

# WIS 4905 Study Abroad: New Zealand Biodiversity and Conservation



Department of Wildlife Ecology and Conservation  
Study Abroad Program, Summer B, June 29 –Aug 1, 2019

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## Course Titles and Credits

WIS 4905 Biodiversity Conservation and Management (3 credits)  
WIS 4905 New Zealand Flora and Fauna (3 credits)

## Course Description

This 5-week, experiential program introduces students to New Zealand's unique flora and fauna and local/national efforts to conserve and restore biodiversity. New Zealand is a biodiversity hotspot with 1865 endemic (i.e. found nowhere else in the world) plants, 63 endemic bird species, 47 endemic skinks/geckos, 2 tuataras, 2 endemic bats, and 4 endemic amphibians. It is also home to a large number of endemic invertebrates, fish, and marine species. New Zealand is known as "clean and green" but faces many environmental challenges to retain its unique natural heritage. Since Maori first stepped onto the land nearly 800 years ago, and after European colonization over 200 years ago, humans have dramatically impacted New Zealand and many remaining species are in danger of going extinct.

Not unlike many places around the world, developed urban and rural properties are situated near or in habitats that sustain native plant and animal communities. Conserving and restoring biodiversity in highly-modified environments is a struggle, and the focus of this course is to expose students to how "kiwis" have tackled this problem. The decisions made by scientists, landowners, policymakers, developers, and the general public intersect in unique ways and ultimately determine the success of any biodiversity conservation program. Topics will span both the natural and social sciences, including human dimensions of natural resource conservation and basic ecology.

Students will be based in a small college town, Lincoln, located just outside of Christchurch on the South Island. Many biodiversity conservation and restoration projects in New Zealand involve conserving remnant bush, managing urban and rural properties, planting native vegetation, rearing and reintroduction of rare native species (e.g., kiwis), and the eradication of introduced, pest mammals. Special emphasis is given to the design and management of urban landscapes as they pertain to biodiversity conservation. In the first part of the course, students will learn about the flora and fauna of New Zealand, the historical and current impacts by Maori and Europeans, and strategies used to conserve biodiversity. The second part of the course will explore the human dimension side of conservation and the role of planners/policymakers, developers/landscape architects, landowners, and the public. Day and overnight field trips will be conducted in and around the Canterbury Plains, Southern Alps, Banks Peninsula, and the West Coast. These frequent field trips will be combined with

lectures by various experts in the field of conservation ecology and planning. Students will come away from the course with an understanding of the challenges and solutions to implementing conservation strategies in growing communities.

## **Objectives**

1. Learn about ways to conserve, manage, and restore natural habitat and to promote biodiversity in urban and rural environments.
2. Examine the relationship among planners/policymakers, developers, and the public and their roles in conserving biodiversity.
3. Explore the unique flora and fauna of New Zealand.

## **Skills and Principles Taught**

Biodiversity Conservation and Management and New Zealand Flora and Fauna courses are intertwined to give students a holistic picture and understanding about biodiversity conservation. Disciplines that are covered in the text book and in scheduled field trips include: Conservation, Human Dimensions of Natural Resource Conservation, Plant & Animal Diversity & Taxonomy, Ecology, Wildlife Management, and Urban & Regional Planning. Students will learn:

- Key ecological principles related to biodiversity conservation
- Key design and management principles to conserve biodiversity in subdivision development
- Key design and management practices to conserve biodiversity in rural areas, including parks and reserves
- Natural and cultural history of New Zealand
- How biodiversity conservation is influenced by the decisions and actions of policy makers, developers, and the public
- Identification of New Zealand plants and animals
- How to conduct a bird survey transect and enter data on NZ NatureWatch

## **Course Text Book**

Hostetler, M.E. and Meurk, C. 2008. Conserving and Restoring Biodiversity in New Zealand Urban and Rural Environments. Landcare Research, Manaaki Whenua Press, Lincoln, NZ

## **Course Grade**

Grades will be based on participation, the completion of a class journal (handed in at the end of the course), and flora and fauna reports. Rubric: Journal must incorporate information from the course manual and contain ecological principles and practices learned while in the field.

## **Logistics**

1. All independent excursions outside of Lincoln University, **each student must contact and let me know of their travel plans and when they will return. For safety reasons. We prefer that people travel in groups of 2 or more.**

2. Housing: Both room and board are provided at Lincoln University Dormitories, Lincoln, Canterbury (<http://www.lincoln.ac.nz/>). Students have access to the internet and phone on campus. City bus service is available to Christchurch.
3. Travel: A 12-seater and an 8-seater van are rented to transport students on day and overnight trips. The 8-seater van is used for luggage. Most day trips are around Christchurch. Overnight trips include visits to Greymouth and Punakaki (West Coast); Kaikoura (East Coast); and Akaroa (Hinewai Reserve). Students will stay in a mixture of hotels and lodges.