



# ENVR12002 *Applied Ecology*

## Term 2 - 2020

Profile information current as at 24/04/2024 07:25 am

All details in this unit profile for ENVR12002 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

Applied Ecology is the science of understanding and managing natural living resources. Over-harvesting of exploited species, habitat loss, and the spread of invasive species are among the world's most pressing environmental issues. Solutions to these problems are complex, but firmly embedded in the fundamental tenets of ecological knowledge and theory. This unit will provide you with a broad perspective of the field of applied ecology by working across different ecological levels (ecosystem, community, population and species) and issues, in the process you will explore how ecological knowledge and theory is applied to the management of natural living resources.

### 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

Pre-requisites ZOOL11005 Foundation Animal Biology and BOTN11004 Foundation Plant Biology or BIOL11099 Living Systems and BIOL11100 Functional Biology or BIOL11102 and ENVR11014. Anti-requisite BIOL13031 - Ecology: Theory and Application

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 - 2020

- Mixed Mode
- 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).

### 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. **Online Quiz(zes)**

Weighting: 40%

#### 2. **Practical Assessment**

Weighting: 30%

#### 3. **Practical Assessment**

Weighting: 30%

### 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](#).

## Unit Learning Outcomes

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

1. Describe how ecological principles are applied to the protection, management, and restoration of terrestrial and aquatic living resources and ecosystems
2. Discuss the elements, concepts, and theories of population and community structure and dynamics
3. Apply integrated knowledge of population, community and ecosystem ecology to real world situations using industry standard methods
4. Develop and utilise the skills necessary to undertake ecological fieldwork successfully and to analyse ecological data/models.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Online Quiz(zes) - 40%	•	•		
2 - Practical Assessment - 30%		•	•	•
3 - Practical Assessment - 30%		•	•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	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				

## Graduate Attributes

## Learning Outcomes

1 2 3 4

### 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

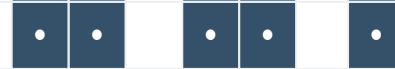
1 - Online Quiz(zes) - 40%



2 - Practical Assessment - 30%



3 - Practical Assessment - 30%



## Textbooks and Resources

### Textbooks

ENVR12002

#### Supplementary

#### Applied Ecology: Monitoring, managing, and conserving

Edition: 1 (2017)

Authors: Anne Goodenough and Adam Hart

Oxford University Press

United Kingdom

ISBN: 9780198723288

Binding: Paperback

#### Additional Textbook Information

If you prefer to study with a paper copy, they are available at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code). eBooks are available at the publisher's website.

### 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

**Guy Carton** Unit Coordinator

[a.carton@cqu.edu.au](mailto:a.carton@cqu.edu.au)

## Schedule

### Week 1 - 13 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Introduction to Applied Ecology: What and why?</b> <b>Fundamentals of Ecology: Things forgotten!</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 1: Introducing Ecology. Chapter 2: Fundamentals of Ecology.	

### Week 2 - 20 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Skills: Ecological Monitoring, Surveying and Indicators</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 3: Ecological Surveying and Monitoring.	<b>Theory Quiz 1 will open 09:00 Friday 24th July (AEST).</b>

### Week 3 - 27 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Skills: Ecological Indicators.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 4: Ecological Indicators.	

### Week 4 - 03 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Exploited species and natural product harvesting.</b>		<b>Theory Quiz 1 will close 09:00 Monday 3rd August (AEST).</b> <b>Theory Quiz 2 will open 09:00 Friday 7th August (AEST).</b>

### Week 5 - 10 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Rehabilitation / Restoration Ecology.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 6: Remediation Ecology	<b>Theory Quiz 3 will open 09:00 Friday 14th August (AEST).</b>

### Vacation Week - 17 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Vacation week.</b>		<b>Theory Quiz 2 will close 09:00 Monday 17th August (AEST).</b>

### Week 6 - 24 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Landscape Ecology and Management.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 7: Landscape Ecology and Management.	<b>Theory Quiz 3 will close 09:00 Monday 24th August (AEST).</b>

### Week 7 - 31 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Let the Invasion Begin! Ecology and Management of Invasive Species.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 8: Non-native Species Management.	<b>Theory Quiz 4 will open 09:00 Friday 4th September (AEST).</b>

### Week 8 - 07 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
<b>Hot Topic: Pest Management.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 9: Pest Management.	

Week 9 - 14 Sep 2020		
Module/Topic	Chapter	Events and Submissions/Topic
<b>Principles of Conservation and <i>In Situ</i> Conservation.</b>	Applied Ecology: Monitoring, Managing and Conserving. Chapter 10: Principles of Conservation. Chapter 11: <i>In Situ</i> Conservation.	<b>Theory Quiz 4 will close 09:00 Monday 14th September (AEST). Theory Quiz 5 will open 09:00 Friday 18th September (AEST).</b>
Week 10 - 21 Sep 2020		
Module/Topic	Chapter	Events and Submissions/Topic
<b>Residential School Focus</b>		
Week 11 - 28 Sep 2020		
Module/Topic	Chapter	Events and Submissions/Topic
<b><i>Ex Situ</i> Conservation</b>	Chapter 10: <i>Ex Situ</i> Conservation.	<b>Theory Quiz 5 will close 09:00 Monday 28th September (AEST).</b>
Week 12 - 05 Oct 2020		
Module/Topic	Chapter	Events and Submissions/Topic
<b>#HELPME</b> - ZOOM Drop In Sessions		
Review/Exam Week - 12 Oct 2020		
Module/Topic	Chapter	Events and Submissions/Topic
		<b>Practical Reports Due 09:00 Monday 12th October (AEST).</b>  <b>Practical Report 1: Growth Modelling Assessment of Marine Fish</b> Due: Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST <b>Practical Report 2: Ecological Surveying Methods: Types, Advantages, Limitations</b> Due: Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST
Exam Week - 19 Oct 2020		
Module/Topic	Chapter	Events and Submissions/Topic

## Term Specific Information

This unit has one compulsory residential school practical for all students. The residential school consists of three days at the North Rockhampton campus, Rockhampton.

Students will be required to provide their own transport to and from campus and over-night accommodation. Details will be provided on the unit Moodle site.

## Assessment Tasks

### 1 Online Quiz(zes) and Short Answer Questions.

#### Assessment Type

Online Quiz(zes)

#### Task Description

Online Quiz(zes)/Short Answer Questions will test knowledge across five (5) key areas, these are;

1. Skills: Ecological Monitoring, Surveying and Indicators (Topic Week 2).
2. Exploited Species and Natural Product Harvesting (Topic Week 4).
3. Rehabilitation / Restoration Ecology (Topic Week 5).
4. Let the Invasion Begin! Ecology and Management of Invasive Species (Topic Week 7).

## 5. Principles of Conservation and In Situ Conservation (Topic Week 9).

### Number of Quizzes

5

### Frequency of Quizzes

Other

### Assessment Due Date

Quiz 1 due 09:00 3rd August; Quiz 2 due 09:00 14th August; Quiz 3 due 09:00 24th August; Quiz 4 due 09:00 14th September; Quiz 5 due 28th September.

### Return Date to Students

### Weighting

40%

### Assessment Criteria

Periodic online quizzes/short answer are based on lecture and study material from the previous week.

For ALL students, online quizzes will open on the Friday (09:00) of the week of the topic (e.g. Quiz 1 covers Week 2, so opens 09:00 Friday of Week 2) and is open for 10 days (so closes on 09:00 Monday of Week 4). Online quizzes are limited to sixty (60) minutes for completion; make sure to submit within the sixty (60) minute time limit. Students will have one attempt per quiz.

Questions can be a mix of true/false, multiple choice, mix-and-match, short answers, and other formats.

Do not share your questions or answers with other students as this may disadvantage other students, and such behaviour will be considered a breach of academic integrity and may result in academic misconduct.

### Referencing Style

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

### Submission

Online

### Learning Outcomes Assessed

- Describe how ecological principles are applied to the protection, management, and restoration of terrestrial and aquatic living resources and ecosystems
- Discuss the elements, concepts, and theories of population and community structure and dynamics

### Graduate Attributes

- Communication
- Critical Thinking
- Information Literacy

## 2 Practical Report 1: Growth Modelling Assessment of Marine Fish

### Assessment Type

Practical Assessment

### Task Description

During your ENVR12002 Residential School you will undertake activities that require the application of scientific and industry standard monitoring, assessment and surveying methodologies and technologies. These activities will be primarily across two areas: 1) Growth Modelling Assessment of Marine Fish (Practical Report 1), and 2) Ecological Surveying Methods: Types, Advantages, Limitations (Practical Report 2). Following the Residential School you will use the data collected during each activity to write up and present the results and conclusions in the format of a scientific/industry standard report.

To assist you with the task of writing up the reports, general assistance with the interpretation and analysis of data will be provided at the conclusion of each activity during the Residential School.

### Assessment Due Date

Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST

### Return Date to Students

Exam Week Friday (23 Oct 2020)

### Weighting

30%

## Assessment Criteria

Practical Reports will be assessed on:

1. Completeness (relevant observations, methods and results presented from each activity).
2. Clarity, grammar, punctuation and organisation.
3. Presentation of figures, tables and diagrams (to publication standard).
4. Correct inline referencing of figures/tables/diagrams.
5. Discussion of the results in context with discipline (e.g. Applied Ecology) relevant and current concepts/theories.
6. Appropriate application of ecological theory and management implications to the results and discussion.
7. Appropriate and correctly-cited references with appropriate author-date citation (Harvard referencing).

Further details of the assessment criteria will be available and discussed at the conclusion of each activity during the Residential School.

## Referencing Style

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

## Submission

Online

## Learning Outcomes Assessed

- Discuss the elements, concepts, and theories of population and community structure and dynamics
- Apply integrated knowledge of population, community and ecosystem ecology to real world situations using industry standard methods
- Develop and utilise the skills necessary to undertake ecological fieldwork successfully and to analyse ecological data/models.

## Graduate Attributes

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

## 3 Practical Report 2: Ecological Surveying Methods: Types, Advantages, Limitations

### Assessment Type

Practical Assessment

### Task Description

During your ENVR12002 Residential School you will undertake activities that require the application of scientific and industry standard monitoring, assessment and surveying methodologies and technologies. These activities will be primarily across two areas: 1) Growth Modelling Assessment of Marine Fish (Practical Report 1), and 2) Ecological Surveying Methods: Types, Advantages, Limitations (Practical Report 2). Following the Residential School you will use the data collected during each activity to write up and present the results and conclusions in the format of a scientific/industry standard report.

To assist you with the task of writing up the reports, general assistance with the interpretation and analysis of data will be provided at the conclusion of each activity during the Residential School.

### Assessment Due Date

Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST

### Return Date to Students

Exam Week Friday (23 Oct 2020)

### Weighting

30%

### Assessment Criteria

Practical Reports will be assessed on:

1. Completeness (relevant observations, methods and results presented from each activity).
2. Clarity, grammar, punctuation and organisation.
3. Presentation of figures, tables and diagrams (to publication standard).
4. Correct inline referencing of figures/tables/diagrams.
5. Discussion of the results in context with discipline (e.g. Applied Ecology) relevant and current concepts/theories.



6. Appropriate application of ecological theory and management implications to the results and discussion.
7. Appropriate and correctly-cited references with appropriate author-date citation (Harvard referencing).

Further details of the assessment criteria will be available and discussed at the conclusion of each activity during the Residential School.

### **Referencing Style**

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

### **Submission**

Online

### **Learning Outcomes Assessed**

- Discuss the elements, concepts, and theories of population and community structure and dynamics
- Apply integrated knowledge of population, community and ecosystem ecology to real world situations using industry standard methods
- Develop and utilise the skills necessary to undertake ecological fieldwork successfully and to analyse ecological data/models.

### **Graduate Attributes**

- Problem Solving
- Critical Thinking
- Team Work
- Information Technology 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