



ECHO12006 Cardiac Science

Term 1 - 2019

Profile information current as at 17/05/2024 02:24 pm

All details in this unit profile for ECHO12006 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

The accurate diagnosis of cardiac conditions requires comprehensive knowledge of cardiac pathophysiology, and the outcomes of a variety of cardiovascular assessment procedures. In this unit you will be introduced to cardiac assessment within the catheterisation laboratory. You will learn how to interpret a 12-Lead electrocardiogram (ECG), and how to assess cardiac structure and function by performing a 2D echocardiographic examination. Within the ethical framework of best practice, you will examine simulated case based clinical information, to explore the outcomes of these procedures, formulating differential diagnoses and patient management strategies for a variety of common cardiovascular pathologies. Attendance at practical activities is a requirement of this unit.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 12

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.25

Pre-requisites or Co-requisites

Pre-requisite ECHO11002 Cardiac Structure and Function and Co-requisite 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

- Brisbane
- Perth
- Sydney

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 12-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 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. **Written Assessment**

Weighting: 40%

2. **In-class Test(s)**

Weighting: Pass/Fail

3. **Practical Assessment**

Weighting: Pass/Fail

4. **Performance**

Weighting: Pass/Fail

5. **Reflective Practice Assignment**

Weighting: Pass/Fail

6. **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 Unit evaluations, emails

Feedback

Despite rapid notification of results, students who successfully 'passed' OSCE and practical assessments on their first attempt, requested more detailed feedback.

Recommendation

Assessment ARC tools and rubrics will be modified to facilitate feedback summation by examiners, so that documents can be uploaded and dispersed via the Moodle site to all students in a more timely fashion.

Feedback from Unit evaluations, emails

Feedback

Laboratory sessions were well structured and supported in their delivery by staff.

Recommendation

The same laboratory format will be continued in 2019. Further improvements will include the addition of blood pressure and practical ECG performance to reinforce skills already learnt, and required for subsequent clinical placements. An induction with staff will be held prior to laboratory delivery to improve tutor consistency. In addition, new video resources will be created to illustrate the scan being taught, and these will be made available on the Moodle site for review.

Feedback from Unit evaluations

Feedback

Students were anxious about the ECG OSCE assessments

Recommendation

An assessment video will be created clearly outlining task requirements. Students will be provided with the opportunity to participate in Mock OSCE assessments during zoom tutorials. The benefit of attending tutorials will be promoted more heavily next delivery, as engagement in tutorials by students this term was poor.

Unit Learning Outcomes

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

1. Perform the standard two dimensional echocardiographic protocol including associated anatomical quantification
2. Provide rationale for the exclusion of artefactual and discordant 2D echocardiographic findings
3. Analyse case-based clinical information to formulate differential diagnoses and plan patient management strategies for a variety of common cardiovascular pathologies
4. Discuss common cardiac catheterisation procedures including radiation safety
5. Interpret the outcome of 12-Lead electrocardiogram (ECG) studies
6. Apply professional behaviour, teamwork and communication skills consistent with safe practice
7. Apply constructive feedback to professional practice improvement.

Linked to National and International Standards

1. ASAR Accreditation Standards for Cardiac Sonography - critical practice Unit 8 - Cardiac, Foundation units of competence - 1 - 5.
2. European Association of Cardiovascular Imaging Core Syllabus
3. American Registry for Cardiac Sonography Core Syllabus

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes						
	1	2	3	4	5	6	7
1 - Written Assessment - 40%			•				
2 - In-class Test(s) - 0%					•		
3 - Practical Assessment - 0%	•	•					
4 - Performance - 0%						•	
5 - Reflective Practice Assignment - 0%							•
6 - Examination - 60%		•	•	•			

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes						
	1	2	3	4	5	6	7
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 - Written Assessment - 40%	•		•	•		•	•			
2 - In-class Test(s) - 0%	•	•	•	•						

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
3 - Practical Assessment - 0%	•	•	•	•		•	•	•		
4 - Performance - 0%	•	•	•		•		•	•		
5 - Reflective Practice Assignment - 0%	•	•	•	•				•		
6 - Examination - 60%	•	•		•				•		

Textbooks and Resources

Textbooks

ECHO12006

Prescribed

A Sonographer's Guide to the Assessment of Heart Disease

Edition: First (2016)

Authors: Bonita Anderson

EchoText

Brisbane , Queensland , Australia

ISBN: 978-0-9923222-0-5

Binding: Hardcover

ECHO12006

Prescribed

Echocardiography: The Normal Examination and Echocardiographic Measurements

Edition: 3rd (2017)

Authors: Bonita Anderson

Echotext

Brisbane , Queensland , Australia

ISBN: 978-0-9923222-1-2

Binding: Hardcover

ECHO12006

Prescribed

Introduction to 12-Lead-ECG: The Art of Interpretation

Edition: 2nd (08/08/2014)

Authors: Tomas B. Garcia

Jones & Bartlett

Sudbury , Massachusetts , United States

ISBN: 9781284040883

Binding: Paperback

Additional Textbook Information

The textbooks prescribed are used throughout the CV69 program in multiple units, and students may have already purchased several of these resources.

You can check and purchase 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

Paula Boucaut Unit Coordinator
p.boucaut@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none">• Radiation safety in the catheterisation laboratory• Determining heart rate, identifying waveforms, cardiac axis and conduction defects• How to obtain and optimise the normal echocardiographic windows	<p>PDF attachments for review:</p> <ul style="list-style-type: none">• The difficult patient• Transducer and breathing techniques to improve visualisation• Sonographer ergonomics <p>Anderson, B. (2017). Echocardiography: The Normal Examination and Echocardiography Measurements. (3rd edn.) Australia: MGA Graphics, p.33-70.</p> <p>Garcia T. (2015) Introduction to 12-lead ECG. 2nd ed. USA: Jones and Bartlett Learning, p.57-61; 63-80; 123-131; 133-147.</p>	<ul style="list-style-type: none">• Lab Induction• Performance assessment - Upload 'Lab Agreement' and 'Consent Form - Examination for Teaching Purposes' (but do not submit for grading yet, as additional submissions required during week 12)

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none">• Cardiovascular haemodynamics• Identifying ischaemia, infarction and anatomical relationship• Identifying the main cardiac structures in the standard imaging views• Variants of normal	<p>PDF attachments for review:</p> <ul style="list-style-type: none">• Fact or Artefact - Two Dimensional Echocardiography• Normal Anatomic Variants on Trans thoracic Echocardiogram• Anatomic Variants Mimicking Pathology on Echocardiography: Differential Diagnosis• Haemodynamics in the Cardiac Catheterization Laboratory of the 21st Century <p>Anderson, B. (2017). Echocardiography: The Normal Examination and Echocardiography Measurements. (3rd edn.) Australia: MGA Graphics, p.33-70.</p> <p>Garcia T. (2015) Introduction to 12-lead ECG. 2nd ed. USA: Jones and Bartlett Learning, p.183-207.</p>	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
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- Transducer function part 1 and 2
- Identifying arrhythmias
- Introduction to 2D measurements including aortic, LV and right heart assessment
- Mmode application, optimisation and measurement

PDF attachments for review:

- Principles of pressure transducers, resonance, damping and frequency response

Anderson, B. (2017). Echocardiography: The Normal Examination and Echocardiography Measurements. (3rd edn.) Australia: MGA Graphics, p.75-81, 153-185, 196.

Garcia T. (2015) Introduction to 12-lead ECG. 2nd ed. USA: Jones and Bartlett Learning, p.65-80.

- Lab 1 focus - Parasternal window acquisition

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Right heart catheterisation • Common pathologies in the catheterisation laboratory • ECG revision - applying 'step wise method' of interpretation • Estimation of RAP using IVC collapsibility • Volumetric assessments 	<p>Anderson, B. (2017). Echocardiography: The Normal Examination and Echocardiography Measurements. (3rd edn.) Australia: MGA Graphics, p.153-185.</p> <p>Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.99-101.</p>	<ul style="list-style-type: none"> • Lab 2 focus - Apical window acquisition

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • The thermodilution technique • ECG revision - applying 'step wise method' of interpretation • Pericardial effusion and other differential diagnoses • Case study - Left ventricular hypertrophy and chronic systemic hypertension 	<p>ASE Chamber Quantification 2015 'Section 4: LV Mass' pages 13-15.</p> <p>Anderson, B. (2017). Echocardiography: The Normal Examination and Echocardiography Measurements. (3rd edn.) Australia: MGA Graphics, p.158.</p> <p>Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.89-92, 346.</p>	<ul style="list-style-type: none"> • Unmanned practice available - book via Google Doc link on Moodle site • Lab 3 focus - Subcostal and aortic arch window acquisition

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
		<ul style="list-style-type: none"> • Unmanned practice available - book via Google Doc link on Moodle site

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Global left ventricular systolic function • Regional left ventricular systolic function • Right ventricular systolic function • Eccentricity index and pulmonary hypertension 		<ul style="list-style-type: none"> • Lab 4 focus - completion of a full 2D echocardiographic examination

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
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- Complications of myocardial infarction
- Non-ischaemic causes of chest pain

Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.125-134, 137-143, 373-394.

- Unmanned practice available - book via Google Doc link on Moodle site
- Lab 5 focus - completion of a full 2D echocardiographic examination

In class test Due: Week 7
Wednesday (1 May 2019) 10:00 am AEST

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Cardiac thrombus • Cardiac tumours 	Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.395-398.	<ul style="list-style-type: none"> • Unmanned practice available - book via Google Doc link on Moodle site • MOCK 'Practical scanning skills and QLAB assessment' performed this week

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Anatomy of the aortic valve • Aortic stenosis, aetiology, 2D and Mmode echo findings • Aortic regurgitation, aetiology, 2D and Mmode echo findings • Aortopathies 	Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.177-202, 325-341.	<ul style="list-style-type: none"> • 2 sessions of unmanned practice available - book via Google Doc link on Moodle site <p>Written Task Due: Week 9 Monday (13 May 2019) 5:00 pm AEST</p>

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Anatomy of the mitral valve • Mitral stenosis, aetiology, 2D and Mmode echo findings • Mitral regurgitation, aetiology, 2D and Mmode echo findings • Mitral valve score index (Wilkins index) 	Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.215-243.	<ul style="list-style-type: none"> • Unmanned practice available - book via Google Doc link on Moodle site • 'Practical scanning skills and QLAB assessment' performed this week

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
<ul style="list-style-type: none"> • Anatomy of the tricuspid valve • Tricuspid stenosis, aetiology and 2D echo findings • Tricuspid regurgitation, aetiology and 2D echo findings • Anatomy of the pulmonary valve • Pulmonary stenosis, aetiology and 2D echo findings • Pulmonary regurgitation, aetiology and 2D echo findings 	Anderson, B. (2014). A Sonographer's Guide to the Assessment of Heart Disease. Australia: MGA Graphics, p.255-257, 259-269, 275-282, 284.	<ul style="list-style-type: none"> • Students who fail practical assessments (and those required to act as patient models) will be individually notified of re-sit schedule on Wednesday the 29th of May • For students required to attempt resit practical examinations - 2 sessions of unmanned practice are available - book via Google Doc link on Moodle site

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Exam revision

- Performance assessment - Upload 'Professional Behaviour Assessment Rubric' and 'Lab Attendance Document'
- Reflective Practice - Upload 5 'Formative feedback forms' and MOCK 'Assessment of Readiness for Clinical ARC tool'
- RESIT 'Practical scanning skills and QLAB assessment' performed this week.

Professional Behaviour Assessment Due: Week 12 Friday (7 June 2019) 5:00 pm AEST
Formative Feedback Assessment Due: Week 12 Friday (7 June 2019) 5:00 pm AEST

Review/Exam Week - 10 Jun 2019

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

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

The unit coordinator for ECHO12006 is Paula Boucaut. There are multiple content experts teaching into this unit. In the first instance, students are requested to utilise the Moodle Q&A forum for content related questions. Using the Moodle Q&A forum enables the most appropriate staff member to respond to your post. If the query is of a personal nature, please email p.boucaut@cqu.edu.au, or phone office number (07) 3203 4108.

Weekly zoom tutorials will be held during the term. Specific times and zoom meeting IDs will be posted on the Moodle site. The zoom tutorials will focus on clarification of course concepts and/or assessment requirements and clinical case studies which will link the course content with clinical practice. To give yourself the best chance of success with the unit, please ensure that you undertake all the additional readings and activities that are provided to you.

Skills labs for this unit are mandatory. Please pay close attention to the campus specific lab schedules associated with this unit. A demerit system applies in this unit for lapses in professionalism (LiP). Tutorial lab sessions missed without a valid reason or supporting documentation will warrant a demerit point. Important: You MUST be available to act as a patient model during week 10 and 12 for practical skills and re-sit assessments.

Assessment Tasks

1 Written Task

Assessment Type

Written Assessment

Task Description

You are to write an essay, which cites a variety of sources that support your discussion on the following topic:

'Acute pericarditis' is an inflammation of the pericardium that can result in chest pain. The ECG in acute pericarditis can evolve through as many as four stages of changes, and the temporal evolution of ECG changes can be highly variable. Echocardiography can be used to exclude associated complications of acute pericarditis such as pericardial effusion and/or tamponade. Whilst a rare complication, chronic inflammation of the pericardium may result in 'constrictive pericarditis'.

Within your essay:

- Discuss the pathophysiology of pericarditis and discriminate between the etiology observed in developed and developing countries.
- Identify clinical findings which would suggest a diagnosis of acute pericarditis.
- Identify ECG changes characteristic of acute pericarditis and suggest at least two other differential diagnoses

which would need to be excluded.

- Define 'constrictive pericarditis' and describe several 2D echocardiographic findings which may support its diagnosis.
- Briefly discuss the clinical management and prognosis of pericarditis, including reference to common pharmaceutical interventions.
- Include several illustrative echocardiographic images and an ECG example within your essay to support discussion.

Word count: 1200 words count +/- 10%, to be submitted as a word document.

Word count does not include headings or references, but does include diagram explanations and labelling.

Referencing: Vancouver.

Minimum 5 peer reviewed journal articles must be cited. Literature titles must be current (<5 years of age), excepting seminal works.

Assessment Due Date

Week 9 Monday (13 May 2019) 5:00 pm AEST

Return Date to Students

Week 11 Friday (31 May 2019)

Weighting

40%

Minimum mark or grade

50%

Assessment Criteria

You will be assessed on your ability to:

- Locate and critically evaluate information
- Recognise pertinent professional information
- Describe practical aspects of electrocardiography and echocardiography
- Produce a scholarly essay

A copy of the marking rubric can be found [HERE](#). This assessment task carries a 40% weighting toward the final unit grade.

Should a student fail this weighted assessment, a supplementary assessment will be made available, provided criteria outlined in the 'Grades and Results Procedure Policy' are satisfied. Students who qualify for a supplementary assessment will be individually notified with details upon grade certification.

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

Electronic submission word document via Moodle site.

Learning Outcomes Assessed

- Analyse case-based clinical information to formulate differential diagnoses and plan patient management strategies for a variety of common cardiovascular pathologies

Graduate Attributes

- Communication
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence

2 In class test

Assessment Type

In-class Test(s)

Task Description

Being able to correctly interpret rhythm strips and ECGs is crucial to providing good health care. Comprehensive ECG analysis can provide vital clues about the nature and location of heart problems.

A PASS must be obtained to pass unit overall.

Students will be presented with 10 different 12 Lead ECG recordings, in standard format.

The ability of students to correctly diagnose and interpret information displayed on each electrocardiogram will be assessed by asking the student to respond to a series of questions.

Questions will focus on specific features demonstrated on the ECG presented, applying aspects of the ['step-wise' method of ECG interpretation](#).

Following 10 min of test perusal, 1 hour will be provided to successfully completed this assessment task.

Students will be prepared for this assessment through lectures, tutorials and provision of revision tasks in a similar format during unit delivery.

Assessment Due Date

Week 7 Wednesday (1 May 2019) 10:00 am AEST

Assessment will be conducted on campus of enrolment

Return Date to Students

Week 10 Monday (20 May 2019)

Weighting

Pass/Fail

Minimum mark or grade

To PASS, a student will be required to demonstrate a 'Novice level' of ECG interpretation competency (60% GRADE).

Assessment Criteria

Students will be assessed on their ability to:

- determine cardiac rate, rhythm and axis
- identify hypertrophy and conduction defects
- identify ischaemia, infarction and associated anatomical relationship
- identify arrhythmia(s)
- use correct terminology when discussing ECG waveforms, segments, intervals and associated anomalies

There is only ONE opportunity to re-sit this assessment task.

A copy of the first assessment piece is not available for viewing prior to resit. Failing students will be individually notified on Monday 20th May Week 10, and provided with feedback regarding first attempt.

Resits will occur on: Wednesday the 29th May Week 11 at 10am on campus of enrolment. (Campus specific room numbers will be advised through unit Moodle site)

Final moderation of resit attempts may take several days. In interim, students should prepare to undertake remaining unit assessment tasks, regardless of anticipated outcome. All grades are 'provisional' until certified.

Referencing Style

- [Vancouver](#)

Submission

Offline

Learning Outcomes Assessed

- Interpret the outcome of 12-Lead electrocardiogram (ECG) studies

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

3 2D Echocardiography practical assessment

Assessment Type

Practical Assessment

Task Description

Students must achieve a '**Novice competency level**' for each assessment component, to pass this assessment task overall.

Assessments will occur on: Wednesday the 22th May Week 10 and Friday the 24th of May. Students should envisage attendance at campus being required for the majority of these days.

Students will be notified of campus specific assessment schedules on: Monday the 13th of May Week 9.

- All students must be available to act as a patient model for peer practical assessments.

- Students may have to be a patient model on more than one occasion.
- Students cannot request who they scan for their practical assessment.

This assessment task has both a professional and technical component. The technical requirement has two sub-components - a practical scanning task and a separate QLAB measurement task. Professional and technical requirements are discussed in the unit lab manual, lab sessions, lectures and tutorials.

Assessment Due Date

Assessments will be completed during week 10 on Wednesday the 22nd of May and Friday the 24th May. Students should envisage attendance at campus being required for the majority of these days. Students will be notified of campus specific assessment schedules on Monday the 13th of May Week 9.

Return Date to Students

Week 11 Wednesday (29 May 2019)

Students will be notified of PASS/FAIL via Moodle grade book.

Weighting

Pass/Fail

Minimum mark or grade

Novice competency level - minimum 60% mark.

Assessment Criteria

Professional (pre-scan, during and post-scan) requirement:

This task component requires the student to demonstrate appropriate professional behaviour both pre-scan, during and post-scan. This includes demonstrating appropriate patient care techniques and effective communication. Effective communication includes being able to obtain relevant patient history, informed consent, and to direct 'patients' accordingly. Students must also demonstrate appropriate sanitation and respect for fragility of equipment used within the laboratory setting.

The Professional requirement is performed and assessed in conjunction with the Technical Part A - Practical scanning task.

A time limit of 10 minutes is provided to complete the professional behavioural assessment task. This is in addition to the practical scanning time limit of 1 hour. Students will be assessed using the ['Assessment of Readiness for Clinical' \(ARC\) tool](#).

Technical - 'scanning and measurement' requirements:

Technical requirements associated with this assessment, incorporate two components:

A. Practical scanning task

Students will be required to demonstrate appropriate 2D and Mmode echocardiographic scanning technique, image optimisation and acquisition, in a reasonable set time period, to a 'novice level' of competency.

A scanning time limit of 1 hour will be applied to image acquisition. Students will be assessed using the ['Assessment of Readiness for Clinical' \(ARC\) tool](#).

B. QLAB measurements

Students will also be required to perform a series of offline measurements using the QLAB workstations.

A 30 min time limit will be applied to measurement acquisition. Students will be assessed using the [QLAB ARC tool](#).

To pass this assessment, both the professional and technical components must be graded as a 'pass'. Students are advised to carefully review assessment ARC tools.

The components of this assessment are graded separately, so that if one is passed and another is not, only the failed component must be repeated to pass. If the student has failed only the professional component, the full practical scanning assessment will be repeated, but the student will only be marked on the professional component.

No marks or feedback will be given at the time of assessment, or prior to moderation across campuses.

There is only **ONE** opportunity to re-sit components of this assessment task.

Re-sits will occur on: Wednesday the 5th June Week 12 on campus of enrolment.

Failing students, and students required to act as patient models, will be individually notified of re-sit schedule on Wednesday the 29th of May.

All enrolled students must be available to act as a patient model for peer resits, if requested by unit coordinator.

Students may have to be a patient model on more than one occasion. Students cannot request who they scan for their practical assessment. Prior to attempting resit, students will not be advised of their allocated patient model.

Final moderation of resit attempts may take several days. In interim, students should prepare to undertake remaining unit assessment tasks, regardless of anticipated outcome. All grades are 'provisional' until certified.

Referencing Style

- [Vancouver](#)

Submission

No submission method provided.

Learning Outcomes Assessed

- Perform the standard two dimensional echocardiographic protocol including associated anatomical quantification
- Provide rationale for the exclusion of artefactual and discordant 2D echocardiographic findings

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

4 Professional Behaviour Assessment

Assessment Type

Performance

Task Description

Professional behaviour is a critical part of any medical imaging profession and encompasses the manners in which we treat our colleagues, patients and the professional settings and equipment provided to us. The purpose of this assessment is to ensure that students from the medical echocardiography program are well-equipped to embody the high standards of professionalism that are expected from CQUniversity students whilst on clinical placements. In addition, this assessment task will prepare you for the attendance and documentation responsibilities associated with clinical placement.

This is a **PASS/FAIL** assessment. There are no resit opportunities for this assessment task.

Lapses in professionalism will result in the award of a LiP (Lapse in professionalism incidence).

Using this demerit system, a maximum of three LiPs can be issued.

- If a fourth LiP is issued, this assessment task will be graded as a FAIL
- If any exhibited behaviour is deemed as UNSAFE for clinical practice, the professional behaviour assessment will be graded as a FAIL at the discretion of the unit coordinator.
- Awarded LiP points are detailed and summated on the 'Professional Behaviour Assessment Rubric' and acknowledged on the 'Lab Attendance Document'.
- You will be required to be present for every scanning tutorial and QLAB session.
- Failure to attend a compulsory scanning tutorial or QLAB session will result in the allocation of a LiP. The only exception will be in the event of illness, in which case medical documentation will be required and no demerit will be issued. If you are absent for a lab, please indicate this on your Lab attendance record - a tutor's signature is not required. Medical certificates verifying any episode of illness, should be uploaded along with lab attendance document.

Students are encouraged to review the documents listed below, which further discuss appropriate professional behaviour and LiP allocation.

- Click here for further details regarding '[Expected Professional Behaviour and LiP allocation](#)'.
- Click here for [ASA CODE OF PROFESSIONAL CONDUCT FOR SONOGRAPHERS](#) and the [CQU CODE OF CONDUCT](#).

Assessment Due Date

Week 12 Friday (7 June 2019) 5:00 pm AEST

WHEN UPLOADING DOCUMENTS AT THE END OF WEEK 1 - DO NOT CLICK 'SUBMIT FOR GRADE'. SUBMIT ALL DOCUMENTS FOR GRADING SIMULTANEOUSLY AT THE END OF WEEK 12.

Return Date to Students

A PASS/FAIL grade will appear in grade books within 7 working days following final submission due date in week 12.

Weighting

Pass/Fail

Assessment Criteria

This assessment task will require you to complete and submit the documentation listed below:

- A signed [Lab Agreement](#) to be uploaded in Week 1 by Friday 15th March 5 pm AEST
- A signed [Consent Form - Sonographic Examination for Teaching Purposes](#) to be uploaded in Week 1 by Friday 15th March 5 pm AEST
- A completed and signed [Professional Behaviour Assessment Rubric](#) to be uploaded in Week 12 by Friday 7th June

5 pm AEST

- A completed [Lab Attendance Document](#) to be scanned and uploaded in Week 12 by Friday 7th June 5 pm AEST

You must upload all of the required documentation for this assessment by the due date and time to obtain a 'PASS'.

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

All documents must be legible, labelled with student name and number, and uploaded in PDF format with submission identifier (i.e. Lab Agreement, Consent Form, Professional Behaviour Assessment, Lab Attendance Document)

Learning Outcomes Assessed

- Apply professional behaviour, teamwork and communication skills consistent with safe practice

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Team Work
- Cross Cultural Competence
- Ethical practice

5 Formative Feedback Assessment

Assessment Type

Reflective Practice Assignment

Task Description

The purpose of this assessment is to develop self-reflection skills by setting weekly goals and following up on progress. Formative Feedback Forms must be completed BEFORE leaving at the end of each lab (as you would be required to complete documentation for each patient's scan before the end of a clinical shift), and to have it signed off by your instructor.

- You must upload all of the required documentation for this assessment by the due date and time to obtain a 'PASS'.
- If you are absent for a lab, please indicate the reason for this on your formative feedback form - a tutor's signature is not required.
- All absences must be discussed with the unit coordinator, following the processes outlined under assessment task 4.

PASS/FAIL assessment. To obtain a 'PASS', all documentation must be completed correctly and submitted on or before the corresponding due date and time.

Assessment Due Date

Week 12 Friday (7 June 2019) 5:00 pm AEST

Return Date to Students

A PASS/FAIL grade will appear in grade books within 7 working days after submission due date in week 12.

Weighting

Pass/Fail

Assessment Criteria

This assessment will require you to upload:

5 completed [Formative Feedback Forms](#) and one completed Mock '[Assessment of Readiness for Clinical](#)' (ARC) tool. (A completed 'Assessment of Readiness for Clinical' (ARC) tool will be provided to you by your tutor following your individual Mock practical skills test during week 8)

Referencing Style

- [Vancouver](#)

Submission

Online

Submission Instructions

All documents must be legible, labelled with student name and number, and uploaded in PDF format with submission identifier (i.e. Formative Feedback Forms or Mock Assessment of Readiness for Clinical (ARC) tool).

Learning Outcomes Assessed

- Apply constructive feedback to professional practice improvement.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Ethical practice

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