



# ECON19031 *Environmental Economics*

## Term 2 - 2018

Profile information current as at 27/04/2024 05:45 am

All details in this unit profile for ECON19031 have been officially approved by CQU University 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

Resource use and environmental issues are difficult for society to evaluate and balance. This unit introduces some of the most important economic concepts that relate to environmental issues, and provide a framework for evaluating policy choices. Among the topics covered are project and policy assessment tools, environmental valuation and accounting methods, and the efficiency of different institutions and mechanisms that guide environmental choices.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 10

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Prerequisite: Minimum of 24 Units

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 - 2018

- Distance
- Rockhampton

### Attendance Requirements

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

### Website

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

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 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: 30%

#### 2. **Written Assessment**

Weighting: 30%

#### 3. **Written Assessment**

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 Evaluation

**Feedback**

Weekly Zoom sessions were very informative.

**Recommendation**

Continue with the weekly Zoom sessions.

#### Feedback from Student Evaluation

**Feedback**

Some teaching resources need an update.

**Recommendation**

Refresh teaching resources, including video recordings.

#### Feedback from Student Evaluation

**Feedback**

Additional resources on contemporary environmental issues provided on Moodle are highly valued.

**Recommendation**

Continue to upload media clips and news articles and reports that are relevant to the topics covered.

#### Feedback from Student Evaluation

**Feedback**

Feedback on assignments can be improved.

**Recommendation**

Consolidate feedback provided to a single place (Grademark or Excel marking rubric).

## Unit Learning Outcomes

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

1. identify how market mechanisms work to allocate resources, and how markets and ecological mechanisms can be viewed in a systems approach
2. demonstrate that many environmental problems arise because of market failure and government failure problems, leading to inadequate signalling and incentive mechanisms used in society to allocate resources
3. identify different approaches to evaluating environmental issues
4. understand how valuation of environmental impacts can allow more accurate assessment of environmental issues
5. develop an understanding of environmental accounting and impact assessment methodologies
6. understand how there are a variety of ways of viewing and using sustainable development concepts
7. develop an understanding of the potential for market-based instruments to help in addressing environmental problems.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes						
	1	2	3	4	5	6	7
1 - Written Assessment - 30%	•	•	•	•			
2 - Written Assessment - 30%			•	•	•	•	•
3 - Written Assessment - 40%		•				•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes						
	1	2	3	4	5	6	7
1 - Communication	•	•	•	•	•	•	•
2 - Problem Solving	•	•	•	•	•	•	•
3 - Critical Thinking	•	•	•	•	•	•	•
4 - Information Literacy	•	•	•	•	•	•	•
5 - Team Work							
6 - Information Technology Competence	•	•	•	•	•	•	•
7 - Cross Cultural Competence							
8 - Ethical practice							
9 - Social Innovation							
10 - Aboriginal and Torres Strait Islander Cultures							

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 30%	•	•	•	•						
2 - Written Assessment - 30%	•	•	•	•				•		
3 - Written Assessment - 40%	•	•	•	•						

## Textbooks and Resources

### Textbooks

ECON19031

#### Prescribed

##### **Environmental & Natural Resource Economics**

11th edition (International Edition) (2018)

Authors: Tietenberg, T. and Lewis, L.

Taylor & Francis

New York, USA

ISBN: 9781138632301

Binding: Paperback

#### Additional Textbook Information

There is also an electronic version of the text available.

Environmental & Natural Resource Economics, International Edition VitalSource eText (11e), ISBN 9781315208343

[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: [American Psychological Association 6th Edition \(APA 6th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Jayanath Ananda** Unit Coordinator

[j.ananda@cqu.edu.au](mailto:j.ananda@cqu.edu.au)

## Schedule

### Week 1 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
The Economic Approach	Tietenberg and Lewis Chapters 1 and 2	

### Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Understanding why environmental problems occur	Tietenberg and Lewis Chapter 2	

### Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Valuing the environment	Tietenberg and Lewis Chapter 4	

### Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Evaluating tradeoffs: Cost Benefit Analysis  
Tietenberg and Lewis Chapter 3

#### Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Dynamic efficiency and Sustainable Development	Tietenberg and Lewis Chapters 5 and 20	<b>Assignment 1</b> Due: Week 5 Friday (10 Aug 2018) 11:45 pm AEST

#### Vacation Week - 13 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
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#### Week 6 - 20 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Depletable Resource Allocation over longer term horizons	Tietenberg and Lewis Chapter 6	

#### Week 7 - 27 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Energy: the transition from depletable to renewable resources	Tietenberg and Lewis Chapter 7	

#### Week 8 - 03 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Forests: Storable, renewable resources	Tietenberg and Lewis Chapter 11	<b>Assignment 2</b> Due: Week 8 Friday (7 Sept 2018) 11:45 pm AEST

#### Week 9 - 10 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Common Pool Resources and Fisheries	Tietenberg and Lewis Chapter 12	

#### Week 10 - 17 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Economics of Pollution Control and Climate Change	Tietenberg and Lewis Chapters 14 and 16	

#### Week 11 - 24 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Water Pollution	Tietenberg and Lewis Chapter 18	

#### Week 12 - 01 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
Unit revision		

#### Review Week - 08 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
Review Period		<b>Assignment 3</b> Due: Review/Exam Week Monday (8 Oct 2018) 11:45 pm AEST

#### Exam Week - 15 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
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## Assessment Tasks

### 1 Assignment 1

#### Assessment Type

Written Assessment

### **Task Description**

Written Assessment 1 covers general economic concepts and environmental valuation techniques and requires short-answer responses.

As a guideline, the total length of your response should be around 1000 words.

Diagrams should be used to illustrate specific aspects of the response. Please ensure that you correctly cite/reference all sources of diagrams used, unless they are original and composed by you. This is an important aspect of academic integrity. It is also important that you familiarize yourself with the Plagiarism policy. The University Academic Misconduct Procedure Policy is available from the CQUni website.

Further details of the Assessment are available on the Moodle page for the unit.

Late submissions will incur penalties (5% of the total assessment marks for each day the work is overdue). All assignment extension requests must be forwarded through the Moodle Assignment Extension portal with verifiable supporting documents.

### **Assessment Due Date**

Week 5 Friday (10 Aug 2018) 11:45 pm AEST

Penalties apply to late submissions without an approved extension.

### **Return Date to Students**

Week 7 Monday (27 Aug 2018)

### **Weighting**

30%

### **Assessment Criteria**

Assessment Criteria for Assignment 1 are as follows:

- (a) Demonstrate a clear understanding and purpose of economic theory and models.
- (b) Application of economic theory and models to given real-life and hypothetical scenarios.
- (c) Demonstrate a clear understanding of the selected valuation technique and its application.
- (d) A critical review of the key strengths and weaknesses of the relevant valuation technique.

### **Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- identify how market mechanisms work to allocate resources, and how markets and ecological mechanisms can be viewed in a systems approach
- demonstrate that many environmental problems arise because of market failure and government failure problems, leading to inadequate signalling and incentive mechanisms used in society to allocate resources
- identify different approaches to evaluating environmental issues
- understand how valuation of environmental impacts can allow more accurate assessment of environmental issues

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

## **2 Assignment 2**

### **Assessment Type**

Written Assessment

### **Task Description**

The focus of this assignment is to test your understanding of the issues around renewable and non-renewable resources, and the issues in dealing with long time horizons. In the assignment, you should choose a major environmental issue in Australia that can be classified as a renewable or non-renewable resource management issue. Issues may be drawn from a number of areas, including Energy, Minerals, and Forestry. To complete the assignment, you should:

1. Provide a brief overview of the issue
2. Identify issues with the rate of resource allocation and the time horizon issues
3. Explain how marginal benefits and costs of extraction or harvest can change over time
4. Identify the appropriate economic analysis to identify optimal rates of harvest or extraction.

5. Identify the implications of extraction or harvest rates in terms of sustainable development.
6. Review available government policies to deal with these kinds of issues, and identify preferred options to address the issue of interest.

This assignment is to be written as a single essay and include diagrams and references. You should aim to develop a logical framework for your arguments in a structure that allows you to address the key questions posed. The choice of a particular environmental issue is yours as a way of bringing some interest to the topic. Do not spend too much time on describing the case but use it to demonstrate the economic principles that you have learnt in the Unit. There are many possible types of environmental issues that you might focus on. Try to narrow it down in some way to a particular case study or development proposal so that it is easier to apply different frameworks to the issue of interest. You should choose an issue that is relevant to the analysis presented in Chapters 5, 6, 7 and 11 in your text. The chosen environmental issue can be at any scale (i.e. local, regional, national or international), but remember that smaller, less complex and well-defined problems are generally easier to analyse than larger multi-faceted issues. It is important to describe what type of economic principles and analysis can be applied to evaluate the problem so that it is clear how to conceptualise the issues in economic terms.

Other details to note are:

- As a guideline, the length of the main body of your essay should be around 2000 words or so, excluding references.
- Diagrams should be used to illustrate specific aspects and please ensure that you correctly cite/reference all sources including diagrams used since this is an important aspect of academic integrity.
- The list of references should form the last page or two, at the end of the assessment. The APA Referencing style should be used.
- Further instructions on assignment submission, formatting, referencing, etc. are provided on the Moodle site for this unit.

### **Assessment Due Date**

Week 8 Friday (7 Sept 2018) 11:45 pm AEST

### **Return Date to Students**

Week 10 Friday (21 Sept 2018)

Penalties apply to late submissions without an approved extension.

### **Weighting**

30%

### **Assessment Criteria**

Assessment Criteria for Assignment 2 are as follows:

- a. Selection and description of a suitable case study issue relevant to the assignment topic
- b. Demonstrate a clear understanding and purpose of the economic concepts involved
- c. Demonstrate knowledge about application of economic analysis
- d. Critical evaluation of the case study issues and policy mechanisms
- e. Standard of writing, explanation and referencing.

### **Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- identify different approaches to evaluating environmental issues
- understand how valuation of environmental impacts can allow more accurate assessment of environmental issues
- develop an understanding of environmental accounting and impact assessment methodologies
- understand how there are a variety of ways of viewing and using sustainable development concepts
- develop an understanding of the potential for market-based instruments to help in addressing environmental problems.

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking



- Information Literacy
- Ethical practice

## 3 Assignment 3

### Assessment Type

Written Assessment

### Task Description

The focus of this assignment is to identify an environmental issue that involves pollution or an open-access resource and use it as a case study to explain how the problem can be evaluated using economic analysis and to identify appropriate policy mechanisms. The case study approach means that students can choose a major environmental issue in Australia that can be classified as a common pool resource problem or a pollution problem. Common pool problems are an open-access or tragedy of the commons type of problem, while pollution problems are examples of negative externalities. Some environmental problems, such as air pollution, exhibit both characteristics and are sometimes called 'wicked' problems because of the difficulties of addressing them.

Students need to complete the following tasks for their case study:

1. Provide a brief overview of the issue.
2. Explain in economic terms why the problem exists, and who bears the costs.
3. Identify the appropriate economic analysis that can be applied to identify more sustainable or efficient resource use.
4. Review economic mechanisms that are available to address these types of environmental problems.
5. Critically review current government policies that are in place and the extent to which they are consistent with economic mechanisms.

This assignment is to be written as a single essay and should include references. You should aim to develop a logical framework for your arguments in a structure that allows you to address the key questions posed.

The choice of a particular case study is yours as a way of bringing some interest to the topic. Do not spend too much time on the descriptive aspects of the case study but use it to demonstrate the economic principles that you have learnt in this Unit.

There are many possible types of environmental issues that you might focus on. Try to narrow it down in some way to a particular case study or development proposal so that it is easier to apply different frameworks to the issue of interest. You should choose a case study topic that is relevant to at least some of the analysis presented in Chapters 12, 14-16 and 18 in your text. The case study can be at any scale (i.e. local, regional, national or international), but remember that smaller, less complex and specific problems are generally easier to analyse than larger multi-faceted issues.

It is important to describe what type of economic principles and analysis can be applied to evaluate the problem so that it is clear how to conceptualise the issues in economic terms.

Other details to note are:

- As a guideline, the total length of the essay should be around 3000 words or so, excluding references.
- Diagrams should be used to illustrate specific aspects and please ensure that you correctly cite/reference all sources including diagrams used since this is an important aspect of academic integrity.
- The list of references should form the last page or two, at the end of the assessment. The APA Referencing style should be used.
- Further instructions on assignment submission, formatting, referencing, etc. are provided on the Moodle site for this unit.

### Assessment Due Date

Review/Exam Week Monday (8 Oct 2018) 11:45 pm AEST

Penalties apply to late submissions without an approved extension.

### Return Date to Students

Marks and feedback will be released after the grade certification.

### Weighting

40%

### Assessment Criteria

Assessment Criteria for Assignment 3 are as follows:

- a. Selection and description of a suitable case study issue relevant to the assignment topic.
- b. Demonstrate a clear understanding and purpose of the economic concepts involved.
- c. Demonstrate knowledge about the application of economic analysis.
- d. Critical evaluation of the case study issues and policy mechanisms.

e. Standard of writing, explanation and referencing.

### **Referencing Style**

- [American Psychological Association 6th Edition \(APA 6th edition\)](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- demonstrate that many environmental problems arise because of market failure and government failure problems, leading to inadequate signalling and incentive mechanisms used in society to allocate resources
- understand how there are a variety of ways of viewing and using sustainable development concepts
- develop an understanding of the potential for market-based instruments to help in addressing environmental problems.

### **Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- 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