EVST19023 *Water Resource Management*
Term 1 - 2019

Profile information current as at 13/05/2024 04:30 pm

General Information

Overview
On completion of this unit, students will have an understanding of the basic relationships between catchment health, water quality and ecosystem health in receiving waters. Students should be able to explain the major threats to water quality and the ways to monitor and manage those threats through the monitoring of physical, chemical and biological parameters and through the preparation of water quality assessment plans. Students must attend a compulsory residential school or on-campus lab classes in order to achieve the leaning outcomes.

Details
Career Level: *Undergraduate*
Unit Level: *Level 2*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Prerequisites: ENVR11012 Applications of Environmental Science Or CHEM11041 Chemistry for the Life Sciences
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

- 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. **Written Assessment**
Weighting: 25%
2. **Practical and Written Assessment**
Weighting: 25%
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 Moodle feedback

Feedback
Students found the residential school and associated assessment very helpful

Recommendation
The residential school, including the changes made this offering to increase the emphasis on water sampling, will be retained

Feedback from Moodle feedback

Feedback
Students would like to see the material most relevant to the first assessment item delivered earlier in the unit

Recommendation
The unit content will be rearranged so the material on water monitoring plans comes earlier in the unit

Feedback from Moodle feedback

Feedback
Students would like to see more practical information about preparing a water monitoring plan for the first assessment item

Recommendation
The information on preparing water monitoring plans will be reviewed

Unit Learning Outcomes

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

1. Describe the basic relationships between catchment health, water quality and end of catchment health
2. Describe the major threats to instream and coastal water quality and the effects of land based pollutants on ecosystem health
3. Explain the important physico-chemical and biological indicators of water quality and their application
4. Discuss different management strategies to reduce diffuse and point source pollutants
5. Apply appropriate standards and national guidelines, interpret data and results when designing a water quality assessment plan
6. Work with others to assess water quality and ecosystem health in aquatic systems

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	6
1 - Written Assessment - 25%			•	•	•	•
2 - Practical and Written Assessment - 25%	•	•	•	•	•	

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
3 - Examination - 50%	•	•	•	•		

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - 25%	•	•	•	•	•	•				
2 - Practical and Written Assessment - 25%	•	•	•	•		•		•		
3 - Examination - 50%	•	•	•	•		•				

Textbooks and Resources

Textbooks

There are no required textbooks.

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: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Larelle Fabbro Unit Coordinator
l.fabbro@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Hydrological cycle, water quality guidelines and environmental values	Study Guide Section 1	

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Project design and monitoring	Study Guide Section 2	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Chemistry of water	Study Guide Section 3	

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Water pollutants and their sources	Study Guide Section 4	

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Microbiology of water	Study Guide Section 5	

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Water and wastewater treatment	Study Guide Section 6	**Water Monitoring Plan** Due: Week 6 Tuesday (23 Apr 2019) 11:59 pm AEST

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
		Residential School 30 April to 2 May 2019

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Water quality standards, quality assurance and quality control	Study Guide Section 7	

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Integrated habitat assessment	Study Guide Section 8	**Residential School Practical Exercise and Written Report** Due: Week 9 Monday (13 May 2019) 11:45 pm AEST

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Management of water resources	Study Guide Section 9	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Catchment management	Study Guide Section 10	

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Review and exam preparation		

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Water Monitoring Plan

Assessment Type
Written Assessment

Task Description
Design a monitoring plan for the waterway that is described in detail on the Moodle site. Identify the environmental stressors present in the system and discuss the field parameters and laboratory analyses that are relevant to them. Mention any health and safety issues that may be associated with the specific waterway.

Maximum 2000 words

Assessment Due Date
Week 6 Tuesday (23 Apr 2019) 11:59 pm AEST

Return Date to Students
Week 8 Monday (6 May 2019)

Weighting
25%

Minimum mark or grade
45%

Assessment Criteria
Discussion of the environmental values and water quality issues (35%)

Appropriate choice of parameters and analyses (35%)
Appropriate safety procedures (15%)
Clear writing style in correct English, accurate referencing, appropriate length and format (15%)

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submit as .doc or .docx files only

Learning Outcomes Assessed

- Explain the important physico-chemical and biological indicators of water quality and their application
- Discuss different management strategies to reduce diffuse and point source pollutants
- Apply appropriate standards and national guidelines, interpret data and results when designing a water quality assessment plan
- Work with others to assess water quality and ecosystem health in aquatic systems

Graduate Attributes

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

2 Residential School Practical Exercise and Written Report

Assessment Type
Practical and Written Assessment

Task Description
There will be a practical and written component to this assessment.
Practical Exercise (5%)
You are required to calibrate water quality meters and correctly collect water samples. You will be required to answer questions on these activities.
Written Report (20%)
You will be required to complete a report sheet based on the residential school activities. A template with the information required and the questions that need to be answered will be provided on the Moodle site.

Assessment Due Date
Week 9 Monday (13 May 2019) 11:45 pm AEST

Return Date to Students
Week 11 Monday (27 May 2019)

Weighting
25%

Minimum mark or grade
45%

Assessment Criteria
Practical exercise will be assessed on the ability to perform laboratory and field tasks in addition to correctly answering questions on these.
Report sheet will be assessed on the completeness and correctness of the answers.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Students will be required to perform practical exercise during the residential school and will need to upload an electronic copy of the report sheet as a Word document as well as any additional Excel files into Moodle.

Learning Outcomes Assessed

- Describe the basic relationships between catchment health, water quality and end of catchment health
- Describe the major threats to instream and coastal water quality and the effects of land based pollutants on ecosystem health
- Explain the important physico-chemical and biological indicators of water quality and their application
- Discuss different management strategies to reduce diffuse and point source pollutants
- Apply appropriate standards and national guidelines, interpret data and results when designing a water quality assessment plan

Graduate Attributes

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

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
45%

Exam Conditions
Closed Book.

Materials
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).
No calculators permitted

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