



# **EVST13017 *Catchment to Reef Management***

## **Term 2 - 2023**

Profile information current as at 04/05/2024 03:12 am

All details in this unit profile for EVST13017 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.

### **Corrections**

#### **Unit Profile Correction added on 11-08-23**

There is an extra cost associated with the residential school for this unit. Further information and the link for payment will be made available on the Moodle page.

## General Information

### Overview

Catchment to Reef Management is a capstone unit in which you will synthesise the skills and knowledge developed in your degree to date. You will study how abiotic and biotic factors affect ecosystem development in the major regions of a catchment and examine anthropogenic issues in catchment management. During an extended field trip, you will work in teams to quantitatively and qualitatively examine and evaluate a Central Queensland catchment and then develop elements of a whole of catchment management plan. While planning and undertaking field work you will consider the role and needs of stakeholders, including Traditional Owners, Australian legislative and ethical requirements, and environmental and economic factors.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Students must successfully complete 96 credit points of study before undertaking this unit. Prerequisites: 96 credit points in an allied discipline (e.g. CV85, CU18, CC13 or other STEM courses).

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 - 2023

- 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. **Learning logs / diaries / Journal / log books**

Weighting: 20%

#### 2. **Research Assignment**

Weighting: 30%

#### 3. **Portfolio**

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 & in-class feedback

##### **Feedback**

Students expressed their appreciation for the residential school, noting the practical work felt much more like a research field trip with purpose, instead of an amalgam of unrelated laboratory practicals.

##### **Recommendation**

Retain the structure of the residential school, emphasising the linked purpose of activities across the duration of the class.

#### Feedback from Moodle feedback

##### **Feedback**

While the residential school was highly valued, one student felt more could be done during the intensive period, especially on Konomie (North Keppel) Island.

##### **Recommendation**

I take this comment as a sign of great enthusiasm from this particular student, since the residential school days have early starts and late finishes, with very little down time each day. Konomie activities and sampling are maximised where possible, but are partly restricted by the schedules of the Konomie Education Centre staff. Opportunities to complete more activities will continue to be sought during subsequent offerings.

#### Feedback from In-class feedback

##### **Feedback**

Requests for more exemplars of assessment pieces, as well as greater clarity of assessment requirements, were made on occasion during the term.

##### **Recommendation**

Continue to improve the clarity of assessment requirements, and provide additional exemplars where possible.

#### Feedback from In-class feedback

##### **Feedback**

Students greatly appreciated the ability to meet and speak with practitioners in the field, both during the residential school and during guest lectures.

##### **Recommendation**

Maintain opportunities for students to meet professionals and practitioners in the field, especially where employment opportunities may arise for soon-to-be graduating students.

## Unit Learning Outcomes

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

1. Differentiate the ecology of the major regions within a catchment system
2. Articulate the major drivers of issues in catchment management
3. Critically explain ecosystem structure and abiotic changes along the length of a catchment system
4. Evaluate current catchment management programs and practices
5. Plan and complete elements of a whole of catchment survey
6. Assess disturbances caused by natural and anthropogenic processes within a catchment system
7. Develop elements of a whole of catchment management plan that considers environmental and economic factors, Australian legislative frameworks, community stakeholders and traditional knowledge.

Not applicable.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

## Alignment of Assessment Tasks to Learning Outcomes

## Alignment of Graduate Attributes to Learning Outcomes

## Alignment of Assessment Tasks to Graduate Attributes

[illegible]

## 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

**Andrew Irving** Unit Coordinator  
[a.irving@cqu.edu.au](mailto:a.irving@cqu.edu.au)

## Schedule

### Week 1 - 10 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Unit overview <ul style="list-style-type: none"><li>• What are catchments?</li><li>• Multiple users, multiple needs</li></ul>		

### Week 2 - 17 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Profile of a catchment <ul style="list-style-type: none"><li>• Water &amp; geology</li><li>• Physical, chemical, &amp; biological characteristics</li></ul>		

### Week 3 - 24 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
RESIDENTIAL SCHOOL 25th - 28th July **No lectures will run this week**		

### Week 4 - 31 Jul 2023

Module/Topic	Chapter	Events and Submissions/Topic
Catchment Issues <ul style="list-style-type: none"><li>• Modification of flow</li><li>• <b>Algae and algal blooms - A/Prof. Larelle Fabbro, guest lecture</b></li></ul>		<b>Field data logs and observation notebook</b> Due: Week 4 Monday (31 July 2023) 11:45 pm AEST

### Week 5 - 07 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
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- Catchment issues
- Sedimentation
  - Nutrients & Eutrophication

#### Vacation Week - 14 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
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#### Week 6 - 21 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
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- Catchment issues
- Over-fishing
  - Coastal and reef impacts

#### Week 7 - 28 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
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**Guest lectures:**  
**Dr Megan Ellis - Gladstone Ports Corporation**  
**Dr Adam Rose - "Slow The Flow"**

**Catchment Health Report Card**  
 Due: Week 7 Monday (28 Aug 2023)  
 11:45 pm AEST

#### Week 8 - 04 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
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- Catchment solutions
- Managing Flow
  - Over-fishing & Aquaculture

#### Week 9 - 11 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
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- Catchment solutions
- Detecting the Problems part 1 - Adequacy of Sampling
  - Detecting the Problems part 2 - Impact Assessment

#### Week 10 - 18 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
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**Guest lectures:**  
**Dr Leigh Stitz - Fitzroy Partnership for River Health**  
**Dr Julie Malan - Carbon Link**

#### Week 11 - 25 Sep 2023

Module/Topic	Chapter	Events and Submissions/Topic
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- Catchment Management
- The DPSWR Framework
  - What is the Future for Catchment Management?

#### Week 12 - 02 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Unit Readings (available on Moodle)

**Catchment Management Plan** Due:  
 Week 12 Friday (6 Oct 2023) 11:45 pm AEST

#### Review/Exam Week - 09 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
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#### Exam Week - 16 Oct 2023

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

This unit will comprise a weekly series of live online content and guest lectures, as well as a compulsory 4-day residential school. The residential school will involve considerable travel over land, river, and sea associated with the Fitzroy River Catchment, and will involve a healthy amount of field work. The residential school will be essential to your ability to successfully complete the assessment components of the unit.

## Assessment Tasks

### 1 Field data logs and observation notebook

#### Assessment Type

Learning logs / diaries / Journal / log books

#### Task Description

You are required to submit a copy of your field data log and observation notebook based on the activities completed during the residential school. Your log book needs to be a thorough and accurate daily account of the activities you have completed, any data obtained (including traceable records such as GPS points), observations made, and people you have interacted with for your research purposes. Importantly, the log book needs to be signed and dated by an independent person who can attest to its veracity (this will be one of your fellow students for your residential school). You will be using your log book as the foundation for the remaining assessment pieces for the unit, so keeping an excellent record of activities, observations and thoughts is going to help you to complete your remaining assessments to a high standard. There is no word limit for this assessment, though note that the more thorough log books tend to attract higher marks by being a more complete reflection of the residential school. You will need to submit copies of your log book shortly after finishing the residential school.

#### Assessment Due Date

Week 4 Monday (31 July 2023) 11:45 pm AEST

Please submit your work through Moodle as either scanned copies of your notes or photographs of your notes embedded into Word or Powerpoint in their correct order.

#### Return Date to Students

Vacation Week Monday (14 Aug 2023)

This marked assessment will be returned through Moodle.

#### Weighting

20%

#### Minimum mark or grade

50 %

#### Assessment Criteria

Your field data log and observation notebook will be marked against the following criteria:

- Presentation of a thorough and accurate daily record of activities (40 %)
- Presentation of a clear record of the raw data you have collected, as well as other field observations (e.g. qualitative, anecdotal) (40 %)
- Presentation of any interpretive notes and other important relevant information (e.g. GPS points, equipment used, contact names and organisations worked with) (10 %)
- Having your log book verified by an independent person each day (10 %)

#### Referencing Style

- [Harvard \(author-date\)](#)

#### Submission

Online

#### Submission Instructions

Please submit your work through Moodle as either scanned copies of your notes or photographs of your notes embedded into Word or Powerpoint in their correct order.

#### Learning Outcomes Assessed

- Plan and complete elements of a whole of catchment survey



- Assess disturbances caused by natural and anthropogenic processes within a catchment system

### **Graduate Attributes**

- Problem Solving
- Information Literacy
- Team Work
- Cross Cultural Competence
- Ethical practice

## **2 Catchment Health Report Card**

### **Assessment Type**

Research Assignment

### **Task Description**

For this assessment, you are required to produce a Catchment Health Report Card based on the data and information you have gathered during the residential school. Your report card should be in the format of a brochure/pamphlet, which presents, at least, the relevant processed data (graphs, tables etc.) and their associated high-level conclusions, along with appropriate justification and background information that explains the purpose of the report card. Your report card is to be no longer than three A4 pages. The Fitzroy Basin Report Card (discussed during term) will be a useful guide for this assessment.

### **Assessment Due Date**

Week 7 Monday (28 Aug 2023) 11:45 pm AEST

Please submit your work as either a Word, Powerpoint, or PDF file via Moodle.

### **Return Date to Students**

Week 9 Monday (11 Sept 2023)

This marked assessment will be returned through Moodle.

### **Weighting**

30%

### **Minimum mark or grade**

50 %

### **Assessment Criteria**

Your assessment will be marked against the following criteria:

- Appropriate and succinct background information needed to interpret your report card (10 %)
- Clear presentation of relevant processed data and summary findings (30 %)
- Reasoned and justified interpretation of your data in the context of river/catchment health, including a succinct report card grade (30 %)
- Consistent and engaging formatting, including diagrams/photographs where appropriate (10 %)
- Correct presentation of reference list (including in-text citations) (10 %)
- Correct spelling and grammar (10 %)

### **Referencing Style**

- [Harvard \(author-date\)](#)

### **Submission**

Online

### **Submission Instructions**

Please submit your work as either a Word, Powerpoint, or PDF file via Moodle.

### **Learning Outcomes Assessed**

- Differentiate the ecology of the major regions within a catchment system
- Articulate the major drivers of issues in catchment management
- Critically explain ecosystem structure and abiotic changes along the length of a catchment system
- Evaluate current catchment management programs and practices

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

- Information Technology Competence

### 3 Catchment Management Plan

#### Assessment Type

Portfolio

#### Task Description

Your task for this assessment is to prepare an in-depth catchment management plan for the area sampled during the residential school. Your plan must include a background to the broad environmental conditions of the catchment, including contemporary use and current issues/conflicts. The core of the plan is the identification of key issues that affect the sustainable management of the catchment (both aquatic and adjacent terrestrial environments), and to propose reasoned solutions that support a sustainable future for the environment and the varied stakeholders that depend upon it. These should be based both on the class data collected at the residential school, as well as your broader readings & data searches. The benefits of your proposed catchment management plan must be explained in terms of environmental outcomes, sustainable economic use and development, societal well-being (including Traditional Owners and practices), and meeting State and Federal legislative requirements. You are encouraged to refer to relevant report cards to support your work (including your own report card produced in assessment 2), as well as those produced by other entities (e.g. Gladstone Healthy Harbour Partnership, Fitzroy Basin Association, etc.). There is a limit of 3000 words (+/- 10 %) for this assessment.

#### Assessment Due Date

Week 12 Friday (6 Oct 2023) 11:45 pm AEST

Please submit your assessment as a Word document through Moodle. No PDF files will be accepted.

#### Return Date to Students

Exam Week Friday (20 Oct 2023)

Marked assessments will be returned through Moodle.

#### Weighting

50%

#### Minimum mark or grade

50 %

#### Assessment Criteria

Your catchment management plan will be assessed against the following criteria:

- An executive summary identifying the key messages (particularly the identified problems and their solutions) of your catchment management plan (20 %)
- A clear and concise summary of background information for the catchment area (10 %)
- An in-depth description of the range of stakeholder interests and contemporary issues associated with the catchment (25 %)
- A discussion that justifies your proposed solutions to maintain/improve environmental and stakeholder sustainability within the catchment (25 %)
- Engaging formatting and presentation, including appropriate use of graphs, tables, figures, and photographs (5 %)
- Clear communication of your ideas, with correct spelling and grammar (5 %)
- A reference list of appropriate literature and information sources cited within the text of your report (5 %)
- Within word limits (3000 words +/-10 %) (5 %)

#### Referencing Style

- [Harvard \(author-date\)](#)

#### Submission

Online

#### Submission Instructions

Please submit your assessment as a Word document through Moodle. No PDF files will be accepted.

#### Learning Outcomes Assessed

- Critically explain ecosystem structure and abiotic changes along the length of a catchment system
- Evaluate current catchment management programs and practices
- Plan and complete elements of a whole of catchment survey
- Assess disturbances caused by natural and anthropogenic processes within a catchment system
- Develop elements of a whole of catchment management plan that considers environmental and economic factors, Australian legislative frameworks, community stakeholders and traditional knowledge.

## Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice
- Social Innovation

## 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