



**THE NEW ZEALAND PROGRAM:
CONSERVATION & ISLAND BIOGEOGRAPHY
SEPTEMBER 29 – NOVEMBER 11, 2023**

ACADEMIC SYLLABUS

Faculty:

Lead Instructor: Isaac Newell, MS

Contact Hours: We will be in close contact, meeting every day throughout the course. There will be a number of “check-in days” where we will schedule student-faculty meetings. If you would like to have a meeting outside of those times, I will be available to meet throughout the course.

Class Meetings: This Wildlands Studies Program involves seven days per week of instruction and field research, with little time-off during the program. Faculty and staff work directly with students 6-10+ hours a day and are available for tutorials and coursework discussion before and after scheduled activities. Typically, scheduled activities begin each day between 8am-9am, with breaks for meals. Scheduled activities vary to include lectures, discussions, hikes, and field activities and field research exercises. Evenings may include scheduled activities, such as guest lectures, structured study time, or journal writing. When at a field site, our activities may start as early as 5am or end as late as 10pm (e.g. for dawn/dusk/night wildlife observation). It is necessary to be flexible and able to accommodate a variety of class times, activities, and independent study times.

Course Credit: Wildlands Studies Program students receive credit for three undergraduate courses. These three courses have distinct objectives and descriptions, and we integrate teaching and learning through both formal learning situations (i.e. lectures and seminars) and field surveys. Academic credit is provided by Western Washington University. Extended descriptions follow in the course description section of this syllabus.

1. **ESCI 497T, Environmental Wildlands Studies (5 quarter units / 3.35 semester credits)** – Study of environmental issues affecting the natural and human-impacted ecosystems of our study region, including the role of human interactions.
2. **ESCI 497U, Environmental Field Survey (5 quarter units / 3.35 semester credits)** – Study and application of biodiversity surveys, sampling and ecosystem restoration techniques, including on-site data collection, assessment and analysis.
3. **ESCI 497V, Wildlands Environment and Culture (5 quarter units / 3.35 semester credits)** – Study of social-ecological systems, drawing on locally relevant cultural perspectives and historic and present-day human relationships with wildlife and the environment. Includes group dialogue and personal reflection to track one’s own learning.

Readings: A Course Reader is provided to students at the commencement of this program digitally via Dropbox as well as in a shared hard copy reference library that will accompany us throughout the program. Readings include selections from primary scientific literature, technical reports, and book chapters. The use of field guides is also required and forms an integral part of our program. It is not mandatory that all students have a printed copy of the Course Reader. Some students may prefer using a digital copy via a tablet or a similar device. However, the opportunities to charge these devices may not always be available and it is recommended that participants arrange for at least one printed copy for every three students. This splitting into groups to share readers should be figured out prior to the start of the course in order to ensure there are enough readers on the program.

Contents of this syllabus:

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I. Program Overview

This program will be a cooperative group effort throughout. Participants will get the most out of it by having great flexibility, open minds, a sense of humor, and a desire to work together toward common goals. There is nothing comparable to the learning you will gain from firsthand experience in the field in a foreign country. We will combine academic and experiential learning as we progress. This formula will ensure that each student gains a truly unique understanding of New Zealand's rich ecological and cultural past and present.

New Zealand is an island country in the south-western Pacific Ocean comprised of two main landmasses, the North and South Islands. The country extends more than 1,000 miles (1,600 km.) north to south, from 34° to 47° S latitude and has a total land area of 103,483 square miles (268,021 km²). For reference, the country is slightly smaller east-to-west, but longer north-to-south, than the state of California, with corresponding northern latitudes spanning from Los Angeles to Seattle. The North Island is more heavily populated and is marked by active volcanism. The South Island is the largest land mass of New Zealand and is divided along its length by the Southern Alps. The highest peak is Aoraki/Mount Cook at 12,320 ft. The climate throughout the country is mild and temperate, mainly maritime, with temperatures that can fall below 32°F (0°C) or rise above 90°F (32°C). Conditions vary sharply across regions, from extremely wet on the West Coast of the South Island to semi-arid in the inland basin and subtropical in the north. We will be exploring the majority of these fascinating landscapes as we navigate the country.

New Zealand is notable for its geographic isolation: it is situated approximately 1,250 miles southeast of Australia across the Tasman Sea. During its long isolation, New Zealand developed a distinctive fauna dominated by birds and almost completely void of native mammals. About 80% of New Zealand's flora is endemic, including 65 endemic genera. New Zealand was the last major land mass in the world to be settled by humans, estimated just over 750 years ago.

Since the introduction of humans to New Zealand, the native landscape has experienced large scale changes. Early Māori settlers burned forests for food procurement and European settlers logged forests for development. Human hunting and pressure from introduced animals such as weasels, stoats, cats, goats, deer and Australian brush-tailed possums have caused high rates of extinction of endemic flora and fauna. In recent times, New Zealand has been leading the world in setting best practices for island restoration projects, such as using offshore islands – cleared of introduced mammalian pests – as a place for native species reintroductions.

Team Activities & Program Itinerary

Our field course will begin with the exploration of New Zealand's culturally rich, volcanically active North Island. Here, amongst colorful parrots and old growth forests, we will hone our species identification skills and examine concepts in island ecology. Our launching point for the class will be Auckland, New Zealand's largest city and cultural hub. From here, we will head to Northland where we will be working with TriOceans, a marine research and conservation organization. With them, we will be learning marine research methods and assisting in their ongoing monitoring programs. Next, we will head to Tongariro National Park, New Zealand's oldest National Park, to explore the area's complex geology and rich human history. Our time on the North Island will come to a close in New Zealand's capital, Wellington. Here, we will have the opportunity to visit a predator-free island and explore more concepts in island biogeography. Finally, we will board a ferry and cross the Cook Strait to The South Island.

The South Island of New Zealand is both ecologically rich and geologically impressive. We will head straight to Abel Tasman National Park where we will begin practicing our own field research methods, focusing on how to quantify bird and plant diversities. Next, we head to Kahurangi National Park which will act as our first data collection site for our independent research projects. We will continue heading south to Nelson Lakes National Park to finish up data collection for our projects. We will also continue our dive into concepts of traditional land management, disturbance ecology, and restoration ecology. Then we will head to a historic sheep farm in Wanaka. We will have the opportunity to help the owners with their carbon-neutral initiative, while also learning about sustainable farming in New Zealand. From there we will visit our final field location, Aoraki/Mt. Cook National Park. Here, we will examine alpine and subalpine ecology, while talking about how we can apply all that we have learned back in our home communities. Finally, we will say our goodbyes in Christchurch.

In order to experience the diversity of New Zealand's landscapes and ecosystems, we'll spend a good amount of time traveling. Our main mode of transportation throughout the country will be rental vans. The program will be broken up between short backpacking trips, nights at a basecamp, day hikes, car-camping at established campgrounds, and an occasional hostel stay. Throughout the program, we will be teaming up with conservation researchers, managers, local organizations and community groups to assist with ongoing and new projects. We will learn about the native flora and fauna of New Zealand, focusing on their ecology, evolution, classification, and identification. We will also explore New Zealand's cultural history of Polynesian and European settlement. By the completion of the program, you will be well-versed in New Zealand's natural and cultural history, as well as the contemporary challenges the country faces and the strategies it has implemented towards biodiversity conservation. You will also be equipped with a foundational scientific naturalist skillset that you can apply anywhere in the world.

II. Learning Objectives

Following this program, students should have working knowledge of and experience in:

1. ***The flora, fauna, ecosystems, and ecological processes of New Zealand.*** Species identification is essential to managing and understanding the ecological communities and species interactions in a particular region. Students will learn to identify plant and animal species using field guides and taxonomic keys throughout the course. Through readings, assignments, presentations, observations and journals, students will understand basic ecological concepts, and how they relate to the flora and fauna of New Zealand. Students will also be able to identify community types and the processes that underlie community development and change.
2. ***The impacts of invasive species and the potential for island restoration through research, management, and conservation.*** Invasive species have dramatically impacted native wildlife in New Zealand. Through readings, lectures, and hands-on experience, students will learn about the management decisions that have been made to curtail the impact of invasive species, as well as the current restoration and research projects being conducted. Students will have the chance to meet biologists, natural resource managers, and conservation scientists to discuss the positive ecological impacts that management decisions have had on native species.
3. ***The culture, politics, and history of New Zealand, including both indigenous and settler perspectives.*** Following lectures on the culture, politics and history of New Zealand, students will have the chance to interact with local residents who may have very different perspectives on environmental sustainability, management, and policy. We will stay with Māori communities who have a long association with the land, as well as work with federal agencies and local non-profit conservation organizations. Students will gain additional insight into the political and management history through discussions and numerous readings.
4. ***Critical reading, discussion, and evaluation of primary literature in natural and social sciences.*** Throughout this course, we rely on primary literature, which provides students with a significant amount of experience reading and critically discussing scientific literature. Following an introductory discussion about "how to read a scientific paper" students will read an average of two/three primary literature articles a week, learning over time and with practice where to focus their attention in order to critically evaluate the work.

5. **Field observation skills, including methods for documenting and sharing findings.** Field observation skills are an integral part of good science and promote understanding of the world around you. Through directed learning of regional ecology, students will gain experience observing and connecting with their surroundings. Students will be introduced to techniques for recording and presenting information, and will gain experience observing ecosystems, ecological communities, and species interactions through a scientific lens. By learning to detect ecological processes on a variety of scales, students will be able to develop a complete understanding of the functional ecosystems we will be immersed in.
6. **Direct experience with a variety of conservation projects throughout New Zealand.** Students will gain hands-on experience with various conservation projects and a variety of local and national conservation agencies. Working on-site with researchers, students will gain in-depth knowledge of conservation threats and concerns throughout New Zealand and how these challenges are being addressed and managed.
7. **Basic backcountry skills, including backcountry travel and field navigation.** Although not the focus of this course, students will gain experience in planning for a backcountry trip, how to travel safely in the backcountry, and how to lead and manage a group.

These topics will be addressed through lectures, group discussions, course readings, visits with locals, exposure to ongoing research, hiking excursions, and field research projects. The course generally progresses from faculty-led instruction in the beginning to student-led discussion, analysis, and synthesis toward the end of the program. **Note that prior field research experience is not required. All necessary skills will be taught on-site in New Zealand.**

Overall, our goal is to develop your skills as a field ecologist and scientific naturalist who can interface between diverse environments, and obtain broader skills and understanding of ecology, conservation, and natural resource management which can be applied to other settings in your future lives and careers. Our primary requirement is that you are enthusiastic, adaptable, genuinely open-minded, and ready and willing to learn. We look forward to you joining us and sharing this once-in-a-lifetime experience together.

III. Course Descriptions

We teach these three courses in an integrated format in the field. However, students will receive transcript credit for the following three courses, introduced on page 1:

ESCI 497T, Environmental Wildlands Studies (5 quarter / 3.35 semester credits)

Field-study of the natural history and environmental challenges impacting New Zealand's ecosystems and biodiversity, and the historic and current role of humans in landscape interactions and management.

Experiences/Activities: Students will become familiar with the flora, fauna, ecology, geology, geography, and natural history of New Zealand. Students will be instructed in methods of field journal recording and will learn directly through attentive observation and experience, as well as through guidebooks, lectures, literature, and stakeholder interactions. Using principles of conservation ecology, the course will introduce conservation issues pertinent to New Zealand such as invasive species, ecological restoration, and species reintroduction. The course will also explore the steps that governmental and non-governmental agencies are taking to address these issues.

Before arriving in New Zealand, each student will be assigned an important New Zealand plant or animal species, and conduct background research on their assigned species to become a local "expert". Students will present their acquired knowledge to the rest of the class and teach other students how to correctly identify their species in the field.

Outcomes: Students will gain the ability to analyze, discuss, and critique the concepts and methods of scientific investigations. They will be conversant with current conservation issues, threats to biodiversity and management strategies. Students will be able to demonstrate an understanding of the ecological, geological, and social processes and interrelationships that have shaped New Zealand over time, and how these principles transfer to their "home ecosystems". They will have the ability to create a field journal that is useful in future studies and by other field workers.

Evaluation/Assessment:

Species Presentation	10%
Field Journal	40%
Midterm Exam	15%
Final Exam	25%
Participation & Discussions	10%

ESCI 497U, Environmental Field Survey (5 quarter / 3.35 semester credits)

In this course, students focus on field survey methods, including scientific observations, identification, and on-site biodiversity assessments as part of individual and group activities. Students will learn and practice various field research methods, as well as learn the importance of proper experimental design, data collection techniques, analysis of field data, and report writing. Students will also gain hands-on experience in conservation research, management, and monitoring techniques used to understand ecological processes and mitigate current environmental issues.

Experiences/Activities: Students will gain comprehension of the methods, principles, and applications of ecological and conservation research and management. Students will assist in ongoing ecological surveys, species monitoring, and restoration projects conducted by the New Zealand Department of Conservation and non-governmental organizations. Lectures and field activities will be used to introduce methods of data collection and analysis. Students will be instructed in methods of field observation, question-setting, reporting, and species identification. In the second half of the course, students will work in teams and use the skills they have learned to propose and carry out research projects. The proposed projects will be based on students' own research questions and should be feasible given the time and resources (i.e., materials) available. Once finished with their projects, student teams will give formal presentations of their work.

Outcomes: Students will develop skills in field observation, data collection, and data presentation. They will gain the ability to undertake field projects and be able to synthesize, organize, and interpret data in a way that is appropriate for peers and other interested stakeholders. Students will be able to clearly describe the rationale and field methods used for a given research, management, or monitoring activity, and discuss and reflect on related outcomes. Students will be able to identify unknown species using taxonomic keys, field guides, and other resources and use that information to teach other students and interested persons how to identify specific plants and animals.

Evaluation & Assessment:

Research Proposal	10%
Research Project	20%
Research Presentation	20%
Midterm Exam	15%
Final Exam	25%
Participation & Discussions	10%

ESCI 497V, Wildlands Environment and Culture (5 quarter / 3.35 semester credits)

This course focuses on the social-cultural relationships with the natural environment. Using context-specific case studies, students assess historical and cultural uses of land, ecosystems and biodiversity, and related social-ecological consequences.

Experiences/Activities: Students will gain familiarity with conservation issues in New Zealand and the ways in which these issues impact local culture and society. Throughout the course we will explore the history of the indigenous Māori people both prior to and after European settlement including the customs and traditions historically and present. We will visit a number of cultural landmarks and discuss case studies addressing ways in which environmental issues have affected local cultures, and how local cultures are participating in conservation projects. Throughout the class, each

student will be required to keep a cultural field journal that includes guest speaker summaries, reflections, and a cultural dictionary to better understand local language and customs. This course will incorporate lectures, talks from guest speakers and visits to conservation and tribal landmarks in New Zealand.

Before arriving in New Zealand, each student will be assigned an important aspect of New Zealand's culture or history. In the first half of the course, students will present their findings to the rest of the class and act as the group's "expert" on the subject as we travel through the country.

Outcomes: Students will become acutely aware of how social-cultural dimensions shape conservation and natural resource management in New Zealand. They will be able to utilize and situate components of ESCI 497T and ESCI 497U within a changing social-cultural context. Students are expected to participate in all activities, discussions, and lectures and demonstrate proficiency in the cultural history of the region.

Evaluation & Assessment:

Cultural Presentation	10%
Cultural Journal	25%
Case Study Discussion	15%
Midterm Exam	15%
Final Exam	25%
Participation & Engagement	10%

IV. Assessment

Below is an overview of the academic requirements for this Wildlands Studies program. Some of the assignments are ongoing (e.g., journals and readings) and some have specific dates (e.g. exams, projects). Due dates are subject to change in response to local variables. Grades for ESCI 497T, 497U, 497V are based on the following:

Course Number	Assessment Item	Due* <small>*specific dates will be assigned during the course</small>	Percent % of Grade
ESCI 497T	Species Presentation	During weeks 1 & 2	10
	Field Journal	Weeks 3 & 6	40
	Midterm Exam	Start of week 4	15
	Final Exam	Week 6	25
	Participation & Discussions	Throughout	10
ESCI 497U	Research Proposal	Week 3	10
	Research Project	Weeks 4 & 5	25
	Research Presentation	Week 5	15
	Midterm Exam	Start of week 4	15
	Final Exam	Week 6	25
	Participation & Discussions	Throughout	10
ESCI 497V	Cultural Presentation	During weeks 1 & 2	10
	Cultural Journal	Weeks 3 & 6	25
	Case Study Discussion	Weeks 3 & 4	15
	Midterm Exam	Start of week 4	15
	Final Exam	Week 6	25
	Participation & Discussions	Throughout	10

ESCI 497T, Environmental Wildlands Studies (5 quarter / 3.35 semester credits)

1. Species Presentation – 10%

Students will be assigned an important New Zealand species a few weeks before the start of the program. Leading up to the program, students will research their assigned species and come prepared to give a presentation (10 minute presentation + 5 minutes for questions/discussion). Species may be culturally or ecologically significant and may be native or introduced. Students will present on why the species is important, its conservation status, and relevant research involving the species. On the day that the presentation is given, students will turn in a 1-2 page summary of bulleted information.

Grading of Oral Presentations will use the following criteria:

- Content: Information delivered is relevant, accurate, original, creative, and coverage is appropriate.
- Structure: Presentation has a logical flow and adheres to the time limit.
- Delivery: Student gives presentation in an engaging manner with good posture and is well spoken. Presentations should not be a verbatim retelling of students' bullet point summaries.
- Discussion: Student is able to answer questions and generate/facilitate discussion around the key points.
- Bullet Point Summary: 1-2 page overview of key points of their assigned topic. The summary can be handwritten or typed/printed out. The summary must include a reference list (e.g., articles, books, websites, personal sources, etc.), and students must use a minimum of three different primary sources. Plagiarism (i.e., cut/paste verbatim) will not be accepted.

2. Field Journal (15% mid-term + 25% final review) – 40%

The field journal is an integral part of our program – it serves as a learning tool and an opportunity to closely attend to the environment and document observations. The field journal will be used throughout the course. We will focus on various techniques and styles for recording observations, although our primary format will be similar to the Grinnell Style Field Journal (*described in the Course Reader*).

Each entry will include the date, time, weather, basic orienting information, a general route description, distances, travel times, and natural history observations. Journal entries are a careful summary of observations and field notes taken throughout the day and should take approximately 45-60 minutes to write up. Occasionally students will get instruction to complete specific journal entries which may follow a different format. These special entries will be assigned and explained during the course.

1. Date & Times:	Head your trip log entry with the date(s) of the trip and the times (start and end)
2. Location:	Give the name of the area and the name of the hiking trail/route. If available, include start/end GPS coordinates.
3. Weather:	Start/end conditions and notable weather changes that occur during the trip, e.g., temperature, % cloud cover, rain, fog, wind direction, etc.
4. Route Description & Map:	Concise description of the route travelled, with distances, times, notable markers or changes in direction. Sketch route map with key features including north arrow.
5. Habitat(s):	Broad description of the area's habitat types (e.g., glacial moraine, lava field, geothermal lands), noting changes in habitat type and ecological/geological changes that occur along the trail.
6. Flora and Fauna:	Descriptions of dominant/notable vegetation that is found and sightings of any animals (Note any interactions/associations between the biological/physical landscape that you notice)
7. Geography:	Descriptions (and names if available) of the prominent geological features (e.g., glaciers, mountains, waterfalls, etc.) that we see during the trip.
8. General Commentary:	A brief personal summary that reflects on the hike and/or other notable observations (e.g., soils, debris, leaf litter, scat, etc.)
9. Observation Descriptions & Sketches:	Descriptions of 3-5 species/geological features that you observed, sketch the species/feature and label.
10. Two Questions:	Conclude with two detailed questions about ecological/geological phenomena encountered that got you wondering.

Grading of Journal Log entries will use the following criteria:

- **Organization:** Entries are written in an organized way and should follow a logical format that is consistent with the established criteria listed above.
- **Completeness:** Each entry includes the essential elements, and table of contents is up-to-date and accurate.
- **Accuracy of Content:** Provides an accurate and comprehensive reflection of phenomena encountered during the trip (e.g., correct descriptive data, features seen, species encountered). Spellings of place names and species should be accurate.
- **Clarity:** The entry should be well-written, easy to read, and should be prepared so that others can use it as a reference.
- **Effort:** The entries should demonstrate that concerted effort has been invested into the process. Consistency of effort is key!

3. Midterm Exam – 15%

A written midterm exam will be administrated halfway through the course in order to test students' concept comprehension. This exam will consist of a series of short answer questions that will pertain to the concepts we have learned.

4. Final Exam – 25%

In the last few days of the program, students will take a written exam to assess their understanding of key themes and concepts related to ecology, geology, oceanography, geography, and environmental issues that were addressed throughout the course. The exam will include short and long essay questions that assess the student's ability to demonstrate thorough comprehension of themes covered during the entire program.

5. Participation & Discussion – 10%

Includes general engagement with the subject matter and participation in group readings and discussions.

ESCI 497U, Environmental Field Survey (5 quarter / 3.35 semester credits)

1. Research Proposal – 10%

Students will begin their group research projects by creating a written proposal which will be presented to the instructor team (~10 minutes). Proposals will include a central research question, an introduction including the importance of the research, intended methods, and a hypothesis (**what** you intent to do, **why** you want to do it, and **how** you plan to achieve it). Research can be based on any topic that interests the group, given that it is feasible to complete given the resources at hand. Students may draw from lectures, readings, guest speakers, and independent research. After each presentation, 5 minutes will be allowed for questions from the instructor team.

Grading of the Research Project will use the following criteria:

- **Organization:** Proposal is organized and presented in a logical way.
- **Content:** Provides an appropriate amount of information that fully presents the proposed study. The proposal convinces the reader why it is important and necessary and demonstrates that the students have thoroughly thought through *what* will be done, *how* it will be done, and *why* it will be done.
- **Clarity:** The proposal should be easy to understand, with concrete objectives and a clear plan.
- **Effort:** The proposal demonstrates that concerted effort has been invested into the process.
- **References:** If literature was used, it needs to be cited.
- **Presentation Style:** Groups can comfortably articulate and answer questions about their study
- **Group Participation:** Individuals are active participants in the group process, and work is evenly shared.

2. Research Project – 25%

Student groups use the methods learned in class to carry out their research projects, including data collection, compilation, and analysis. Students will use the methods learned in class as the foundation of their research.

Complete project writeups will include:

- Introductions: Why is this research is important or necessary? What is your research question? What do readers need to know about the context of the study?
- Methods: How did you collect your data? How did you analyze your data?
- Results: What did you find? Results sections will include written results and data presented in effective figures.
- Discussion: What does your data mean? What are the implications on the local, national, global scales?
- Works cited

Grading of the Research Project will use the following criteria:

- Organization: Research project is organized and written in a logical way. Handwriting throughout must be legible.
- Content: Provides an appropriate amount of information in each section.
- Clarity: The writeup should be easy to understand, with each piece being clearly related to the central research question.
- Effort: The writeup demonstrates that concerted effort has been invested into the entire project.
- References: If literature was used, it needs to be cited.
- Group Participation: Individuals are active participants in the group process, and work is evenly shared.

3. Research Presentation – 15%

Students will present their completed research projects to the rest of the class. This will include introductions, methods, results and figures, discussion, and conclusions. Presentations should not be verbatim readings of research projects, rather they should be presented in an engaging, easy to understand way. After each presentation, 5 minutes will be allowed for questions from the audience.

Grading of the Research Presentation will use the following criteria:

- Organization: Presentation is organized and presented in a logical, easy to understand way.
- Content: Provides an appropriate amount of information that fully demonstrates with research that has been done.
- Effort: The Presentation demonstrates that concerted effort has been invested into the process.
- Presentation Style: Groups can comfortably articulate their study to their peers.
- Group Participation: Individuals are active participants in the group process, and work is evenly shared.

4. Midterm Exam – 15%

A written midterm exam will be administrated halfway through the course in order to test students' concept comprehension. This exam will consist of a series of short answer questions that will pertain to scientific research we have learned. Students will also be tested on fundamental concepts in ecology and biogeography discussed on-site.

5. Final Exam (Written) – 25%

Students will take a written exam to assess understanding of the key scientific research methods, concepts, and theories encountered throughout the program. The emphasis will be on how these techniques can be applied to given scenarios within a specific context. This exam will be similar to the midterm, but with a wider array of questions including short answer, multiple choice, true/false, and essay. Like the midterm, this exam will also test student's comprehension of key ideas and concepts exposed to them during the duration of the course.

6. Participation & Discussion – 10%

Includes general engagement with the subject matter and participation in field work and discussions.

ESCI 497V, Wildlands Environment and Culture (5 quarter / 3.35 semester credits)

1. Cultural Presentation – 10%

Students will be assigned an aspect of Kiwi/Māori history or cultural a few weeks before the start of the program. Leading up to the program, students will research their assigned topic and come prepared to give a presentation (10-minute presentation + 5 minutes for questions/discussion). Students' presentations will offer a thorough, holistic report on their topic. On the day that the presentation is given, students will turn in a 1-2 page summary of bulleted information.

Grading of Oral Presentations will use the following criteria:

- **Content:** Information delivered is relevant, accurate, original, creative, and coverage is appropriate.
- **Structure:** Presentation has a logical flow and adheres to the time limit.
- **Delivery:** Student gives presentation in an engaging manner with good posture and is well spoken.
- **Discussion:** Student is able to answer questions and generate/facilitate discussion around the key points.
- **Bullet Point Summary:** 1-2 page overview of key points of their assigned topic. The summary can be handwritten or typed/printed out. The summary must include a reference list (e.g., articles, books, websites, personal sources, etc.), and students must use a minimum of three different primary sources. Plagiarism (i.e., cut/paste verbatim) will not be accepted.

2. Cultural Journal – 25%

The cultural journal is an integral part of the New Zealand program and the ESCI 497V course. It is used to document interactions with local experts, and as a way to keep track of one's own personal development, awareness, and socio-cultural insights that are gained during the program. It will also include a dictionary of Māori and Kiwi words. Students will be instructed on the best way to organize their Cultural Journal at the start of the program. The journal will be halfway through the program for review and in the last week of the program for a final review.

The field data notebook will consist of the following components:

i) **Guest Speaker Summaries:** We expect to be learning from local researchers and experts during the program. For certain interactions, students will be instructed to complete a guest speaker summary in their cultural journals. These entries are not meant to be time consuming and should only take 10-15 minutes to complete. The summary should include the following elements:

Name of Presenter:	Date:
Topic:	Location:
<ul style="list-style-type: none">• Provide 3 - 4 bullet points describing key information that you learned during the presentation.• Question: Write one question that came to your mind related to the presentation topic.	

Grading of the guest speaker summaries will use the following criteria:

- **Organization:** Entries follow the format established above.
- **Completeness:** Includes a completed entry for all guest speakers.
- **Accuracy of Content:** Provides an accurate overview of the presentation.
- **Clarity:** The entry should be well-written, easy to read, with concise bullet points, and a clear question.
- **Effort:** The entries should demonstrate that the student paid attention during the presentation.

ii) **Reflections/Creative Entries:** At least 4 thorough entries or more if shorter more regular entries are preferred. Students will develop a “social-ecological autobiography” (See Hayes manuscript) in their cultural journal. This includes regular insightful reflections on learning experiences embedded within specific contexts, which can include but is not limited to interactions with guest speakers, local communities, other travelers, your peers, and the course readings. These entries are meant to challenge the student to tap into their creative side and to find awareness of how their own views and values have been brought into focus or shaped by the experience. Examples of themes that entries might highlight include 1) changes in personal beliefs, perceptions, worldviews, and learning, possibly as part of comparative reflection to past experiences/knowledge/places encountered back in your homeland, 2) Key elements and information that finds resonance (appeal) or dissonance (conflict) within you, 3) creative writing about a location/experience that incorporates Kiwi and/or Māori cultural beliefs and traditions. Poetry and art are welcomed as individual shorter entries or to complement longer entries.

Grading of reflections/creative entries will use the following criteria:

- Consistency of Use: Entries are completed regularly throughout the program (1 entry per week)
- Concept: Entries are creative and demonstrate a high level of contemplation. The theme or experience is explored in depth, from different angles, and incorporates philosophical, social, or creative reflection. Entries use learning experiences to make insightful links between themes, readings, and experiences prior, during, and beyond the program.
- Style: Entries are well-written, and make use of narrative, prose, poetry, art, etc.
- Effort: A genuine effort to write thoughtful, creative reflections is demonstrated.

iii) **Cultural Dictionary:** The cultural dictionary is a list of New Zealand words and phrases as well as unique cultural components that are commonly encountered during the program. The dictionary should be organized in the back of the Cultural Journal using the table format below. Students should have at least 10 entries per week.

<i>Word or Phrase</i>	<i>Language</i>	<i>English Translation</i>
Kia Ora	Māori	Hello

Grading of the cultural dictionary will use the following criteria:

- Accuracy: Student makes an effort to spell accurately and use accurate translations.
- Consistency of Use: Student demonstrates an attention to new words/phrases/cultural elements that are encountered throughout the program.
- Effort: Reasonable effort has been invested throughout the program.

3. Cultural Case Study – 15%

Students will be grouped together at the beginning of the course and will be tasked with facilitating a group discussion on a specific topic that intersects the ecology and culture of New Zealand. Discussions will focus on multiple scientific articles that everyone will be required to read. The students leading the discussion will read the article(s) ahead of time, plan appropriate discussion questions, meet with the instructor prior to the discussion, and lead the group discussion. Although each group discussion will focus on a few scientific articles, students will draw from scientific articles, popular media, field guides and personal experience during discussions. We strongly suggest that students leave themselves ample time to read the papers before discussions as some may take longer than others to digest. Students will be graded on how well they guided the discussion, posed questions, and covered the main topics of the articles.

4. Midterm Exam – 15%

A written midterm exam will be administered halfway through the course in order to test students’ understanding of cultural and historical concepts we have learned. This exam will consist of a series of short answer questions that will pertain to guest speakers, lectures, and readings we have covered.

5. Final Exam – 25%:

In the last few days of the program, students will take a written exam to assess their understanding of key themes and concepts related to New Zealand culture, history, traditions, and how the landscape has shaped the Kiwi way of life. The exam will primarily include short and long essay questions that assess the student's ability to demonstrate thorough comprehension of themes covered during the program.

6. Participation & Discussion – 10%

Includes general engagement with the subject matter and participation with guest speakers and discussions.

V. Grading Scheme

To convert final grade percentages to letter grades for each course that will appear on your transcript, we will use the following grading scheme:

Grade	Percentage	Grade	Percentage	Grade	Percentage	Grade	Percentage	Grade
		B+	87.5 - 89.9	C+	77.5 - 79.9	D+	67.5 - 69.9	
A	93.0 - 100	B	82.5 - 87.4	C	72.5 - 77.4	D	62.5 - 67.4	F < 59.9
A-	92.9 – 90.0	B-	80.0 - 82.4	C-	70.0 - 72.4	D-	60.0 - 62.4	

VI. General Reminders

Academic Integrity is as relevant in this field course as it is at your home institution. Plagiarism, using the ideas or materials of others without giving due credit, cheating, or putting forth another student's work as your own will not be tolerated. Any plagiarism, cheating, or aiding another to cheat (either actively or passively) will result in a zero for the assignment. Cases of academic dishonesty may be reported to your home institution.

Assignment deadlines are necessary so course instructors can get the grading done on time. These deadlines need to be enforced so that diligent students aren't penalized for being punctual. Therefore, work submitted late may receive a lower grade than equivalent work submitted on time. If you think circumstances may keep you from completing your work on time, talk to the instructor before the assignment is due.

Participation and attendance are crucial throughout this program. Because of the demanding schedule and limited time, all components of the program are mandatory (unless indicated) and missing even one lecture can have a proportionally greater effect on your final grade. Hence, it is important to be prompt and prepared (i.e., with required equipment) for all activities.

Students should meet with the lead instructor as soon as possible to discuss any special accommodations that may be necessary.

VII. Required Materials

- Two durable notebooks for coursework— one (1) for ESCI 497T and ESCI 497U assignments (i.e. for your field journal and field data notebook assignments) and one (1) for ESCI 497V (i.e. for your cultural journal assignments). We strongly recommend Rite in the Rain notebooks. These notebooks will be periodically turned in to be graded.
- Additional durable notebook(s) for field/lecture notes— To be successful in the program you will want to take notes during lectures and while we are in the field. For your lecture notebooks, we recommend Rite in the Rain products as well. Up to you how many to bring. Students are often surprised by the quantity of notes they take. Consider bringing a few smaller notebooks or a larger notebook similar to the notebooks described in the previous bullet point. You will use your field/lecture notes to complete the graded assignments that are completed in the above coursework notebooks.
- Alternative compact hardback or tough softback bound notebooks may be suitable for all the above. Whatever your choice, ensure the notebooks for your coursework contain at least 80 pages, are durable, and can fit in a large Ziploc bag. Avoid cubic grid line formats. Your field/lecture notebook(s) should be weather resistant and durable. For all books, avoid flimsy wire spiral bound notebooks and soft cardboard covers. They deteriorate quickly and frustrate you when writing in them and us when grading them.

VIII. Course Reader

A Course Reader will be sent out prior to the beginning of the course. This reader will contain all of the required readings for the class, such as scientific articles, opinion pieces, geological and cultural histories of the locations and regions we will be visiting, and specific instructions for each assignment.

IX. Academic Schedule & Course Content

The anticipated daily itinerary is outlined in the following table, but scheduling is subject to change according to local conditions (e.g., weather, tides, availability of guest researchers/managers/community members, and ‘strategic opportunism’). We seek your cooperation in allowing for flexibility with the programming.

Date	Location	Lecture Topics & Activities
September 29 - 30	Auckland	Introductions Gear checks and prep
October 1 - 8	Northland	Introduction to New Zealand ecology Introduction to New Zealand culture Marine research methods & conservation strategies Backpacking Trip
October 9 -13	Tongariro. NP	Climate zones Bird and plant ID Endemism, natives, non-natives
October 14 - 17	Wellington	Matiu/Somes Island Te Papa museum Picton Ferry
October 19 -22	Abel Tasman NP	Plant Survey Methods Bird Survey Methods Research Project Proposals Midterm Exam
October 23 – 26	Kahurangi NP	Research Project data collection Māori and European settlement island biogeography Evolution Research Project writeup
October 27 - 31	Nelson Lakes NP	Research Project data collection Disturbance ecology Seral ecology Research Project Presentations
November 1 – 5	Lake Hawea Station	Sustainable agriculture Monitoring programs Data collection with LHS Backpacking trip
November 6 -9	Aoraki/Cook NP	Geology Climate Change Turn in Field Journals Final Exam
November 10-11	Christchurch	Goodbyes

*This calendar of events, as well as the lecture topics and activities, are subject to change throughout the course. Flexibility with this scheduling will allow for ample exposure to opportunities and experiences.