



Wildlife Conservation Bachelor's Degree

The Bachelor of Science in Wildlife Conservation degree enables students to work effectively as wildlife biologists, managers, and ecologists for government agencies, environmental non-profits, and environmental consulting businesses. This program emphasizes sustainable management of wildlife species through consideration of the applicable social, economic, and environmental concepts. This program also prepares students with sound understanding of modern environmental issues and the professional skills needed for effective functioning in modern natural resource organizations.

Graduates of the B.S. in Wildlife Conservation will be able to:

1. Understand fundamental knowledge of ecological, social, legal, and economic concepts underlying modern wildlife management.
2. Exhibit ability to choose and implement appropriate field techniques used in wildlife management.
3. Demonstrate ability to critically evaluate information using scientific and quantitative reasoning skills.
4. Demonstrate proficiency in written, oral, and interpersonal communication.
5. Exhibit ability to work effectively individually and in groups.

General Education Foundation Requirements

**Note: Disciplinary program courses can be used to fulfill any General Education Foundation requirement; Any given course can only fulfill one of the General Education Foundation courses.*

A Life Science course (Courses with a code of BIOL)
A Physical Science course (Courses with a code of ERSC, EVPC 200; ENV5)
A Quantitative Skills course (MATH)
A Humanities course (HUMN)
A Language course (LANG)
A Social Science course (ENV5 or SOCI or PSYH)
An Arts course (ARTS)
2 Communications courses – (courses with a code of COMM)
A transdisciplinary professional capstone course

Environmental Professional Core

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation

This course is part of a two-course sequence that provides students with an understanding of the interconnectedness of the looming environmental issues that the world faces. This class will provide students with a basic scientific understanding of deforestation, biodiversity, and overpopulation and address what societies can do that they aren't currently doing. Upon completion, students will be able to critically assess these issues and provide models for making more sustainable choices.

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

This course is part of a two-course sequence that provides students with an understanding of the interconnectedness of looming environmental issues that the world faces. This class will provide students with a basic scientific understanding of energy, water scarcity, and waste, and overpopulation and address what societies can do that they aren't currently doing. Upon completion, students will be able to critically assess these issues and provide models for making more sustainable choices.

EVPC 301 Environmental Justice

This course examines issues of environmental quality and social justice. The course begins by examining the philosophical foundations and history of the environmental justice movement and foundational concepts such as justice, race, gender, and class. Students will explore these concepts through a series of case studies of urban and rural environmental (in)justice in the United States and move on to environmental justice's role on globalization.

EVPC 305 Building a Better World: Ethical Decision-Making

Ethical decision making is essential for leadership, and since most decisions leaders make have an ethical dimension, the ability to discern the ethical implications requires a set of skills that are informed by ethical philosophy. This course provides students with strategies, tools, and techniques to make ethical decisions by considering the ethical issue and the people involved, develop a strategy, and implement the most ethical action possible. Through the use of case studies, students will develop their ethical awareness, learn to distinguish difficult decisions from real ethical dilemmas, and practice deliberating effectively about a variety of ethical issues drawn from social and professional contexts.

EVPC 401 Transformational Leadership

In this course, students explore strategies needed to become effective instruments of change. Students will examine themselves as leaders, learn how to create meaningful relationships as a leader, and understand the role of leadership within complex systems. By using case studies from a variety of organizational contexts such as business, government, non-profit, community, and education, students explore concepts of organization behavior and culture, consensus building, and project management to lead effective change towards environmental sustainability. This course is designed to empower and prepare students to become leaders in any profession.

Wildlife Conservation Core

WCON 201 Wildlife Plant Identification: Wildlands and Wildlife Habitat

This course centers around the identification and life history of groups of plants important as habitat components of wildlife species. Students will learn major plant groups and species in forest, rangeland, grassland, agricultural, and desert environments that influence wildlife species. Students will explore life history of these plants with the goal of understanding how habitat management activities, human land use, and other activities influence populations of wildlife through changes in food and cover.

WCON 301 Human Dimensions of Wildlife Conservation

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the human dimension of wildlife management. During the course students explore social, political, and economic concepts that are involved in effective wildlife management. Students will learn common forms of wildlife governance, the role of stakeholders, concepts from sociology, ethics, economics, management and decision-making as they relate to wildlife management.

WCON 303 Life History and Identification of Birds & Mammals

During this course students will learn to identify avian and mammalian species with a focus on species at which management is often directed. These species include game bird and mammals, common agricultural or urban 'pest' species, and threatened or endangered species. Students will also learn basic life history of these species with a focus on characteristics useful for management. Students will be expected to conduct field activities directed at learning the species prominent in their region.

WCON 305 Wildlife Conservation Genetics

Genetics form a key component of modern wildlife management, providing tools aiding our understanding of taxonomy, conservation of small populations, and hybridization, as well as enabling non-invasive population monitoring and enhancing wildlife forensics. During this course, students will encounter the basic concepts of genetics, with an emphasis on population genetics and genetic techniques useful in wildlife management. Prominent topics covered include genetic variation, the role of gene flow and genetic drift on population viability, and key genetic markers used by wildlife biologists. Students will explore case studies illustrating the applicability of concepts in genetics to wildlife management.

WCON 307 Humans, Parasites, and Wildlife: Understanding the Impact of Insects on Wildlife

Insects, as the largest class of animals, have an extraordinarily large influence on ecosystem function. For humans they act as vectors for important zoonotic diseases and pollinators of key food crops. For wildlife species they pollinate and feed on key plant species, vector prominent diseases, create large scale habitat change through plant disease outbreaks, and provide the primary source of animal matter for predators. During this class students will learn basic taxonomy and life history of insects, as well as explore case studies involving the role of insects in plant and animal disease, pollination, biological control, and other influences on ecosystem functioning.

WCON 403 Habitat Management for Wildlife and Fisheries

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the habitat dimension of wildlife management. Students will engage in discussions and activities to create understanding of the basic concept of habitat and its components, how various species identify, select, and interact with their habitat, and how this process influences how managers manipulate the environment to influence wildlife populations. Students will also gain familiarity with common habitat management tools and funding programs.

WCON 405 Population Management for Wildlife and Fisheries

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the population dimension of wildlife management. Students will explore how wildlife biologists measure and monitor demographic parameters of populations, including field techniques and analysis methods, with a focus on understanding strengths, weaknesses, and appropriate use of each technique. Students will consider ecological concepts and management techniques used to manipulate wildlife populations including sustainable harvest, management of threatened and endangered species, and control of overabundant species.

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

Plants, as the most prominent primary producers in terrestrial systems due to photosynthesis, are the base source of energy in the most ecosystems. This course will introduce students to the factors that influence the growth, distribution and abundance of plants, the influence of plants on energy and nutrient flow, and key features of plant biology. Students will experience the diversity of plants and how major taxa differ in form and function. Case studies will illustrate the role of plants in ecosystem function, human culture, and animal ecology.

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

In this course students will explore key concepts of ecology. The course emphasizes concepts applicable to understanding and mitigating impacts of climate change, human activities, and invasive species on ecological systems, as well as other concepts underlying conservation ecology and management of wildlife species. Through course activities focused around practical application of concepts, students will gain a basic understanding of evolution, autecology, population ecology, community ecology, and ecosystem ecology.

BIOL 305 Conservation Biology

There's a popular axiom in science that "all biology is now conservation biology." This statement is telling in two ways: First, in the modern era it is hard to find a biological system that is untouched by humankind. Second, perhaps more than any other discipline conservation biology is highly integrative, bringing together such disparate fields as ecology, evolutionary biology, public policy, and sociology. In this course, we will lay the foundation for any field within the natural sciences or environmental studies. Specific topics that we will cover include the status of biodiversity, the threats facing biodiversity, the importance of ecosystem services, conservation policy, design and management of protected areas, and habitat restoration.

COMM 303 Communicating to Stakeholders

This course teaches students how to communicate real-world issues and problems for a just end. Students will learn how different modes of communication such as storytelling can be used as an effective way to communicate an organization's mission and builds empathy for its cause. Students will learn how to craft values-based communications to persuade stakeholders to support for social justice issues such as sustainability, environmental law, and wildlife conservation. Students will learn concepts and skills to build public support for their organization's mission, strategic initiatives, and fund-raising activities. This course will develop skills in written, visual, and oral communication.

ENCJ 305 Natural Resource Law and Policy

This survey course addresses not only the creation and management of our natural and wildlife resources on federal public lands, with a focus on the National Parks, National Forests, and the National Resource Lands (Bureau of Land Management (BLM) regulated lands), but also including the National Wildlife Refuge System and the National Wilderness Preservation System. Students will learn how interest groups, citizens, and the courts influence the management of natural resources on these lands. After taking the class, students should be familiar with the major public land legislation such as the National Forest and National Park "Organic Acts" and the Wilderness Act; as well as laws that affect our public lands, but apply more broadly, including the Endangered Species Act and the National Environmental Policy Act. Through class work and their papers, students will also be familiar with different perspectives on some of the most important current issues facing our public lands.

ENVS 201 The Warming Planet: Understanding Climate Change

Climate change is one of the most urgent and complicated issues we face today. This course explores the science of climate change by teaching students how the climate system works, what factors cause climate to change, how climate has changed in the past, how scientists use models, observations, technology, and theory to make predictions about future climate; and the possible consequences of climate change for our planet. Finally, students will explore the connection between human activity and the current warming trend and consider some of the potential social, economic, political, and environmental consequences of climate change.

GIS 101 Introduction to GIS for Environmental Solutions

This course is designed for students from any discipline who are interested in applying GIS as a tool to help answer important and timely questions about our environment. This course presents the concepts upon which Geographic Information System technology is based including the fundamentals of cartography, geodesy, coordinate systems, and projections. Conceptual overview and hands-on experience of vector data analyses and table queries are introduced. Students will use ArcGIS to classify data, query tables and maps, analyze spatial relationships, set map projections, build spatial databases, edit data, and create map layouts.

EVPC 490 Transdisciplinary Wildlife Conservation Capstone

The Capstone course is the culminating course for students in Unity College bachelor's degrees. In this course, students will develop a project that deals with a real issue and produce a final artifact reporting the project's findings. During this process, students will demonstrate and apply learning from their degree program and their ability to communicate to a broad audience. The course will also cover other important topics that support a student's career development and goals. All projects will be workforce-related products that students can use for their current or pitch to a future employer.

College Wide Requirements: *A minimum of 120 earned credit hours, 24 credits at the 200 level, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*