



# MEDS13008 Vascular Sonography

## Term 1 - 2018

Profile information current as at 14/12/2025 04:13 pm

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

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 - 2018

- Distance

#### 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. **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 Moodle feedback and Unit coordinator self-evaluation

##### **Feedback**

Some weeks the Tutorials contained too many images for comprehensive discussion. This resulted in extension of the tutorial time or leaving some sonograms not critiqued nor discussed resulting in some frustration to students.

##### **Recommendation**

Future tutorials will focus on approximately 10 varied but relevant sonograms to compare and contrast similarities/differences

#### Feedback from Moodle, emails and tutorials

##### **Feedback**

A suggestion to adapt the prescribed text so it is more relevant to the content of this course.

##### **Recommendation**

A custom solutions text is currently being formatted at the publisher Elsevier

#### Feedback from Unit evaluation feedback

##### **Feedback**

The assessment item was favourably received for its directions, production and its design for student learning.

##### **Recommendation**

This assessment item will be retained but with slight changes in the topics offered.

## 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.
4. Demonstrate professional collaboration with your peers.
5. Analyse clinical scenarios to provide a differential diagnosis and produce a sonographic report.

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
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### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Group Work - 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 - Group Work - 40%	•	•	•	•	•					
2 - Examination - 60%	•	•		•						

## Textbooks and Resources

### Textbooks

MEDS13008

#### Prescribed

##### **Clinical Doppler Ultrasound**

3rd edition (2014)

Authors: Pozniak, M & Allan, P

Elsevier Health Sciences

London, UK

ISBN: 9780702050152

Binding: Other

#### **Additional Textbook Information**

Included in the purchase of the hard copy of this textbook is on-line access to the same text as an e-book ISBN: 97807055379.

[View textbooks at the CQUniversity Bookshop](#)

### 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 styles below:**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)
- [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Afrooz Najafzadeh Abriz** Unit Coordinator

[a.najafzadehabriz@cqu.edu.au](mailto:a.najafzadehabriz@cqu.edu.au)

## Schedule

### Week 1 - 05 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Haemodynamics and Doppler Physics Review	Chapter Ch. 1_Physics: Principles, Practice and Artefacts P 1-25 CH 2_ Haemodynamics and Blood Flow p26-38	

### Week 2 - 12 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
DVT- Routine study of leg veins	CH 5_ The Peripheral Veins PP 94-113	Formation of teams for group- work assessment item.

**Week 3 - 19 Mar 2018**

Module/Topic	Chapter	Events and Submissions/Topic
DVT continued- Abnormalities encountered in DVT studies	CH 5_ The Peripheral Veins PP 102-103 and On-line resources	Finalisation of teams for group-work assessment item

**Week 4 - 26 Mar 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Routine Carotid and Vertebral Artery Studies	Ch 3_ The Carotid and Vertebral Arteries PP 39-50	

**Week 5 - 02 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Abnormal Extra-cranial Cerebrovascular studies	Ch 3_ The Carotid and Vertebral Arteries PP 50-66	Submission via Moodle of DRAFT of Oral Presentation

**Vacation Week - 09 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
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**Week 6 - 16 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Lower and Upper Extremity Arterial Doppler examination	CH 4_ The Peripheral Arteries PP 71-93	

**Week 7 - 23 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Abdominal Aortic Aneurysm (AAA) - EVAR	CH 6_ The Aorta and Inferior Vena Cava PP 122-130 and On- line resources	

**Week 8 - 30 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Renal Arteries - Direct and Indirect Doppler Assessment	Read Pozniak & Allan (2014) Chapter 9: The Kidneys Renal Vascular Doppler, pp 193-21	Submission via Moodle of Recording of Oral Presentation

**Week 9 - 07 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Renal Transplant assessment- Doppler of Haemodialysis Access Grafts	CH 10_ Solid Organ Transplant (renal transplantation) PP 214-232 CH 7_ Haemodialysis Access (Arteriovenous Fistulas and Synthetic Grafts) PP 35- 147	During week 9 students will assigned two other oral presentations to individually critique.

**Week 10 - 14 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Hepato-Portal Assessment_ Abdominal Venous Doppler	CH 8_ The Liver (executing the Liver Doppler Study) PP 148-178 PP 183-191 CH 6_ The inferior Vena Cava PP 130-133	Completion of Self and Peer Assessment (SPA) due by Friday Week 10

**Week 11 - 21 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
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Doppler assessment of Chronic Venous Valvular Insufficiency (CVVI)

CH 5\_The Peripheral Veins (Recurrent Varicose Veins and Chronic Venous Insufficiency) PP 114-121

Final submission of critiques of both alternate recorded oral presentations due at end of week 11.

All components of Group Work Due: Week 11 Monday 4:00 pm AEST

**Recording of Oral Presentation**

Due: Week 11 Monday (21 May 2018) 11:45 pm AEST

**Week 12 - 28 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Revision and Final Examination Preparation		Mock Exam and exam review Distribution of links to all recorded oral presentations for unit review and exam preparation.

**Review/Exam Week - 04 Jun 2018**

Module/Topic	Chapter	Events and Submissions/Topic
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**Exam Week - 11 Jun 2018**

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

Unit coordinator is Maria Maroney.

Contact details: email: [m.maroney@cqu.edu.au](mailto:m.maroney@cqu.edu.au) or phone: 07 49232522

Maria's Days for CQU are Tuesday, Wednesday and Thursday. Email on others days may take longer.

The best way to contact Maria initially is by email at [m.maroney@cqu.edu.au](mailto:m.maroney@cqu.edu.au).

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

## Assessment Tasks

### 1 Recording of Oral Presentation

**Assessment Type**

Group Work

**Task Description**

Task Description

Assessment Item 1 Group work -

Oral Presentation

There are three parts to this assessment Item.

- Part A: Each group will produce a 10 to 15 min recorded oral presentation.
- Part B: Your peers will assess your individual contribution to the Group Presentation.
- Part C: You will critique two other Group Presentations.

Your Task

The unit coordinator will assign you to a group for this assessment task. Group members will be from the same campus.

Part A: GROUP PRESENTATION (20%)

As a group, choose one (1) topic from the list below:

1. Peripheral Arterial Disease (PAD) of the arteries of the lower limbs
2. Initial diagnosis of Abdominal Aortic Aneurysm (AAA)
3. Post Endovascular Aortic Repair (EVAR) evaluation
4. Fibromuscular Dysplasia (FMD) in renal arteries
5. Atherosclerosis (AS) in carotids
6. Subclavian Steal Syndrome (SSS) in carotids and vertebral arteries
7. Portal Vein (PV) hypertension
8. Deep Vein Thrombosis (DVT) of the lower limb

Prepare and record an oral presentation (10 to 15 minutes) using Power Point for submission in Week

8. Information on best practice group work and good presentation style will be available on the Moodle site.

In Week 5, you are required to submit a draft of your work for feedback from the unit coordinator.

A deduction of 5 marks will be taken from the marks for the oral presentation for failure to submit this draft.

Group marks will be determined by the content and quality of the oral presentation submitted.

All team members will receive the same marks for this component.

Part B: INDIVIDUAL CONTRIBUTION 1 (10%)

Other group members will assess your contribution to the group presentation by answering 10 standard questions. You will receive a link to these questions via email in Week 10. You will be awarded the average of these marks.

Part C: CRITIQUE OF GROUP PRESENTATIONS (10%)

The Unit coordinator will assign to each student two other group presentations to critique individually. You will write a 300-350 words critique on each presentation, in which you will comment only on the accuracy, quality and depth of the sonographic content as well as the relevance of any accompanying sonograms within the oral presentation.

You will provide examples from the oral presentation to highlight your referenced arguments on the above aspects.

The coordinator will assess your critiques.

More details about all aspects of this assessment are available on the Moodle site.

ALL parts A, B and C of Assessment Due Date Week 11 Monday

04:00 PM AEST

Return Date to Students Week 12 Friday

Weighting 40%

### **Assessment Due Date**

Week 11 Monday (21 May 2018) 11:45 pm AEST

### **Return Date to Students**

Week 12 Friday (1 June 2018)

### **Weighting**

40%

### **Assessment Criteria**

Your team's recorded oral presentation will be assessed by considering each of the following assessment criteria:-

- a) Have you identified the parameters of your topic or problem?
- b) Have you prioritised relevant detail for inclusion?
- c) Is the information included accurate and evidence-based with relevant references?
- d) Does your content indicate that you understand the most important aspects of the vascular study?
- e) Have you used images and graphics which are relevant and of satisfactory quality?
- f) Have you sufficiently addressed the significant Doppler waveforms and details?
- g) Have you clearly taken into account your specific audience i.e. your fellow students in MEDS13008 Vascular Sonography?
- h) Do you have adequate support from peer-reviewed, up-to-date references?
- i) Is your organisation, spelling, grammar and use of vocabulary exemplary?

A full marking Rubric is available on the Moodle page



## Referencing Style

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)
- [Vancouver](#)

## Submission

Online

## Submission Instructions

Only one team member needs to submit the video recording of the oral presentation for the whole group.

## Learning Outcomes Assessed

- Apply knowledge of the anatomy, physiology and pathological processes of the vascular system to sonographic examinations and sonographic image appearances.
- Analyse normal, anomalous and abnormal flow haemodynamics and laboratory findings.
- Demonstrate professional collaboration with your peers.

## Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work

## 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

Minimum percentage of examination marks required to pass course - 50%

### Exam Conditions

Closed Book.

### Materials

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

Calculator - non-programmable, no text retrieval, silent only

## 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