

ENVS2006: Ecology and Management of Wildlife

Callaghan and Ourimbah

Semester 1 - 2024



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description

Wildlife around the world are increasingly heading toward extinction. One method governments use to avert this extinction crisis is to create threatened species recovery plans that outline what we know about a species and how we can keep it alive into the future.

This course will develop your understanding of the ecology and management of wildlife via the creation of a species recovery plan. Students will work in groups to identify why recovery plans are important, and then to collect the information necessary on their chosen taxa to compile a recovery plan.

In doing so, students will develop skills on species identification and survey methods to ensure they can make appropriate recommendations in their recovery plans. Students will summarise published data on their focal species and related taxa to generate sections of their recovery plan on the species ecology and evolutionary history, unique adaptations, threatening processes and fully costed management solutions.

Academic Progress Requirements

Nil

Assumed Knowledge

BIOL1001 or BIOL1002, and BIOL1003 (Callaghan students)
BIOL1040 and BIOL1070 (or BIOL1050) (Ourimbah students)

Contact Hours

Callaghan & Ourimbah Computer Lab

Face to Face On Campus
3 hour(s) per week(s) for 13 week(s) starting Week 1
Computer / group work

Field Study

Face to Face Off Campus
21 hour(s) per term starting Week 1

Lecture

Online
1 hour(s) per week(s) for 13 week(s) starting Week 1

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

COURSE OUTLINE

www.newcastle.edu.au

CRICOS Provider 00109J

CONTACTS

Course Coordinator	Callaghan and Ourimbah Prof Matthew Hayward Matthew.Hayward@newcastle.edu.au (02) 4921 7472 Consultation: By Appointment
Teaching Staff	Dr Darren Southwell Darren.southwell@newcastle.edu.au Consultation: in the field
School Office	School of Environmental and Life Sciences Room C228 Chemistry Building Callaghan CESE-SELS@newcastle.edu.au (02) 4921 5080 9am-5pm (Mon-Fri)
	School of Environmental and Life Sciences SO-104 Science Offices OURIMBAH CESE-SELS@newcastle.edu.au (02) 4349 4568 / 4348 4115 9am-5pm (Mon-Fri)

SYLLABUS

Course Content	<p>The Theme of the course revolves around creating a recovery plan for a threatened species. Specific emphasis is given to processing key components of the recovery plan including:</p> <ol style="list-style-type: none">1. What is in a species recovery plan and why are they important?2. Understanding the ecology of your focal species3. Determining critical habitat and identifying critical threats for your species.4. Paraphrase the national and international legal obligations that may affect your species.5. Methods to study, identify and describe the diversity of animals.6. The importance of your study taxa to Indigenous people.7. Social and economic interests associated with the conservation management of your species.8. Decide what the broader benefits will be from the successful conservation of your species (ecosystem services).9. Describe the existing conservation management practices that are being implemented for your species, and evaluate how successful this has been.10. Compile recovery goals, objectives and actions to improve the conservation success of your species and the cost the recovery actions you propose.
Course Learning Outcomes	<p>On successful completion of this course, students will be able to:</p> <ol style="list-style-type: none">1. Create a fully costed recovery plan for a threatened species.2. Assemble information relevant to the creation of the recovery plan, including that on species taxonomy, distribution, status, population trends, ecology, habitat and threats.3. Translate lessons learnt on a threatened species that is relevant to other species.4. Debate threatened species management from a range of perspectives.5. Identify the strengths and weaknesses of methods of surveying wildlife.6. Work effectively independently and as part of a team.
Course Materials	<p>Lecture Materials: Lecture and supplementary materials provided via Canvas.</p>

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb	Introduction and Context	Form groups of 4-6 to discuss methods of group work; identify study species; allocate tasks for each group member (incl what info to research for next week).	Online quiz due before lab (1% of final mark) 2
2	4 Mar	Species ecology	Review the ecology of your study species using jigsaw learning	Bird ID quiz conducted before the field trip, and then the field trip quiz conducted online after the trip (6%) 3
3	11 Mar	Species distribution modelling	GIS mapping of habitat and MaxEnt modelling	Online quiz due before lab (1%)
4	18 Mar	Threats to wildlife	Identify and prioritise threats (Project Prioritisation protocols) using expert opinion	Online quiz due before lab (1%)
5	25 Mar	Legal obligations of threatened species management	Review the legal requirements of threatened species conservation	Online quiz due before lab (1%)
6	1 Apr	Affected interests in your species	Conduct a mock stakeholder engagement meeting (group members to be Chair; government conservationist; AWC; farmer; coal miner; community group; academic)	Contribution to the stakeholder engagement meeting due in class (20%)
7	8 Apr	Indigenous and socio-economic issues relating to your threatened species	Review likely Indigenous and socio-economic issues affecting your species	Online quiz due before lab (1%)
Mid-Semester Recess				
Mid-Semester Recess				
8	29 Apr	Population viability analysis	Run a Population viability analysis (PVA/Vortex) of your species	Online review of another group's draft recovery plan submitted before the lab (5%).
9	6 May	Broader biodiversity benefits of your species	Summarise likely ecosystem services your species provides	Online quiz before lab (1%)
10	13 May	Existing conservation practices and species management and recovery planning	Review IUCN red list & other literature for conservation actions employed to conserve your species. Unmarked presentation on your species to the class. Define goals & objectives of your recovery plan; and actions necessary to conserve your species.	Online quiz due before lab to upload PowerPoint slides of your talk to the class (1%)
11	20 May	Costing and prioritising recovery actions	Project Prioritisation protocols (PPP) - prioritise recovery actions.	Online quiz due before lab on project prioritisation protocols (2%).
12	27 May	Continue the PPP	PPP	Group work participation mark (10%) due at end of week.

13	3 Jun	Finalise recovery plan and submission	No workshop. Finalise your recovery plan and submit via Turnitin.	Final recovery plan due at the end of week (50% of final mark)
Examination Period				
Examination Period				

ASSESSMENTS

This course has 4 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Online Quizzes	Weekly before each lab.	Individual	20%	2, 3, 5
2	Recovery Plan	Friday of the first week of study break (2nd week of June).	Group	50%	1, 2, 5, 6
3	Stakeholder workshop	In lab in Week 6	Individual	20%	4, 6
4	Group work assessment	Friday of Week 12	Individual	10%	6

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Online Quizzes

Assessment Type	Quiz
Purpose	The purpose of the quizzes is to ensure everyone comes to the computer lab prepared to work and with some background understanding of the theory behind the week's activity.
Description	Short multi-choice or short answer questions.
Weighting	20%
Due Date	Weekly before each lab.
Submission Method	Online
Assessment Criteria	In multiple-choice questions, only correct answers will receive marks, and there is no penalty for incorrect answers. In short answer questions, full marks will be allocated to responses that correctly explain or apply appropriate concepts to the context of the questions. Partial marks will be awarded in accordance with the level of completeness, understanding and accuracy of a response. Incorrect responses will not be penalised with negative points.
Return Method	Online
Feedback Provided	Online
Opportunity to Reattempt	Students WILL NOT be given the opportunity to reattempt this assessment.

Assessment 2 - Recovery Plan

Assessment Type	Written Assignment
Purpose	This is the ultimate goal of this course - a full recovery plan for a threatened species to enable conservation managers to understand the ecology and threats to your species, and how best to improve its conservation status.
Description	Your group will compile all the data necessary to create a threatened species recovery plan.
Weighting	50%
Length	This is a detailed plan.
Due Date	Friday of the first week of study break (2nd week of June).
Submission Method	Online Submission via Turnitin link found in the Assessments tab of the Canvas page
Assessment Criteria	See marking rubric in the Assessments tab of the Canvas page.
Return Method	Online
Feedback Provided	Online - 2 weeks after submission. Rubric scores and online comments.
Opportunity to Reattempt	Students WILL NOT be given the opportunity to reattempt this assessment.

Assessment 3 - Stakeholder workshop

Assessment Type	Tutorial / Laboratory Exercises
Purpose	The purpose of the stakeholder workshop is to investigate the conservation of your species from a range of perspectives.
Description	Your group will discuss issues related to the conservation of your species with each person giving one or more different perspectives.
Weighting	20%
Length	10 Minutes
Due Date	In lab in Week 6
Submission Method	In Class
Assessment Criteria	Marking rubric provided on the Canvas site
Return Method	In Class
Feedback Provided	In Class - Week after presentations. Rubric scores.
Opportunity to Reattempt	Students WILL NOT be given the opportunity to reattempt this assessment.

Assessment 4 - Group work assessment

Assessment Type	Participation
Purpose	The purpose of this assessment is to help you develop your teamwork skills.
Description	When you leave university and get a job, you will almost certainly work as part of a team. Employers have been stressing the importance of the ability to work in a team to the university. Hence, this course will use your attendance, and the perceptions of the rest of your group and the course coordinator to allocate a group work mark.
Weighting	10%
Length	Assessed via group contribution
Due Date	Friday of Week 12
Submission Method	Online
Assessment Criteria	Group members will be required to provide a mark out of 10 for each group member. The mean of these marks will be coupled with the marks of the staff to yield a final group mark.
Return Method	Online
Feedback Provided	Online - 2 weeks after recovery plan submitted - as requested.
Opportunity to Reattempt	Students WILL NOT be given the opportunity to reattempt this assessment.

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following

disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Attendance

Attendance/participation will be recorded in the following components:

- Computer Lab (Method of recording: Class list)
- Field Study (Method of recording: Class list)

Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <https://policies.newcastle.edu.au/document/view-current.php?id=35>.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at <https://policies.newcastle.edu.au/document/view-current.php?id=236>

Important Policy Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures> that support a safe and respectful environment at the University.

Other Information

The field trip in March will require you to provide your own camping gear, food, and transport (car-share where possible). We can provide a lift to some people, and some camping gear. Please alert Matt if you need this.

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

