



EVST19021 Sustainability Issues and Solutions

Term 3 - 2020

Profile information current as at 06/05/2024 12:36 am

All details in this unit profile for EVST19021 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

The impacts of human populations on the natural environment are well studied but little progress has been made to improve the sustainability of our lifestyle due to the complex interactions among social, economic and environmental imperatives. In Sustainability Issues and Solutions you will investigate the impact of human activities on a range of living and non-living, renewable and non-renewable natural resources. By applying 'Systems Thinking' you will practise developing solutions that are economically, socially and environmentally sustainable. On completion of this unit you will have a broad appreciation of the balances underpinning both temporal and spatial variation in sustainability and human efforts to control these.

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

Minimum of 72 credit points

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 3 - 2020

- Online

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: 20%

2. **Written Assessment**

Weighting: 30%

3. **Written Assessment**

Weighting: 40%

4. **Group Discussion**

Weighting: 10%

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 in Moodle.

Feedback

It would be helpful if students were required to submit the details of their topics for comment to the unit coordinator in the assessments where they are free to choose a topic.

Recommendation

Students will be asked to submit their choice of topic or specialised subtopic for the presentation and the final report.

Feedback from Student evaluation in Moodle.

Feedback

Students really enjoyed the content of the unit and the extra resources available.

Recommendation

The content will be kept much the same but updated to ensure it keeps up with this rapidly changing field.

Feedback from Student evaluation in Moodle

Feedback

Students really enjoyed the assessable forums

Recommendation

Assessable forums will be retained.

Unit Learning Outcomes

























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

1. Discuss the economic, ethical and ecological issues associated with the sustainable utilisation of the earth's renewable and non-renewable natural resources.
2. Explain the importance of systems thinking and an understanding of temporal and spatial scales and feedback loops in determining solutions to sustainable management of resources.
3. Discuss the shortcomings in our understanding and acceptance of the processes that lead to sustainability.
4. Develop a range of possible strategies that would help to ensure the sustainable utilisation of natural resources.




























Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
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 - 20%										
2 - Written Assessment - 30%										
3 - Written Assessment - 40%										
4 - Group Discussion - 10%										

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

Michael Tausz Unit Coordinator
m.tausz@cqu.edu.au

Schedule

Week 1 - 09 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Sustainability concepts and the application of systems thinking	Study Guide Chapter 1	

Week 2 - 16 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Ecological, economic and social measures of sustainability	Study Guide Chapter 2	

Week 3 - 23 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Biodiversity	Study Guide Chapter 3	Forum 1 closes midnight Sunday 29 Nov 2020

Week 4 - 30 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Management of water resources	Study Guide Chapter 4	

Vacation Week - 07 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Week 5 - 14 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
Food production systems	Study Guide Chapter 5	Presentation: Impact of climate change on biodiversity Due: Week 5 Monday (14 Dec 2020) 11:49 pm AEST

Week 6 - 21 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
Marine resource management	Study Guide Chapter 6	Forum 2 closes midnight Sunday 3rd January 2021
Vacation Week - 28 Dec 2020		
Module/Topic	Chapter	Events and Submissions/Topic
Week 7 - 04 Jan 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Energy generation and use	Study Guide Chapter 7	Debate: Can animal production have a sustainable future in Australia? Due: Week 7 Friday (8 Jan 2021) 11:45 pm AEST
Week 8 - 11 Jan 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Transport systems	Study Guide Chapter 8	
Week 9 - 18 Jan 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Building and urban design	Study Guide Chapter 9	Forum 3 closes midnight Sunday 24 th January 2021
Week 10 - 25 Jan 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Waste minimisation and reuse	Study Guide Chapter 10	
Week 11 - 01 Feb 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Population and sustainable development	Study Guide Chapter 11	
Week 12 - 08 Feb 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Cultural change and social innovation	Study Guide Chapter 12	Forum 4 closes midnight Sunday 14 th February 2021
Exam Week - 15 Feb 2021		
Module/Topic	Chapter	Events and Submissions/Topic
		Report on bioenergy use in Australia Due: Exam Week Monday (15 Feb 2021) 11:45 pm AEST

Assessment Tasks

1 Presentation: Impact of climate change on biodiversity

Assessment Type

Written Assessment

Task Description

Prepare a slide deck with notes for a presentation that you could use to deliver to a group of your peers describing the impacts of climate change on an aspect of biodiversity. You need to provide a brief overview of the important role of biodiversity in ecosystem services and of the general impacts of climate change. For the bulk of your presentation, you need to look at some specific impacts of climate change on biodiversity such as impacts of change in rainfall or temperature regimes on a particular vegetation community or ecosystem type (e.g. mangrove communities in the Kimberley) or on a particular group of organisms within a specified area (e.g. Queensland tropical reef fish). Your slide deck should consist of a PowerPoint presentation of 15 slides (maximum), including the title slide and a slide of references. Add the extra information you would use during the presentation in the notes section below the slides.

You should not have more than about seven dot points or 30 words per slide, and the notes section should be in dot point format and be between about 1000 and 1500 words in total for the entire presentation. For this assessment, you are NOT required to actually give the presentation to an audience! Pitch your material at an informed lay audience, by using clear concise English and avoiding the use of jargon. Always check the Moodle site for further information!

Assessment Due Date

Week 5 Monday (14 Dec 2020) 11:49 pm AEST

Return Date to Students

Week 7 Friday (8 Jan 2021)

Weighting

20%

Assessment Criteria

- Clarity of presentation and logical presentation of the issues
- Application of science and sustainability principles
- Comprehensive coverage of relevant issues
- Use of valid information sources and accuracy of reference details
- Appropriateness of language and presentation for audience

Referencing Style

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

Submission

Online

Submission Instructions

Upload into moodle as a word file

Learning Outcomes Assessed

- Discuss the economic, ethical and ecological issues associated with the sustainable utilisation of the earth's renewable and non-renewable natural resources.
- Discuss the shortcomings in our understanding and acceptance of the processes that lead to sustainability.

Graduate Attributes

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

2 Debate: Can animal production have a sustainable future in Australia?

Assessment Type

Written Assessment

Task Description

Prepare the arguments, both FOR and AGAINST, for a debate on the following statement:

It would be better for the environment and action on climate change if livestock production and meat consumption is phased out in Australia

You need to investigate current practices and environmental implications of animal production and debate whether there is a sustainable way forward for livestock production and meat consumption in Australia. You can use specific examples from your area for more detailed arguments. Be sure to evaluate the alternative food production implications, too. Present the arguments for and against the statement, backing them up with references from scientific journals, government and NGO reports and other credible sources.

Focus on the likely outcomes in environmental sustainability of the relevant agricultural practices but include some of the social and economic issues as well. You need an overall understanding of the land management and agricultural production practices, but you don't need a detailed understanding of all the intricacies involved in the livestock business or in food industries. You are required to argue both sides. Note that you do NOT have to argue the 'status quo' of meat

industries, but can make suggestions for improvements.

Your arguments should be based on detailed scientific information, and while some of your arguments will be based on general principles, you should ensure you have researched the specific issue in depth.

Provide a brief introduction to the topic, then a series of arguments for each side of the debate in a TABLE with two columns headed: FOR and AGAINST. Complete your assignment with a brief concluding paragraph, setting out which side has the strongest arguments. Your assignment should not exceed 2000 words. Aim to have roughly equal numbers of words for each case. Make sure you apply the principles of Systems Thinking, use only credible information sources, and cite references where applicable.

Assessment Due Date

Week 7 Friday (8 Jan 2021) 11:45 pm AEST

Return Date to Students

Week 9 Monday (18 Jan 2021)

Weighting

30%

Assessment Criteria

Assignment will be assessed on:

- Comprehensive coverage of arguments both for and against
- Logical presentation of arguments
- Relevance of issues raised
- Clarity of expression
- Evidence of research and critical thinking
- Selection of credible sources and correct referencing

Referencing Style

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

Submission

Online

Submission Instructions

Submit a Word file into moodle

Learning Outcomes Assessed

- Discuss the shortcomings in our understanding and acceptance of the processes that lead to sustainability.
- Develop a range of possible strategies that would help to ensure the sustainable utilisation of natural resources.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Cross Cultural Competence
- Ethical practice

3 Report on bioenergy use in Australia

Assessment Type

Written Assessment

Task Description

Humanity has used bioenergy since the first humans mastered the controlled use of fire, but more recently various modern forms of bioenergy, such as liquid biofuels or high-tech use of biomass to generate electricity have gained momentum. However, despite its apparent potential in mitigating climate change, several forms of bioenergy, especially those that involve the farming of specific bioenergy crops remain controversial, requiring high inputs of water and fertiliser and competing with food crops for arable land. Write a report on biomass and bioenergy use in your region (or Australia more broadly), describe the sources and technologies involved, and estimate (approximate) quantities used. Analyse the environmental sustainability of these solutions and make suggestions which ones (if any) can contribute to a sustainable future.

Format your assignment as a report with headings and an executive summary. Maximum word limit: 3000 words. The word count will include words in tables and the executive summary but not words in figures, or reference citations and list.

Assessment Due Date

Exam Week Monday (15 Feb 2021) 11:45 pm AEST

Return Date to Students

Ten working days after submission

Weighting

40%

Assessment Criteria

- Logical and comprehensive presentation of information
- Evidence of critical thinking and problem solving
- Validity of conclusions from evidence presented
- Clarity of expression, evidence of research and accurate referencing
- Overall presentation, including format of diagrams and tables, correct grammar, spelling and punctuation.

Referencing Style

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

Submission

Online

Submission Instructions

Upload as word file to moodle

Learning Outcomes Assessed

- Explain the importance of systems thinking and an understanding of temporal and spatial scales and feedback loops in determining solutions to sustainable management of resources.
- Develop a range of possible strategies that would help to ensure the sustainable utilisation of natural resources.

Graduate Attributes

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

4 Forum Posts

Assessment Type

Group Discussion

Task Description

You are required to post relevant comments to each of the four forums in Moodle to obtain the maximum marks. Each forum will be open for approximately three weeks. Forum posts must be 200 words or less and be presented as dot points.

Assessment Due Date

Forum 1 will close at the end of week 3, Forum 2 at the end of week 6, Forum 3 at the end of week 9 and Forum 4 at the end of week 12.

Return Date to Students

Mark will be available through the Moodle gradebook.

Weighting

10%

Assessment Criteria

Your posts will be assessed on:

- Relevance to the question
- Evidence of critical thinking

- Clarity of arguments
- Conciseness of posts

Referencing Style

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

Submission

Online

Submission Instructions

Post to forums in Moodle

Learning Outcomes Assessed

- Discuss the economic, ethical and ecological issues associated with the sustainable utilisation of the earth's renewable and non-renewable natural resources.
- Explain the importance of systems thinking and an understanding of temporal and spatial scales and feedback loops in determining solutions to sustainable management of resources.

Graduate Attributes

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

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