence for this unit the *bibliographic style* you are to use is *Vancouver referencing style*.

Assessment Due Date

Week 9 Monday (13 May 2019) 10:00 am AEST

Upload submissions to Moodle

Return Date to Students

Week 11 Monday (27 May 2019)

Weighting

40%

Assessment Criteria

Practical component - Acquisition of images

Your images will be assessed for:

- optimisation
- scan plane
- accurate measurement/s
- annotation
- use of ultrasound machine features (zoom, chroma maps, split screen, etc)

Written component - Discussion of image series

Your discussion will be assessed on:

- spelling, grammar, academic writing
- referencing
- adherence to word count (word count marks not allocated if too brief or too lengthy; additional words will not be assessed)

As well as the following:

Part A

- justification of clinical relevance of images/reports/graphs
- quality of critique on image quality
- reflection of difficulties encountered in the acquisition process
- suggestions for improvement in a clinical setting

Part B

- quality of critique on image quality
- accuracy of description
- knowledge of basic lesion characterisation

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

- Marking rubric
- Assessment Video
- Exemplars of previous submissions
- Vancouver referencing information

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

Submit in word doc so that marker comments can be added

Learning Outcomes Assessed

- Analyse normal and abnormal obstetric ultrasound findings with reference to embryology, clinical presentation, sonographic appearance and aetiology
- Analyse normal and abnormal breast ultrasound findings with reference to anatomy, clinical presentation, sonographic appearance, aetiology and correlation with other breast imaging modalities
- Apply sonographic techniques, appropriate to obstetric and breast ultrasound respectively, to produce limited examinations in a simulated environment.

Graduate Attributes

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

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

60%

Length

180 minutes

Minimum mark or grade

50%

Exam Conditions

Closed Book.

Materials

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

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