



# ECHO13008 Advanced Cardiac Assessment Skills

## Term 1 - 2024

Profile information current as at 19/05/2024 07:01 am

All details in this unit profile for ECHO13008 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

## General Information

### Overview

In this unit you will compare and contrast the methodology and outcomes of several advanced echocardiographic and cardiac catheterisation procedures and alternative cardiac testing modalities including MRI, CT and Nuclear medicine. You will apply this knowledge to a variety of common cardiovascular pathologies frequently first assessed with echocardiography, within the setting of best practice and patient safety. You will evaluate a variety of cardiac assessment data, formulating differential diagnoses and management strategies.

### 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 ECHO12004 Cardiac Assessment Skills 1 OR ECHO12007 Cardiac Rhythm Assessment AND ECHO12003 Principles of Cardiac Assessment OR ECHO12008 Doppler Echocardiography AND ECHO12005 Cardiac Clinical Unit 2 AND Co-requisite: ECHO13006 Adult Echocardiography

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 - 2024

- 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. **Online Quiz(zes)**

Weighting: 40%

#### 2. **Group Work**

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 Unit Evaluation and Self-Reflection

**Feedback**

Students would like more real-world examples provided.

**Recommendation**

More real-world examples will be provided to students to help them with their knowledge. Review the effectiveness of the learning materials provided for the unit and incorporate additional real-life examples to enhance students' knowledge development in this unit.

#### Feedback from Student Unit Evaluation

**Feedback**

Provide more useful feedback.

**Recommendation**

Try to encourage students to engage with the unit coordinator for an informal consult regarding their results. Provide feedback in a different format. This year feedback was provided as a video recording. Students may prefer feedback in a written format.

## Unit Learning Outcomes

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

1. Discuss the clinical assessment and management strategy for a variety of cardiac conditions, with consideration of pathophysiological processes, best practice guidelines and patient safety
2. Compare and contrast the methodology and outcomes of various cardiac assessment modalities, identifying discordant data
3. Analyse case-based cardiac assessment data to formulate differential diagnoses
4. Demonstrate professional communication skills.

Linked to the Australian Sonographer Accreditation Register Standards for Cardiac Sonography:  
Foundation Units of Competence

- Unit 1: Deliver safe, patient centred service
- Unit 2: Practice within professional and ethical frameworks
- Unit 3: Locate, analyse and synthesise information to support evidence based practice
- Unit 4: Contribute to workplace health and safety and quality assurance
- Unit 5: Communicate effectively

Critical Practice Unit of Competence

- Unit 8: Cardiac

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Online Quiz(zes) - 40%	•	•	•	•
2 - Group Work - 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				

## Textbooks and Resources

### Textbooks

ECHO13008

#### Supplementary

##### **ASE's Comprehensive Echocardiography**

3rd Edition (2022)

Authors: Roberto M. Lang, Goldestein, Kronzon, Khandheria, Mor-avi

Elsevier

Philadelphia , USA

ISBN: 9780323698306

Binding: Hardcover

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#### Supplementary

##### **A Sonographer's Guide to the Assessment of Heart Disease**

Edition: First (2014)

Authors: Bonita Anderson

MGA Graphics

Brisbane , QLD , Australia

ISBN: 9780992322205

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)

## Referencing Style

All submissions for this unit must use the referencing style: [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Sudeepthi Singarayar** Unit Coordinator

[s.singarayar@cqu.edu.au](mailto:s.singarayar@cqu.edu.au)

## Schedule

### Week 1 - Module 1 - 04 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Stress Echocardiography and Dobutamine Stress Echocardiography in Ischaemic Heart Disease	See eReading list via Moodle	

### Week 2 - Module 1 - 11 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Stress Echocardiography Applications in Non-Ischaemic Heart Disease	See eReading list via Moodle	

**Week 3 - Module 1 - 18 Mar 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Ultrasound Enhancing Agents (UEA's) and Bubble Studies	See eReading list via Moodle	

**Week 4 - Module 1 - 25 Mar 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Strain	See eReading list via Moodle	

**Week 5 - Module 1 - 01 Apr 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Transoesophageal Echocardiography	See eReading list via Moodle	

**Vacation Week - 08 Apr 2024**

Module/Topic	Chapter	Events and Submissions/Topic

**Week 6 - Module 2 - 15 Apr 2024**

Module/Topic	Chapter	Events and Submissions/Topic
3D Echocardiography	See eReading list via Moodle	<b>Online Quiz 1</b> will open at 8:00 am (AEST) on Friday 19th of April and close at 8:00 pm (AEST) on Monday 22nd of April.

**Week 7 - Module 2 - 22 Apr 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Device closure of ASD and PFOs Percutaneous valve replacement	See eReading list via Moodle	

**Week 8 - Module 2 - 29 Apr 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Computerised Tomography (CT) Magnetic Resonance Imaging (MRI)	See eReading list via Moodle	

**Week 9 - Module 2 - 06 May 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Fractional Flow Reserve (FFR) Nuclear Medicine	See eReading list via Moodle	

**Week 10 - 13 May 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Groups to review group work for submission		<b>Online Quiz 2</b> will open at 8:00 am (AEST) on Friday 17th May and close at 8:00 pm (AEST) on Monday 20th May.

**Week 11 - 20 May 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Groups to review group work for submission		

**Week 12 - Evaluation on this unit - 27 May 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Evaluation of the unit.		<b>Group Work Due</b> 5:00 pm (AEST) Wednesday 29th May 2024

## Term Specific Information

### Unit Coordinator and Contact Details

The Unit Coordinator for ECHO13008 is Sudeepthi Singarayar. The preferred method for contacting Sudeepthi is via the Learning Community Q&A Forum located on the Moodle site for content-related questions. If the query is personal, please email s.singarayar@cqu.edu.au, or phone (02) 9324 5036. Sudeepthi's workdays are Wednesday, Thursday and Friday and she is based at the Sydney Campus.

### Unit Tutorials

Tutorials for this unit will be delivered online using ZOOM (the links required for accessing the tutorials are provided on the Moodle site under the Virtual Classes tile). The tutorials will focus on clarification of theoretical concepts and assessment requirements. Tutorials are designed to complement the theories and principles presented in lectures. Tutorials provide an opportunity for discussion and interaction with other students and with your tutor. Students should make the most of these interactive sessions and participate fully to broaden their knowledge and experience with the course material. Note: Tutorials are recorded for educational purposes. Recordings of Zoom tutorials may be uploaded and appear on YouTube, Moodle and Microsoft Teams. If you have any concerns about being recorded please turn off your webcam or audio, or both, during the session. Your participation will signify your consent to the recording and publication for educational purposes.

### Unit Study Commitment

As per Australian educational standards, there is an expectation of 150 hours of engagement required to complete learning and assessment tasks associated with this 6-credit point unit. (i.e. 12.5 hours per week). Weekly revision material will be provided. Attempting all provided revision material will help you prepare for your online test. No new lecture material will be presented from week 9 of the term. The final weeks will be used to prepare for your group and individual assessments.

## Assessment Tasks

### 1 Online Quiz(zes)

#### Assessment Type

Online Quiz(zes)

#### Task Description

The online quiz(zes) will assess your understanding of the content presented within this unit. Questions may be drawn from lectures, additional resources provided (e.g. prescribed readings) or tutorial presentations.

**There will be two (2) online quizzes.**

#### Online Quiz 1 (20% of the assessment weighting)

- This quiz will assess the topics covered during weeks 1 to 5 (inclusive).

#### Online Quiz 2 (20% of the assessment weighting)

- This quiz will assess the topics covered during weeks 6 to 9 (inclusive).

**Students will have 30 minutes to complete each quiz once started. This time frame includes a perusal time.**

Students are advised:

- To have a calculator available once started.
- Once the quiz is started, the online quiz cannot be paused or restarted.
- Only one attempt is permitted.
- The online quiz will automatically close and submit completed student answers once the allocated time has elapsed.
- The duration of this quiz is tailored to promote recall of fact, rather than research of answers unknown.
- You will be required to answer a variety of online questions. Questions may include multiple-choice, short answers and image interpretation format.
- The number of marks allocated for each question will be indicated within the online quiz. Question marks are allocated based on the accuracy, depth and breadth of required responses.

Students are reminded that IT support from the University Information and Technology Division (TASAC) is only available

during AEST business hours. It is recommended that the online quiz is completed during business hours.

Students are advised to refer to the 'Assessment Policy and Procedure (Higher Education Coursework)' document for additional university guidelines regarding assessments.

This assessment is to be undertaken as an individual. As with all other university examinations, colluding with other students on non-group work tasks is considered academic misconduct, and may lead to action being taken by the Deputy Dean of Learning and Teaching HMAS.

Please note that the online quiz must be completed before the due date listed below. In the absence of an approved extension, there will be no opportunity to complete the task after this date, and there will be no opportunity to apply a late penalty of five percent per day. Students will receive a mark of zero (or fail) for this assessment if you have not completed it by the scheduled date and time and do not have an approved extension.

**Number of Quizzes**

2

**Frequency of Quizzes**

Other

**Assessment Due Date**

Online Quiz 1 will open from 8:00 am (AEST) on Friday 19th of April and will close at 8:00 pm (AEST) Monday 22nd of April. Online Quiz 2 will open from 8:00 am (AEST) on Friday 17th May and will close at 8:00 pm (AEST) Monday 20th of May.

**Return Date to Students**

Results will be available within two weeks of the due date.

**Weighting**

40%

**Minimum mark or grade**

50%

**Assessment Criteria**

You will be required to answer a variety of online questions. Question responses will be assessed according to the student's:

- Use of appropriate terminology and descriptors as well as grammar and spelling.
- Ability to appropriately interpret presented sonographic images and cardiac assessment data.
- Ability to succinctly respond with accurate answers.

**Referencing Style**

- [Vancouver](#)

**Submission**

Online

**Submission Instructions**

The online quiz will be accessible through the assessment tab on Moodle.

**Learning Outcomes Assessed**

- Discuss the clinical assessment and management strategy for a variety of cardiac conditions, with consideration of pathophysiological processes, best practice guidelines and patient safety
- Compare and contrast the methodology and outcomes of various cardiac assessment modalities, identifying discordant data
- Analyse case-based cardiac assessment data to formulate differential diagnoses
- Demonstrate professional communication skills.

## 2 Group Work

**Assessment Type**

Group Work

**Task Description**

You have been asked by your supervisor to present at a cardiology conference. As an echocardiographer, it is a requirement of your discipline to maintain continuing professional development (CPD) points. You will be representing



your department at the conference. As such, you have decided to organise a small team of peers who will present the topic with you at the conference.

This task is designed to give you experience in preparing and delivering presentations to fellow colleagues in your future career as a clinical cardiac sonographer. The target audience for this presentation will be fellow students and the unit coordinator.

To replicate the team environment encountered by cardiac sonographers in the workplace, students will choose the group they would like to present with and the topic they would like to research. The final student number, required for the group will be decided by the unit coordinator once the final student numbers for the unit are known.

Each team member will individually research the topic. You will then collaborate as a team to create a PowerPoint and a 10-minute recording to present your group's findings.

The topics that can be chosen are:

- Benign cardiac tumours
- Malignant cardiac tumours

The weighting for this assessment is distributed across three assessment components:

**Part A: Individual component (30% of the assessment weighting)**

You will be required to research the provided topic area and write a 500 (+/- 10%) word essay.

The essay should include:

- A definition of the disease allocated.
- Echocardiography findings of the disease.
- Define one other multi-modality imaging technique that can be used to diagnose the cardiac findings of the disease and the findings of this modality concerning the cardiac etiology of the disease.
- Include possible symptoms and treatments, if any.

This essay can then be used to aid in the development of your group presentation. A minimum of 5 references should be included. References do not form part of individual word counts. Students will receive an individual mark for this task component.

**Part B: PowerPoint and Recorded Presentation - Group Work (20% of the assessment weighting)**

It is expected that you will share the work of this assessment task part B equally between group members so that an even spread of input between group members is achieved. If any issues arise within the group, members of the group should contact the unit coordinator as soon as possible so that a resolution can be achieved. All oral presentations are to be submitted using Zoom video conferencing recording - in this way, no groups can be advantaged nor disadvantaged by their IT skills.

**Recorded Presentation**

- The presentation must be no longer than 10 minutes in length (+/-1 minute).
- Define the disease allocated.
- Discuss the diagnostic evaluation of the disease and how to differentiate between the disease and other diseases with similar echocardiographic findings.
- Echocardiography findings of the disease.
- Define other multi-modality imaging that can be used to diagnose the disease. Include at least two to three multi-modality imaging techniques. No more than three multi-modality imaging techniques.
- A script of what each team member is saying should be provided (this will not be marked).
- As this is meant to simulate a conference presentation, video cameras should be used.

All team members will receive the same mark for this task component.

The PowerPoint slides should:

- Contain appropriate key information, diagrams, cardiac images, and referencing as required.
- Contain captions and tables that are clear and succinct.
- Do Not use abbreviations or acronyms without an initial explanation in the presentation.
- Should not be overloaded with written content or visual graphics, simplistic styling is recommended.

**Part C: Self and Peer Assessment (SPA) tool (10% of the assessment weighting)**

To assess each member's contribution to the group work, you will need to complete a self and peer assessment (SPA)

tool. Each person within the group will score themselves and other team members for their degree of contribution to the group work activity.

All students will be required to individually complete a SPA tool. Students will be emailed a SPA Tool access link via email. SPA submission details are confidential and are not made available to other members of the group.

### **Assessment Due Date**

Group Work Due 5:00 pm (AEST) Wednesday 29th May 2024.

### **Return Date to Students**

Marks will be released at certification of grades.

### **Weighting**

60%

### **Minimum mark or grade**

50 %

### **Assessment Criteria**

The following assessment criteria cues should be considered by students when completing each task component.

#### **Part A: Individual Component**

- Have you prioritised relevant information for inclusion?
- Is the information included accurate and evidence-based with relevant references?
- Does the information provided indicate that you understand the topic and the multi-modality technique that you have chosen?
- Have you used relevant images?
- Is your spelling and grammar exemplary?
- Have you adhered to the correct referencing style?

The Group work marking rubric can be found on the unit's Moodle site.

#### **Part B: PowerPoint and recorded presentation**

- Are your PowerPoint slides well collated with no breaches of academic integrity? Do not copy and paste information from other sources.
- Is the information included accurate and evidence-based with relevant references?
- Have you prioritised relevant information for inclusion?
- Does your content indicate that you understand the topic?
- Have you used images and graphics that are relevant and of satisfactory quality?
- Have you taken into account your specific audience?
- Do all speakers provide an engaging presentation, which is clearly audible?
- Is your spelling and grammar exemplary?
- Have you adhered to the correct referencing style and provided adequate acknowledgment to sources?
- Do all speakers speak clearly?

### **Referencing Style**

- [Vancouver](#)

### **Submission**

Online Group

### **Submission Instructions**

Each student is to individually submit all parts of the assessment task. A step by step guide will be available on Moodle.

### **Learning Outcomes Assessed**

- Discuss the clinical assessment and management strategy for a variety of cardiac conditions, with consideration of pathophysiological processes, best practice guidelines and patient safety
- Compare and contrast the methodology and outcomes of various cardiac assessment modalities, identifying discordant data
- Analyse case-based cardiac assessment data to formulate differential diagnoses
- Demonstrate professional communication skills.

## 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