



ECHO13002 Cardiac Assessment Skills 2

Term 1 - 2019

Profile information current as at 02/10/2022 01:11 pm

All details in this unit profile for ECHO13002 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 builds upon the knowledge and skills required in Cardiac Assessment 1. You will advance your study of the principles of cardiac rhythm management, 12-Lead electrocardiogram interpretation, cardiac catheterisation procedures, and be exposed to a variety of other cardiac testing modalities including MRI, CT and nuclear medicine. You will compare and contrast the methodology and outcomes of these procedures. You will explore the role of pharmacotherapy during interventional procedures. Armed with this knowledge, you will be able to discuss common management strategies associated with a variety of common cardiovascular pathologies, within the setting of best practice and patient safety.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Pre-requisites: ECHO12004 Cardiac Assessment Skills 1 ANDECHO12005 Cardiac Clinical Unit 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 1 - 2019

- 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).

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 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. **Group Work**

Weighting: 30%

2. **Online Test**

Weighting: 20%

3. **Examination**

Weighting: 50%

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 Email, unit evaluation

Feedback

OSCE assessment format was popular with students

Recommendation

Unit delivery in 2019 will again incorporate an OSCE assessment. It allows for the examiner to assess the student's clinical reasoning and image interpretation in a format which they will likely encounter during their subsequent clinical placement experience.

Feedback from Email, unit evaluation

Feedback

Content provided in 'other modality cardiac imaging lectures' was overwhelming

Recommendation

These lectures provided information in excess of the student learning requirements associated with this unit. Review will be undertaken to focus content. More image interpretation and improved revision resources will be included to support delivery, assessment preparation, and to illustrate relevance to echocardiography.

Unit Learning Outcomes

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

1. Describe the relationship between anatomy, pathophysiology and clinical assessment of the cardiovascular system
2. Compare and contrast the methodology and outcomes of various cardiac assessment modalities, with consideration to best practice and patient safety
3. Describe the role of pharmacotherapy during cardiovascular interventional procedures
4. Analyse case-based cardiac assessment data to formulate differential diagnoses and plan patient management strategies
5. Display teamwork and communication skills.

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
1 - Online Test - 20%				•	
2 - Group Work - 30%	•	•			•

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
3 - Examination - 50%	•	•	•	•	

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 Test - 20%	•	•	•	•		•				
2 - Group Work - 30%	•	•	•	•	•			•		
3 - Examination - 50%	•	•	•	•		•		•		

Textbooks and Resources

Textbooks

ECHO13002

Prescribed

Cardiac Catheterization Handbook

Edition: 6th (2015)

Authors: Morton Kern, Paul Sorajja, Michael Lim

Elsevier

Philadelphia , PA , USA

ISBN: 10: 0323340393 ISBN 13: 9780323340397

Binding: Paperback

ECHO13002

Prescribed

The Nuts and Bolts of Cardiac Resynchronization Therapy

(2007)

Authors: Tom Kenny

Wiley-Blackwell

UK

ISBN: 978-1-4051-5372-0

Binding: Paperback

ECHO13002

Prescribed

The Nuts and Bolts of ICD Therapy

(2009)

Authors: Tom Kenny

Wiley-Blackwell

UK

ISBN: 978-1-4051-8404-5

Binding: Paperback

ECHO13002

Prescribed

The Nuts and Bolts of Implantable Device Therapy: Pacemakers

(2014)

Authors: Tom Kenny

Wiley-Blackwell

UK

ISBN: 978-1-118-67067-5

Binding: Paperback

Additional Textbook Information

All copies are available to 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

Aidan Rickwood Unit Coordinator
a.rickwood@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Pharmacotherapy in the Cardiac Catheterisation Laboratory		

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Anticoagulation and concepts of hemostasis		

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Anti-platelet therapy following coronary stenting Other cardiac testing modalities; including MRI, CT, Nuclear Medicine and ECG		Zoom Tutorial

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fractional flow reserve assessment in coronary angiography Other cardiac testing modalities; including MRI, CT, Nuclear Medicine and ECG	Cardiac Catheterization Handbook 6th Edition (2015)	Zoom Tutorial

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Cardiovascular haemodynamics 1: cardiac output and shunts Other cardiac testing modalities; including MRI, CT, Nuclear Medicine and ECG	Cardiac Catheterization Handbook 6th Edition (2015)	Draft website design submission due Friday 12th April, 05.00 p.m. AEST. The first SPA survey is due Friday 12th April, 05:00 p.m. AEST.

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
		Zoom Tutorial

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Cardiovascular haemodynamics 2: bidirectional shunt calculations Other cardiac testing modalities; including MRI, CT, Nuclear Medicine and ECG	Cardiac Catheterization Handbook 6th Edition (2015)	Zoom Tutorial

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic

Valve Pathology: Right Heart Disorders Principles of CRT pacing and the importance of a 12 lead ECG Upper rate behaviour in cardiac devices	Cardiac Catheterization Handbook 6th Edition (2015) The Nuts and Bolts of Implantable Device Therapy: Pacemakers (2014) Chapter 19 The Nuts and Bolts of Cardiac Resynchronization Therapy (2008) Chapter 14 &19	Zoom Tutorial
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Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Valve pathology: Left Heart Disorders To test or not to test: DFT in the lab environment and subcutaneous ICDs	Cardiac Catheterization Handbook 6th Edition (2015) The Nuts and Bolts of ICD Therapy (2007) Chapter 5 & 8	Zoom Tutorial

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Non-surgical Cardiac Supports SVT discriminators with a review of sensing and detection in ICDs	Cardiac Catheterization Handbook 6th Edition (2015) The Nuts and Bolts of ICD Therapy (2007) Chapter 9	The second SPA survey is due Friday 17th May, 05:00 p.m. AEST. Educational Website design Due: Week 9 Wednesday (15 May 2019) 5:00 pm AEST

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Transcatheter Aortic Valve Implantation Radiologic imaging of cardiac devices	Cardiac Catheterization Handbook 6th Edition (2015)	Zoom Tutorial

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
CRT device tool box and trying to prevent heart failure The downside of right ventricular (RV) pacing	The Nuts and Bolts of Cardiac Resynchronization Therapy (2008) Chapter 23	Multimodality image interpretation Due: Week 11 Wednesday (29 May 2019) 9:00 am AEST

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Revision		Zoom Tutorial

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
		Zoom Tutorial

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

The unit coordinator for ECHO13002 is Aidan Rickwood. In the first instance, students are requested to utilise the Moodle Q&A forum for content related questions. As there are multiple content experts teaching into this unit, this enables the most appropriate staff member to respond to your forum post. If the query is of a personal nature, please email a.rickwood@cqu.edu.au or phone my office number (08) 9260 4034. My office hours are Monday, Tuesday and Wednesday, therefore some responses maybe delayed. I will however do my best to adress any questions as soon as possible.

Weekly tutorials will be held during the term. Specific times and meeting IDs will be posted on the Moodle site.

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.

Assessment Tasks

1 Educational Website design

Assessment Type

Group Work

Task Description

We live in a society where people look to the internet as the first point of interest when it comes to topics such as healthcare and within seconds we can find more information than we can digest. The internet has become a part of our everyday lives and it is often regarded as an informative portal for furthering our knowledge. Cardiovascular disease is frequently complex and difficult to assess and therefore multimodality imaging is often required to establish a precise diagnosis (including but not limited to echocardiographic applications). In this assessment you are asked to design a website using Wix.com online platform. The aim of your website is to educate your fellow colleagues and/or other students of a similar level about a specific cardiovascular condition and the various imaging modalities that are involved in the diagnosis.

You will be allocated to a group by your unit coordinator, ideally groups will contain maximum of 4 students from the same campus but depending on number of enrolments, this may differ slightly to accommodate all students. A revision of Belbin's team roles will be provided under the assessment overview task if you wish to use this to help with your group or even just to see how you fit into a group environment.

A copy of the draft group allocation will be available by the first week of the term (Monday 11th March), which could be subject to minor changes up until the census date of Tuesday 2nd April.

Students will be randomly allocated into groups and the group will be allocated a number. As Cardiac Physiologist's we work within a multi-disciplinary environment and the most appropriate way to reflect a similar working environment is through the random allocations of groups.

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

1. Trans catheter aortic valve implantation (TAVI)
2. Trans catheter treatment of mitral regurgitation (MitraClip)
3. Atrial septal defect (ASD) closure
4. Left atrial appendage occlusion (LAAO)

Assessment Due Date

Week 9 Wednesday (15 May 2019) 5:00 pm AEST

There are three (3) components to this assessment: Part A: Draft website format submission-group component (Due date: week 5 Friday 12th April 2019 02:00 p.m. AEST). Part B: Submission of link to the completed website with individual component (Due date: week 9 Wednesday 15th of May 2019 02:00 p.m. AEST). Part C Self and Peer Assessment (SPA) surveys x 2 - individual component (Due dates: week 5 Friday 12th of April and week 10 Friday 24th of May 2019 02:00 p.m. AEST).

Return Date to Students

Week 11 Friday (31 May 2019)

Weighting

30%

Assessment Criteria

Below is a breakdown of what is required within the website. The marks allocated show the percentage toward the overall weighting for the assessment piece and will be used for the marking rubric (found on Moodle website). There are 90% of marks available from the website, 5% available from both SPA surveys and 5% available from the draft submission of the website in week 5.

The website should contain 5 tabs only.

The tabs will have the following titles:

1. Overview (10%)

2. Disease information (15%)
3. Work up and procedure (20%)
4. Recent research / blog (25%)
5. References (10%)

Tab descriptors:

Tab 1. Overview (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.

Include the following:

- 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 cardiovascular condition as an important health issue.

Tab 2: Disease information (15%)

This page should contain the main overview about the disease and should reflect evidence of a wide range of readings including the most up to date and accurate information about the disease using multiple credible resources. The maximum word count for this section is 1000 words.

Include the following:

- 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.
- Discuss any differential diagnosis.

Tab 3: Work up tests and procedure (20%)

This page should explain the multimodalities involved to diagnose the condition. Discuss the different techniques involved in the procedure and also elaborate on what is involved with the actual procedure on the day.

Included the following

- Clearly describe the different imaging techniques involved in diagnosing the condition.
- Define the different grades / levels of severity for the condition and how each is assessed.
- List any other possible test or procedures that may be offered to the patient.
- Discuss the prognosis of the procedure.

Tab 4: Blog (25%) - Individual component

Each member of the group is to enter a blog in this page, with the maximum word count of 500 words per blog. One blog entry per person regardless of the group size.

The blog entry needs to contain the title of the entry, author's name and a date of entry. This part of the assessment represents an individual component for this assignment. The blog entry should bring in new information about the condition and should not be elsewhere on the website. The entry should show 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 and or the treatment of the condition.
- Refer to any new media release / recent published work about the condition.
- Explain possible alternative diagnostic examination and/ or treatment options (if relevant).

Tab 5- References (10%)

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.

All website content needs to contain correct in-text citation using Vancouver style of referencing with superscript numbers.

When referencing use reputable websites or peer reviewed journals. Minimum of 10 references.

Website layout and creativity (10%)

This has been allocated to the creativity and the website layout.

Draft submission (5%) - due 12th April, week 5.

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

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

Any additional information is fine to have on the website and any changes made to the website after the draft submission will not incur any penalties. This stage is to show that your group has made some progression towards the final submission.

The SPA Survey (5%)

This will be assessed in two parts, the first SPA survey to be submitted during week 5 but no later than the 12th April at 5pm AEST.

The final SPA survey to be submitted during week 10 but no later than 24th May at 5pm AEST.

The two surveys will be averaged to determine the final SPA grade.

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

Referencing Style

- [Vancouver](#)

Submission

Online Group

Submission Instructions

Only one student from each group is to submit the draft link and the final link to the website on the required due dates. All other students are also required to submit their own individual component on the due date. Each student is required to complete both SPA surveys in week 5 and week 10 by the due date.

Learning Outcomes Assessed

- Describe the relationship between anatomy, pathophysiology and clinical assessment of the cardiovascular system
- Compare and contrast the methodology and outcomes of various cardiac assessment modalities, with consideration to best practice and patient safety
- Display teamwork and communication skills.

Graduate Attributes

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

- Ethical practice

2 Multimodality image interpretation

Assessment Type

Online Test

Task Description

As the scope of a cardiac physiologist's job role lends itself to multiple clinical specialities, it's necessary to have a clear understanding of the various modalities that contribute to a patient's pathway. Having the ability to correctly interpret information is essential. To demonstrate your understanding and knowledge from this unit, you are required to complete an online test.

The clinical scenarios will be based on concepts which students have been introduced to during the lecture and tutorial sessions. The students will be required to correctly interpret information (data and images) presented in a number of separate clinical scenarios.

Students will complete an online test to assess your understanding of the concepts delivered throughout the term. The test will be accessible via Moodle assessment tab and will be open for 48hrs during week 11 starting on Wednesday the 29th at 09:00 AEST and will automatically close on Friday the 31st May at 08:59 AEST.

Students will be provided with 5 clinical scenarios from a pool of 10 questions. This will be randomly allocated through an online program. The questions will provoke an explanatory style / short answer type of answer. The test will be on a time limit of 6 minutes per question with a total of 30 minutes for the entire test.

Once the test has been started a timer will commence and at the end of 30 minutes the test will automatically close and there will be no opportunity to pause, look back, or change any answers. During the 30 minutes students will be able to change between questions as needed. There is only one attempt at the test once commencement has begun.

It is the responsibility of the student to sit the exam in an environment where there are few distractions. Any internet problems will not be a reason for a resit unless a letter can be issued from their internet provider stating the internet domain in question was experiencing issues during the time Moodle has recorded the test was started.

- The assessment is to be completed as an individual. As with all university assessments, any student breaching the academic misconduct will lead to action being taken against them.

- This is an open book exam so it might be useful to have notes from lectures available or any other familiar information from the Unit.

- Moodle will monitor the start and finish time of each test and this will be recorded for moderation purposes.

All content from this Unit will be examinable during the online test.

Assessment Due Date

Week 11 Wednesday (29 May 2019) 9:00 am AEST

Online test will be open from 09:00am AEST 29th May and the test needs to be complete before the 08:59am AEST 31st May. Allow a maximum of 30 minutes to complete the test.

Return Date to Students

Week 12 Wednesday (5 June 2019)

Weighting

20%

Minimum mark or grade

50%

Assessment Criteria

You must provide short to medium length typed responses to a series of online questions.

Multiple choice and film viewing questions may be included and you are required to be familiar with both normal and pathological images.

Responses will be assessed according to:

- Use of appropriate terminology and descriptors as well as grammar, spelling, relevance of response and competence in addressing all elements of the question.

- The student's ability to appropriately interpret images/graphs/tables and then to succinctly compose an appropriate response based on their learning from the unit.

Referencing Style

- [Vancouver](#)

Submission

Online

Learning Outcomes Assessed

- Analyse case-based cardiac assessment data to formulate differential diagnoses and plan patient management strategies

Graduate Attributes

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

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

50%

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