



MEDS13008 *Vascular Sonography*

Term 1 - 2019

Profile information current as at 05/10/2023 08:50 am

All details in this unit profile for MEDS13008 have been officially approved by CQUUniversity 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 - 2019

- 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. **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 email

Feedback

Students enjoyed the learning achieved from the "Waveform of the Week" quiz.

Recommendation

Retain the "Waveform of the Week" learning.

Feedback from Student email

Feedback

Students felt that there was too much content for a 12 week unit.

Recommendation

The more advanced vascular learning has been removed and will be taught in the Advanced Vascular Masters unit.

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



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

THIRD EDITION (2014)

Authors: MYRON A POZNIAK and PAUL L. ALLAN

CHURCHILL LIVINGSTONE ELSEVIER

LONDON , UK

ISBN: 978-0-7020-5015-2

Binding: Hardcover

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Supplementary

Vascular ULTRASOUND HOW, WHY AND WHEN

Edition: THIRD (2009)

Authors: Thrush, A & Hartshorne, T

Churchill Livingstone

London , UK

ISBN: 978-0-443-06918-5

Binding: Hardcover

Additional Textbook Information

Vascular Ultrasound is a recommended supplementary book. Students may choose to purchase this book but it is not compulsory.

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

[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 style: [Vancouver](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Afroz Najafzadeh Abriz Unit Coordinator

a.najafzadehabriz@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
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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

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of the peripheral veins	Pozniak & Allan: Chapter: 5 pp 94-114 Thrush and Hartshorne: chapter: 13 PP 193-215 and chapter: 14: pp 233-253	Zoom Tutorial Friday 22.03.19 12:00 p.m. AEST

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of carotid and vertebral arteries	Pozniak & Allan: chapter: 3 pp 39-70 Thrush and Hartshorne: chapter: 8 pp 87-116	

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of the aorta and inferior vena cava	Pozniak & Allan: chapter: 6 pp 122-134 Thrush and Hartshorne: chapter: 11 PP 155-174	Zoom Tutorial Friday 05.04.19 12:00 p.m. AEST

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of the lower limb arteries	Pozniak & Allan: chapter: 4 pp 71-93 Thrush and Hartshorne: chapter: 9 pp 117-142	Draft website design submission due Friday 12.04.19, 02.00 p.m. AEST. The first Self and Peer Assessment (SPA) survey is due Friday 12.04.19, 02:00 p.m. AEST.

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
This is the vacation week and a good time to revise the contents of the unit so far.		

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of the upper limb arteries	Pozniak & Allan: chapter: 4 pp 77-82 Thrush and Hartshorne: chapter: 10 PP 143-154	Zoom Tutorial Friday 26.04.19, 12:00 p.m. AEST

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of renal arteries	Pozniak & Allan: chapter: 9 pp 193-213 Thrush and Hartshorne: chapter: 12 pp 175-187	

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Doppler ultrasound assessment of the hepato-portal system	Pozniak & Allan: chapter: 8 pp 148-192	Zoom Tutorial Friday, 10.05.19 12:00 p.m. AEST

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Work on the assessment task.		The second SPA survey is due on Friday 2.00 p.m. AEST. Design an educational website on a vascular condition, targeting general public / patients Due: Week 9 Friday (17 May 2019) 2:00 pm AEST

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to advanced vascular ultrasound-Doppler ultrasound assessment of haemodialysis access grafts	Pozniak & Allan: chapter 5 pp 114-120 Thrush and Hartshorne: chapter: 13 PP 199-232	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to advanced vascular ultrasound-Doppler ultrasound assessment of chronic venous insufficiency	Pozniak & Allan: chapter 5 pp 114-120 Thrush and Hartshorne: chapter: 13 PP 199-232	

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Exam revision week		Zoom Tutorial Tuesday 10.06.19 12:00 p.m. AEST

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
The Standard Examination		

Term Specific Information

Unit coordinator is Dr. Afrooz Najafzadeh Abriz. Afrooz is based in Perth.

Contact details: email: a.najafzadehabriz@cqu.edu.au or phone: 08 92604080

The best way to contact Afrooz is by email. Remember the time difference between Western Australia and the eastern states when contacting the unit coordinator.

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 Design an educational website on a vascular condition, targeting general public / patients

Assessment Type

Group Work

Task Description

The internet has become an integral part of our everyday lives, affecting the way we work, communicate, shop, travel and obtain information. It has also changed the way patients obtain health information. In this assessment you are asked to design a website using any free online platform. The aim of your website is to raise the awareness of a vascular condition with the emphasis to educate the patients about what signs and symptoms to look for and what to expect when they attend an ultrasound examination for diagnosis of the condition. Additionally a component of this assignment has been dedicated to demonstrate effective communication skills.

You will be allocated to a group, ideally groups will contain maximum of 4 students from the same campus but depending on number of enrolments, a group may be comprised of 3 students or students may be from different campuses. A revision of Belbin's team roles will be provided under the assessment overview task. A draft group allocation will be available by Monday of the second week of the term (18.03.19), which could be subject to change until after the census date of 03.04.19 in week 4.

Groups in various campuses will be randomly given a number from 1 to X (depending on the numbers enrolled at each campus). Random allocation of teams reflects the reality of working in a multi-disciplinary team in a clinical environment.

A topic from the list below will be allocated to that group number:

1. Deep vein thrombosis
2. Carotid artery stenosis
3. Abdominal aortic aneurysm
4. Peripheral arterial disease.

Assessment Due Date

Week 9 Friday (17 May 2019) 2:00 pm AEST

There are three components to this assessment: Part A: Draft website format submission-group component (Due date: week 5 Friday 02:00 p.m. AEST). Part B: Submission of link to the final website-group component with embedded individual component (Due date: week 9 Friday 17.05.19 02:00 p.m. AEST). Part C SPA surveys x 2 - individual component (Due dates: week 5 Friday 12.04.19 02:00 p.m. AEST and week 9 Friday 17.05.19 02:00 p.m. AEST.)

Return Date to Students

Week 11 Friday (31 May 2019)

Weighting

40%

Assessment Criteria

The website must contain five pages or tabs:

Tabs / pages to be titled as:

1. About us
2. Factsheet
3. Blogs
4. Identify, Situation, Background, Assessment, Recommendation (ISBAR) video
5. References

Page 1 / tab 1: About Us (10%)

In this tab you are required to introduce all group members, stating the name of your unit, course and the

university you're enrolled at.

Additionally:

- Describe what the website is designed for.
- Provide a guide for the reader on how to navigate the website.
- Clearly define the target audience.
- Describe the aims / objectives of the information provided in the website.
- Explain the significance of the vascular condition as an important health issue.

You can enter above information as written text or embed a recorded video where all members introduce themselves and explain the purpose of the website.

Page 2 / tab 2: Factsheet (25%)

This page should contain the main information about the vascular condition and should reflect evidence of a wide range of readings including the most up to date and accurate information about the vascular condition using credible references. The maximum word count for this section is 1500 words.

The factsheet page should:

- Clearly define the background to the condition including facts / figures / statistics and identify the high risk group.
- Clearly explain the signs and symptoms of the condition.
- Clearly describe the ultrasound examination for the condition.
- Advise the follow up assessment depending on the ultrasound diagnosis and / or explain the possible treatment options.
- Contain correct in-text citation using Vancouver style of referencing with superscript numbers.

Page 3 / tab 3: Blog (25%) - Individual component

Each member of the group to enter a blog on this page, with the maximum word count of 500 words per blog. A team comprising of 4 members must have 4 blog entries, smaller groups of 3 may enter 3 blog only. The blog entry needs to contain the author's name and a date of entry. It is more attractive for an educational website to have blog entries over a space of several weeks, so try and not post all blogs at once. The blogs would be representation of the individual component for this assignment. No information in the factsheet should be repeated in the blog entries. Similar to the factsheet, evidence of wide range of readings and most up to date, accurate information is required.

The blog entry should:

- Provide new information on any aspect of the condition not included in the factsheet.
- Refer to any new media release / recent published work about the condition.
- Provide additional information about the ultrasound examination not included in the fact sheet **or** describe the advantages of ultrasound examination compared to other methods of investigation for this condition.
- Explain possible alternative diagnostic examinations and/ or management options (if relevant).

- Contain correct in-text citation using Vancouver style of referencing with superscript numbers

Page 4 / tab 4 - ISBAR video (25%)

Group members need to record an oral presentation and are expected to do a role play in order to portray the correct method of communicating patients' information and scan findings to the reporting Radiologist (using ISBAR framework of communication in health).

The ISBAR will be explained in a tutorial in week 2.

The video length should be maximum of 5 minutes, each member is required to take part. Team members can play the following roles: Patient, student Sonographer, supervising Sonographer and the reporting Radiologist.

The recorded video is to be embedded in page 4 / tab 4 or a link to a You Tube channel should be placed in page 4 / tab 4 to direct the reader to the video.

The ISBAR video requirements are:

- The purpose of the video should be explained to the target audience.
- In role play, each team member portrays their part so all aspects of ISBAR are clearly demonstrated.
- The ultrasound findings are clearly and concisely reported to the supervisor and / or the reporting Radiologist.
- The recommendations from the Radiologist must be clearly communicated to the patient.
- The video production must be of high quality (clarity of speech / audio volume and visuals).

More information about the ISBAR is provided on Moodle under the Assessment Overview task.

Page 5 / TAB 5- References (5%)

This tab should contain all your end text citations and link address to any other websites / videos you have used in your website. The references should be divided under subheadings (corresponding to page / tab number) to show which references were used for each tab.

Website layout (5%)

Five percent mark has been allocated to creativity and the website layout.

The minimum requirement for the draft status of your websites are as follows:

1. Website title.
2. Tabs / pages allocated with headings.
3. Introduction of group members and purpose of the website explained in tab 1 / page 1.

You do not need to have any information typed / inserted in other tabs at the draft stage, but you may choose to do so to show your progress.

The Self and Peer Assessment (SPA) Survey (5%)

This will be assessed in two parts, the first SPA survey to be submitted in week 6 by Friday 12.04.19 02:00 p.m. AEST with the link to the draft website.

The final SPA survey to be submitted in week 9 by Friday 17.05.19 02:00 p.m. AEST. The average score of two surveys will determine the final SPA survey grade.

A marking rubric is provided on the Moodle under the Assessment Overview task.

Referencing Style

- Vancouver
-

Submission

Online

Submission Instructions

Only one member of each group is required to submit the link to the draft website and the final website by the due dates. Other members need to submit their own blog only by the due date. Each member of group is expected to submit the SPA survey in week 5 and week 9 by the due date.

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

Only one member of each group is required to submit the link to the draft website and the final website by the due date. Other members need to submit their own blog only by the due date in week 9. Each member of group is expected to submit the SPA surveys in week 5 and week 9 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.
- 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

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