MEDS13008 *Vascular Sonography*
Term 3 - 2021

Profile information current as at 26/04/2024 04:11 am

All details in this unit profile for MEDS13008 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 will introduce you to vascular ultrasound. In this unit you will explore the sonographic assessment of normal and pathological vascular cases. You will apply knowledge of vascular anatomy and physiology, and the physical properties of Doppler ultrasound to clinical scenarios and case studies to critically reflect on sonographic problems. Engaging in this sonographic decision-making process will culminate in the creation of sonographer's interpretive reports, including a provisional diagnosis.

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
Prerequisites:- MEDS12001 Physics of Ultrasound and MEDS11002 Relational Anatomy and Image Recognition
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 3 - 2021

- 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. **Group Work**
Weighting: 40%
2. **Online Test**
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 Have your Say

Feedback
The lectures are too long and there are too many lecture hours each week.

Recommendation
Revise the lectures where possible.

Feedback from Have your Say

Feedback
More quizzes throughout the term would help content retention.

Recommendation
Offer more online quizzes throughout the term.

Unit Learning Outcomes

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

1. Apply knowledge of the anatomy, physiology and pathological processes of the vascular system to sonographic examinations and sonographic image appearances
2. Describe sonographic techniques and protocols appropriate to vascular ultrasound
3. Analyse normal, anomalous and abnormal flow haemodynamics and laboratory findings to provide differential diagnosis and produce a provisional sonographic report
4. Demonstrate professional collaboration with peers.

The learning outcomes for this unit relate to the requirements of the Australian Sonographer's Association (ASA) Competency Standards for the Entry Level Sonographer, unit 1-5, 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
1 - Group Work - 40%	•	•		•
2 - Online Test - 60%	•	•	•	

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				

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Group Work - 40%	•	•	•	•	•	•		•	•	
2 - Online Test - 60%	•	•	•	•						

Textbooks and Resources

Textbooks

MEDS13008

Prescribed

Clinical Doppler Ultrasound
Edition: 3rd edn (2014)
Authors: Pozniak, M & Allan, P
Churchill Livingstone Elsevier
London , UK
ISBN: 978-0-7020-5015-2
Binding: Hardcover
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Supplementary

Vascular Ultrasound How, Why And When
3rd edition (2009)
Authors: Thrush, A & Hartshorne, T
Churchill Livingstone Elsevier
London , UK
ISBN: 978-0-443-06918-5
Binding: Hardcover

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

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

Referencing Style

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

Teaching Contacts

Celia Tinetti Unit Coordinator
c.tinetti@cqu.edu.au

Schedule

Week 1 - 08 Nov 2021

Module/Topic	Chapter	Events and Submissions/Topic
Doppler Physics and Haemodynamic Principles	*Clinical Doppler Ultrasound* by Pozniak & Allan: Chapters 1 and 2, pp. 1-38 *Vascular Ultrasound, How, Why and When* by Thrush and Hartshorne: Chapters 3, 4, 5, 6 and 7, pp. 23-86	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD

Week 2 - 15 Nov 2021

Module/Topic	Chapter	Events and Submissions/Topic

Abdominal Vasculature	Pozniak & Allan: Chapter 6, pp. 122-134 Thrush and Hartshorne: Chapter 11, pp. 155-174	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Week 3 - 22 Nov 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Cerebral Arterial System	Pozniak & Allan: Chapter 3, pp. 39-70 Thrush and Hartshorne: Chapter 8, pp. 87-116	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Week 4 - 29 Nov 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Lower Limb Arterial System	Pozniak & Allan: Chapter 4, pp. 71-93 Thrush and Hartshorne: Chapter 9, pp. 117-142	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Vacation Week - 06 Dec 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Enjoy your break! Take this opportunity to ensure your studies for this term are up to date.		
Week 5 - 13 Dec 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Upper Limb Arterial System	Pozniak & Allan: Chapter 4, pp. 77-82 Thrush and Hartshorne: Chapter 10, pp. 143-154	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD **First Self and Peer Assessment (SPA) survey due Tuesday 1pm AEST**
Week 6 - 20 Dec 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Renal Vasculature	Pozniak & Allan: Chapter 9, pp. 193-213 Thrush and Hartshorne: Chapter 12, pp. 175-187	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Vacation Week - 27 Dec 2021		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Enjoy your break, and see you next year!		
Week 7 - 03 Jan 2022		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Peripheral Venous System	Pozniak & Allan: Chapter 5, pp. 94-114 Thrush and Hartshorne: Chapter 13 pp. 193-215 and Chapter 14: pp. 233-253	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Week 8 - 10 Jan 2022		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
Hepatoportal Circulation	Pozniak & Allan: Chapter 8, pp. 148-192	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD
Week 9 - 17 Jan 2022		
Module/Topic	**Chapter**	**Events and Submissions/Topic**
No new topic introduced this week		**E-Poster, second SPA survey, and draft Abstract due Friday 1pm AEST**

Week 10 - 24 Jan 2022

Module/Topic	Chapter	Events and Submissions/Topic
Haemodialysis	Pozniak & Allan: Chapter 5, pp. 114-120 Thrush and Hartshorne: Chapter 13, pp. 199-232	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD

Week 11 - 31 Jan 2022

Module/Topic	Chapter	Events and Submissions/Topic
Venous Disorders	Pozniak & Allan: Chapter 5, pp. 114-120 Thrush and Hartshorne: Chapter 13, pp. 199-232	Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD

Week 12 - 07 Feb 2022

Module/Topic	Chapter	Events and Submissions/Topic
Review Week - last minute Q&As		Zoom tutorial Wednesday 1pm PER, 3pm BNE & MKY, 4pm MEL & SYD **Final Abstract due Tuesday 1pm AEST** **E-Poster Assessment** Due: Week 12 Tuesday (8 Feb 2022) 1:00 pm AEST

Exam Week - 14 Feb 2022

Module/Topic	Chapter	Events and Submissions/Topic
End of term Online test on Tuesday		The two-hour online test is available from Tuesday 15th February 2022 at 10am AWST / 12pm AEST / 1pm AEDT and will remain open for 2.5 hours. Please ensure you commence the test within 30 minutes of the opening time to allow yourself enough time for completion. Once you begin the test, it can not be re-started or paused. **Online test** Due: Exam Week Tuesday (15 Feb 2022) 2:30 pm AEST

Term Specific Information

Unit Coordinator Information:
Your unit coordinator for 2021 is Celia Tinetti. Celia is based at the Melbourne campus and can be reached via email: c.tinetti@cqu.edu.au or telephone: 03 9616 0528. Please note, all staff emails end in ".cqu.edu.au" - Celia also has a student account but this is not monitored; emails sent to this incorrect account will be missed as this account is not monitored throughout the term.

Unit Details:
MEDS13008 is a 6 credit point unit and is a prerequisite for MEDS13002 Sonographic Skills Development 2 (SSD2), which is run in term one of third year. This unit has been designed to ensure your learning is aligned with what is required of you in SSD2, where you will be performing actual ultrasound examinations of the lower extremity veins and carotid arteries. While there is no vascular scanning this term, so you won't be in the driver's seat so to speak, you will be in the passenger seat, looking at the vascular systems of the whole body, including normal and pathological images and surveys of the lower extremity venous system and carotid systems. This early exposure to what you may observe when scanning will help prepare you for next term when you are in the driver's seat. The teachings of 'Vascular Sonography' will be regularly revisited throughout your studies and your knowledge will be relied upon to assist in you in passing SSD2 practical assessments. As you progress through your clinical units, you will also benefit from revising content from the unit as a part of your critical thinking skills. I encourage you to carefully study the unit profile and to be active in the unit online discussion forums. It is recommended that you commit to 12.5 hours of study each week, therefore a total of 150 study hours upon completion of this unit. This unit is another where you will need to incorporate information from previous units, in particular Relational Anatomy and Image Recognition and Physics of Ultrasound. If your anatomy, image recognition, and physics recollection is a bit hazy, please do yourself a huge favour and refresh this before and throughout the unit - it really will help!

Zoom Tutorial Sessions:
Zoom tutorial sessions will be conducted throughout the term - please see Unit Outline for exact dates and times. Video recordings and chat conversations are uploaded following the tutorial so that students who did not attend can follow along. While every attempt is made to record tutorials, technical mishaps may prevent tutorials from being uploaded for later viewing, so attendance in real-time is highly recommended. Case study scenarios and sonographic image interpretation (both normal and pathological) will be used to teach correct sonographer worksheet completion and reporting of findings. Tutorial material may be included in any of the assessment components.

Assessment Tasks

1 E-Poster Assessment

Assessment Type
Group Work

Task Description
In this assessment task which consists of both group and individual components, you will be in a group consisting of 3 or 4 students (group sizes depend on enrolment numbers; group members all from different campuses) to design an e-poster to inform sonography students of a specific vascular condition. The pathological condition for your group is to be associated with one of the following:

1. Renal arteries
2. Leg arteries
3. Aorta

e-Poster:
This assessment task will enable you to experience what it may be like working in a multi-disciplinary group in a professional environment. Group allocations will be done in week 2; however, this may change after Census date in week 4.
The e-poster will be in PowerPoint format and contain nine slides with the following titles:

1 – 2. Title and Introduction slides
3 – 4. Background
5 – 7. Sonographic assessment
8. Conclusion
9. References

Slides over and above the stipulated number will not be assessed.

Marks are also given for:

1. Presentation and quality of writing – Paragraphs are coherently connected to each other with good grammar, spelling, and punctuation
2. Research quality – The use of peer-reviewed journal articles that demonstrate current trends in relation to the condition's background or assessment with ultrasound are required to show credibility

Abstract:

The structure of the abstract will contain the following subheadings:

- Introduction – A compelling statement as to why this abstract is worth reading with a clear outline of what will be discussed.
- Background – The presenting condition – What is the problem? How does it affect the patient? What are the causes or underlying factors?
- Sonographic assessment – How can ultrasound be used to document and assess this condition? What can it show, and what can't it show? What are the latest advances in sonography regarding this condition?
- Conclusion – A detailed and focused summary of the condition presented in the e-poster. The conclusion should include a take-home message, something you really want readers to remember when they finish reading your abstract.

Marks will also be given for the following:

- Presentation and quality of writing – Paragraphs are coherently connected to each other with good grammar, spelling, and punctuation.
- Structure and detail – The abstract is arranged in a logical, structured, and coherent manner and is representative of the information included in the e-poster.
- Word count – The word count should be between 230 to 250 words inclusive. The word count excludes subheadings. Words over and above the stipulated word count will not be assessed.

Evidence-based research should inform the abstract which should be written in a concise and cohesive manner. A marking rubric for this assessment task is available on the unit Moodle site.

SPA:

The first and Self and Peer Assessment (SPA) surveys are due at the dates and times listed below. Links to the SPA surveys will be available on the unit Moodle site in weeks 5 and 9. The average score of two surveys will determine the final SPA survey grade. Students who do not complete either one or both of the SPAs will be given a score of 0 regardless of the scores received from their peers.

Assessment Due Date

Week 12 Tuesday (8 Feb 2022) 1:00 pm AEST

There are three due dates associated with this assessment: 1 - 1st SPA survey due week 5 Tuesday 14.12.21 at 1:00pm AEST; 2- Submission of e-poster, 2nd SPA survey, and draft abstract due week 9 Friday 21.01.22 at 1:00pm; 3 - final abstract due week 12 Tuesday 8.2.22 1:00pm.

Return Date to Students

A marked rubric containing feedback will be uploaded onto the Gradebook for each student following marking of each part.

Weighting

40%

Minimum mark or grade

50%

Assessment Criteria

You need a minimum of 50% to pass each component to pass Assessment 1. Mark allocation for Assessment 1 include:

1. e-Poster (60% group mark, please see marking rubric for allocation of marks)
2. Abstract (35% individual mark, please see marking rubric for allocation of marks)
3. The Self and Peer Assessment (SPA) Surveys (5% individual mark for both SPAs)

Marking rubrics for both the e-poster (group work) and the Abstract (individual work) are available on the unit Moodle site.

The e-poster will be assessed on its creative engagement and ease of navigation and understanding for the audience, layout, communication style used, content, and facts provided for the reader regarding the specific vascular condition, as well as referencing.

Evidence-based research should inform the slides which should be written in a concise and cohesive manner.
The abstract will be assessed on your ability to write a structured abstract from the information presented in your group's e-poster.
The draft submission for the abstract needs to be submitted by the due date and time listed above to allow for feedback prior to submission of the final version. One feedback opportunity per student is available; late submissions will not receive feedback.

The individual components of this assessment (Abstract and SPAs) are to be undertaken as an individual. Colluding with other students on non-group work tasks is considered academic misconduct, and will be reported to the Deputy Dean of Learning and Teaching (HMAS).

Referencing Style

- Vancouver

Submission
Online Group

Submission Instructions
Only one member of each group is required to submit the draft and final e-poster by the due dates. Each student needs to submit their two SPA surveys and their own draft and final abstracts by the due dates.

Learning Outcomes Assessed

- Apply knowledge of the anatomy, physiology and pathological processes of the vascular system to sonographic examinations and sonographic image appearances
- Describe sonographic techniques and protocols appropriate to vascular ultrasound
- Demonstrate professional collaboration with peers.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Ethical practice
- Social Innovation

2 Online test

Assessment Type
Online Test

Task Description
In this end of term online test, you will be demonstrating your critical thinking skills to answer the questions. This may include using information from clinical and ultrasound presentations to arrive at diagnoses, using a diagnosis and working backwards to name the expected sonographic presentation, other combinations of clinical presentation, sonographic presentation, and diagnoses, and extending the ultrasound examination if appropriate. To do this, you will evaluate clinical case studies, images, and clinical presentation information. You will also be required to identify the cause of artefacts on duplex Doppler images and explain both how this can affect the patient results and how to correct these. Questions will be in the format of short answer, medium length or extended answer, and multiple-choice questions (MCQs). Questions and images may include all content covered throughout the whole unit.

The online test will be available at the date and time listed below. The length of the test will be 2 hours so please ensure you start within 30 minutes of the start time to ensure adequate time to complete the test. At 12:30pm AWST / 2:30pm AEST /3:30pm AEDT, all attempts will be automatically submitted. Only one attempt of the online test will be allowed. Once started, the test cannot be stopped, paused, re-started, or re-taken.

Assessment Due Date
Exam Week Tuesday (15 Feb 2022) 2:30 pm AEST

Return Date to Students

Weighting
60%

Minimum mark or grade
50%

Assessment Criteria
You will be assessed on your critically thinking ability by evaluating clinical information including sonographic images, clinical presentation information, ultrasound findings, and extending your ultrasound examination.
Answers require critical thinking and may include explaining what has been demonstrated in the images using appropriate sonographic terminology, including anatomical features, differential diagnoses, a provisional diagnosis, and extending the examination.
Answers may also include working backward to provide possible clinical presentations of patients with those specific images.

This assessment is to be undertaken as an individual. Colluding with other students on non-group work tasks is considered academic misconduct, and will be reported to the Deputy Dean of Learning and Teaching (HMAS).
This assessment task must be completed on the due date listed above. No late submissions are permitted after the test has closed, so please ensure adequate time for completion, with additional time in case of computer mishaps. If you have computer / test access difficulties, you need to contact TaSAC as soon as possible for assistance, and the unit coordinator (after you've contacted TaSAC) if you cannot complete the test in the allocated time before the end of the test.

Referencing Style

- Vancouver

Submission
Online

Learning Outcomes Assessed

- Apply knowledge of the anatomy, physiology and pathological processes of the vascular system to sonographic examinations and sonographic image appearances
- Describe sonographic techniques and protocols appropriate to vascular ultrasound
- Analyse normal, anomalous and abnormal flow haemodynamics and laboratory findings to provide differential diagnosis and produce a provisional sonographic report

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

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