ECHO11002 *Cardiac Structure and Function*
Term 2 - 2021

Profile information current as at 26/04/2024 02:10 am

All details in this unit profile for ECHO11002 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
Accurate assessment of cardiac function requires comprehensive knowledge of anatomy, embryology, and physiology of the heart, lungs and surrounding structures. You will develop familiarity with the spatial relationship of thoracic structures and the heart. This unit exposes you to data acquired from multiple imaging modalities, including angiography, electrocardiograms (ECG), and echocardiography. You will explore normal ECG complexes, learn how a standard 12-lead ECG is generated, and learn to competently perform a standard 12-lead ECG. Attendance at a residential school is a requirement of this unit.

Details
Career Level: *Undergraduate*
Unit Level: *Level 1*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Pre-requisite Students must be enrolled in CV69 Bachelor of Echocardiography (Cardiac Physiology)/Graduate Diploma of Echocardiography ANDCo-requisiteBMSC11002 Human Body Systems 2
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 2 - 2021

- Mixed Mode

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).

Residential Schools
This unit has a Compulsory Residential School for distance mode students and the details are:
Click here to see your Residential School Timetable.

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: 60%
2. **Practical Assessment**
Weighting: Pass/Fail
3. **Online Test**
Weighting: 40%

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 and Teaching Evaluation

Feedback
Students enjoyed the cardiac anatomy and physiology content and interactive delivery of the unit.

Recommendation
Continue to deliver content with an interactive focus.

Feedback from Student Unit and Teaching Evaluation

Feedback
Students appreciated the format and timing of the online quizzes.

Recommendation
Deliver the assessment with similar format and timing of online quizzes.

Feedback from Student Unit and Teaching Evaluation

Feedback
Students expressed that embryology content was lacking structure and introductory concepts.

Recommendation
Redevelop embryology content with a clearer structure and a more scaffolded approach.

Unit Learning Outcomes

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

1. Describe the anatomy and physiology of the cardiovascular and respiratory system
2. Identify anatomical structures on diagrams and medical images of the thorax and cardiovascular system
3. Describe the embryological development of the cardiovascular system
4. Explain the formation of an electrocardiogram (ECG) complex, and its representation on a normal 12-lead ECG
5. Perform a 12-lead ECG.

Linked to National and International Standards
1. ASAR Accreditation Standards for Cardiac Sonography - critical practice Unit 8 - Cardiac
2. European Association of Cardiovascular Imaging Core Syllabus
3. American Registry for Cardiac Sonography Core Syllabus

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level | • Introductory Level | • Intermediate Level | • Graduate Level | ◦ Professional Level | ◦ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Online Quiz(zes) - 60%	•	•		•	
2 - Practical Assessment - 0%					•

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
3 - Online Test - 40%	•	•	•		

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 - Online Quiz(zes) - 60%	•	•		•		•				
2 - Practical Assessment - 0%	•	•				•	•	•		
3 - Online Test - 40%	•	•		•						

Textbooks and Resources

Textbooks

ECHO11002

Prescribed

Echocardiography: The Normal Examination and Echocardiographic Measurements
Edition: 3rd (2017)
Authors: Bonita Anderson

Echotext
AUS
ISBN: 0992322219
Binding: Hardcover
ECHO11002

Prescribed

Introduction to the 12-Lead ECG: The Art of Interpretation
Edition: 2nd (2015)
Authors: Tomas Garcia
Jones & Bartlett Learning
Burlington , MA , USA
ISBN: 9781284040883
Binding: Paperback
ECHO11002

Supplementary

Before We Are Born: Essentials of Embryology and Birth Defects
Edition: 9th (2016)
Authors: Keith Moore, T. V. N. Persaud, Mark Torchia
Elsevier
Philadelphia , PA , USA
ISBN: 9780323313377
Binding: eBook
ECHO11002

Supplementary

Pathophysiology of Heart Disease: A Collaborative Project pf Medical Students and Faculty
Edition: 6th (2015)
Authors: Leonard S. Lilly
Wolters Kluwer Health
Hagerstown , MD , USA
ISBN: 9781451192759
Binding: eBook
ECHO11002

Supplementary

The Cardiac Catheterisation Handbook
Edition: 6th (2015)
Authors: Morton J. Kern, Paul Sorajja, Michael J Lim
Elsevier
Philadelphia , PA , USA
ISBN: 9780323340397
Binding: eBook

Additional Textbook Information
Hard copy books ("12 Lead ECG", "Echocardiography") are available via the CQUniversity Bookshop. The **eBooks** ("The Cardiac Catheterization Handbook", "Before We Are Born", "Pathophysiology of Heart Disease") are available via the CQUniversity Library and Moodle eReading List.
The books "12 Lead ECG", "Echocardiography" and "The Cardiac Catheterization Handbook" are referenced in subsequent CV69 units.

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

Kim Prince Unit Coordinator
k.prince@cqu.edu.au

Schedule

Week 1 - 12 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac anatomy	See eReading List	

Week 2 - 19 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac physiology	See eReading List	

Week 3 - 26 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Respiratory anatomy and physiology	See eReading List	**Online Quiz 1 (15 %)** opens at 08:00 am AEST on Monday 26th of July and closes at 08:00 pm AEST on Tuesday 27th of July.

Week 4 - 02 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Echocardiography	See eReading List	

Week 5 - 09 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Electrocardiography 1	See eReading List	**Online Quiz 2 (15 %)** opens at 08:00 am AEST on Monday 9th of August and closes at 08:00 pm AEST on Tuesday 10th of August.

Vacation Week - 16 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 23 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Electrocardiography 2	See eReading List	

Week 7 - 30 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac catheterisation 1	See eReading List	**Online Quiz 3 (15 %)** opens at 08:00 am AEST on Monday 30th of August and closes at 08:00 pm AEST on Tuesday 31st of August.

Week 8 - 06 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Cardiac catheterisation 2	See eReading List	

Week 9 - 13 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Embryology 1	See eReading List	**Online Quiz 4 (15 %)** opens at 08:00 am AEST on Monday 13th of September and closes at 08:00 pm AEST on Tuesday 14th of September. **ECG Practical Assessment (Pass/Fail)** scheduled during the mandatory residential school in Week 9 on Thursday 16th and Friday 17th of September.

Week 10 - 20 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Embryology 1	See eReading List	

Week 11 - 27 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Embryology 3	See eReading List	

Week 12 - 04 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Revision		

Review/Exam Week - 11 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
		Online Test (40 %) scheduled during the university Standard Exam block. Details on ECHO12006 Moodle.

Exam Week - 18 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

The Unit Coordinator for ECHO11002 is Ashley Spermon. The best method to contact the Unit Coordinator is by email (a.spermon@cqu.edu.au). Please put the unit code ECHO11002 and your name in the subject title to expedite a reply to your email. Course delivery and laboratory commitments for university staff are ongoing, therefore it is best to email and request a scheduled meeting (telephone, Zoom, office) if required.
The first point of contact is the ECHO11002 Q&A forum. Prioritising the Moodle forums allows the entire ECHO11002 cohort to benefit from questions and answers. All Moodle forums are monitored and responses will be provided in a timely manner. If your query is personal, please email the Unit Coordinator. Students are encouraged to review the CQUniversity Student Charter and apply appropriate conduct in-person and on-line.
ECHO11002 consists of weekly lectures (recorded), readings, tutorials (live), and a mandatory residential school. Lectures, readings, and tutorial details are posted on the ECHO11002 Moodle. The mandatory residential school must be attended at your campus of enrolment in Week 9 on Thursday 16th and Friday 17th of September (further details posted on the ECHO11002 Moodle).
ECHO11002 has prescribed textbooks. These textbooks will also be prescrbed in subsequent units within CV69. Please review the eReading List before purchasing your hardcopy textbooks.
To give yourself the best chance of success in ECHO11002, please ensure that you review all lectures, attend tutorials, complete readings and participate in all activities that are provided to you. You are expected to spend an average of 12.5 hours each week on ECHO11002 studies.

Assessment Tasks

1 Online Quizzes

Assessment Type
Online Quiz(zes)

Task Description
The ability to describe cardiac and respiratory anatomy, physiology, and associated diagnostic modalities is crucial in a professional cardiac diagnostic role.

Task Requirements
Respond to a series of questions to demonstrate knowledge of cardiac, respiratory, and associated diagnostic concepts, within the prescribed time frame. Questions are drawn from lectures, readings, and tutorials. The content covered in each Onine Quiz is as follows:

1. Online Quiz 1 (Week 3): cardiac anatomy and physiology
2. Online Quiz 2 (Week 5): respiratory and physiology, and echocardiography
3. Online Quiz 3 (Week 7): electrocardiography
4. Online Quiz 4 (Week 9): cardiac catheterisation

To successfully complete the Online Quizzes, students must:

- Access the Online Quizzes via ECHO11002 Moodle between 08:00 am AEST on Monday and 08:00 pm AEST on Tuesday of Week 3, 5, 7, and 9;
- Attempt each Online Quiz only once (Once started, the Online Quiz can not be paused or restated);
- Submit the responses to complete each Online Quiz (Moodle will automatically close and submit responses once the allocated time has elpased);
- Prepare personal notes and have a calculator when attempting each Online Quiz;
- Undertake each Online Quiz as an individual (questions are drawn from a question pool to allow a different experience for each student, with any incidences of academic misconduct to be met with action from the Deputy Dean of Learning and Teaching);
- Notify TASAC and the Unit Coordinator immediately if technical issues arise during any Online Quiz (i.e. email TASAC at tasac@cqu.edu.au with a screen shot of the issue, and Cc the Unit Coordinator at a.spermon@cqu.edu.au); and
- Undertake each Online Quiz during TASAC operating hours where possible, to expedite the resolution of any technical issues.

In the absence of an approved extension, the Online Quiz can not be completed at a later time.

Number of Quizzes
4

Frequency of Quizzes

Assessment Due Date

Online Quiz 1 (15 %) opens at 08:00 am AEST on Monday 26th of July and closes at 08:00 pm AEST on Tuesday 27th of July; Online Quiz 2 (15 %) opens at 08:00 am AEST on Monday 9th of August and closes at 08:00 pm AEST on Tuesday 10th of August; Online Quiz 3 (15 %) opens at 08:00 am AEST on Monday 30th of August and closes at 08:00 pm AEST on Tuesday 31st of August; Online Quiz 4 (15 %) opens at 08:00 am AEST on Monday 13th of September and closes at 08:00 pm AEST on Tuesday 14th of September.

Return Date to Students

Students will receive feedback within two (2) weeks of the closing date of each quiz.

Weighting
60%

Minimum mark or grade
50 %

Assessment Criteria
Grading is based on the student's ability to:

- Interpret presented data and images;
- Describe concepts clearly and concisely;
- Use appropriate terminology and descriptors; and
- Apply correct spelling and grammar.

Referencing Style

- Vancouver

Submission
Online

Submission Instructions
Access and submit the Online Quizzes via ECHO11002 Moodle.

Learning Outcomes Assessed

- Describe the anatomy and physiology of the cardiovascular and respiratory system
- Identify anatomical structures on diagrams and medical images of the thorax and cardiovascular system
- Explain the formation of an electrocardiogram (ECG) complex, and its representation on a normal 12-lead ECG

Graduate Attributes

- Communication
- Problem Solving
- Information Literacy
- Information Technology Competence

2 ECG Practical Assessment

Assessment Type
Practical Assessment

Task Description
The ability to perform a 12-lead ECG is crucial in a professional cardiac diagnostic role.
Task Requirements

1. Perform a 12-lead ECG.

To successfully complete the ECG Practical Assessment, students must:

- Attend the mandatory residential school in Week 9;
- Practice performing an ECG during the residential school;
- Attempt the ECG Practical Assessment during the residential school;
- Perform a 12-lead ECG within 20 minutes;
- Re-attempt the ECG Practical Assessment once if required; and
- Pass the ECG Practical Assessment to pass ECHO11002.

In the absence of an approved extension, the ECG Practical Assessment can not be completed at a later time.

Assessment Due Date

The ECG Practical Assessment must be completed during the mandatory residential school in Week 9.

Return Date to Students

Students will receive feedback during the mandatory residential school in Week 9.

Weighting
Pass/Fail

Minimum mark or grade
70 %

Assessment Criteria
A detailed rubric is available on ECHO11002 Moodle, with grading based on the student's ability to:

- Perform appropriate infection control practice and patient care;
- Recognise superficial anatomical landmarks;
- Use cardiac diagnostic equipment; and
- Obtain a 12-lead ECG.

Referencing Style

- Vancouver

Submission
Offline

Submission Instructions
The ECG Practical Assessment must be completed during the mandatory residential school in Week 9.

Learning Outcomes Assessed

- Perform a 12-lead ECG.

Graduate Attributes

- Communication
- Problem Solving
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

3 Online Test

Assessment Type
Online Test

Task Description
The ability to describe cardiac and respiratory anatomy, physiology, associated diagnostic modalities, and embryology, is crucial in a professional cardiac diagnostic role.

Task Requirements

1. Respond to a series of questions to demonstrate knowledge of cardiac, respiratory, associated diagnostic concepts, and embryology within the prescribed time frame. Questions are drawn from lectures, readings, tutorials, and the residential school.

To successfully complete the Online Test, students must:

- Access the Online Test via ECHO11002 Moodle at the assigned time;
- Attempt the Online Test once (Once started, the Online Test can not be paused or restated);
- Submit the responses to complete the Online Test (Moodle will automatically close and submit responses once the allocated time has elpased);
- Prepare personal notes and have a calculator when attempting the Online Test;
- Undertake the Online Test as an individual (questions are drawn from a question pool to allow a different experience for each student, with any incidences of academic misconduct to be met with action from the Deputy Dean of Learning and Teaching);
- Notify TASAC and the Unit Coordinator immediately if technical issues arise during the Online Test (i.e. email TASAC at tasac@cqu.edu.au with a screen shot of the issue, and Cc the Unit Coordinator at a.spermon@cqu.edu.au); and
- Undertake the Online Test during TASAC operating hours where possible, to expedite the resolution of any technical issues.

In the absence of an approved extension, the Online Test can not be completed at a later time.

Assessment Due Date

Online Test (40 %) scheduled during the university Standard Exam block.

Return Date to Students

Students will receive feedback within two (2) weeks.

Weighting
40%

Minimum mark or grade
50 %

Assessment Criteria
Grading is based on the student's ability to:

- Interpret presented data and images;
- Describe concepts clearly and concisely;
- Use appropriate terminology and descriptors; and

- Apply correct spelling and grammar.

Referencing Style

- Vancouver

Submission
Online

Submission Instructions
Access and submit the Online Test via ECHO11002 Moodle.

Learning Outcomes Assessed

- Describe the anatomy and physiology of the cardiovascular and respiratory system
- Identify anatomical structures on diagrams and medical images of the thorax and cardiovascular system
- Describe the embryological development of the cardiovascular system

Graduate Attributes

- Communication
- Problem Solving
- Information Literacy

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem