

## COURSE DESCRIPTIONS

### **ENVI 410RR Applied Conservation Biology 3 CREDITS**

Conservation biology focuses on the application of scientific principles to inform and guide the protection and management of Earth's biological diversity. This course covers major topics that fall under applied conservation biology, with an emphasis on large-scale conservation and local case studies. Due to the interdisciplinary nature of this course, topics are drawn from fields including population ecology, landscape ecology, community ecology and genetics, as well as social, economic, and community aspects of conservation. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 415RR Applied Ecology 3 CREDITS**

Applied ecology provides the conceptual basis for the practice of science-based ecological research, conservation, monitoring, and restoration. In this course, we will explore concepts in ecology that are essential for understanding how historical land-use shapes ecosystems today, and how we can expect systems to respond in the future to current disturbances and proposed management actions. Ecological concepts covered within this course include trophic cascades, speciation, predation and herbivory, habitat use and preference, aquatic and terrestrial food webs, disturbance regimes, and climate change. The course also focuses on local applications for ecological restoration, such as removing or modifying a source of disturbance (e.g., a dam), removing invasive non-native species, reintroducing native species, and removing barriers to wildlife movement. By providing locally relevant case studies and scientific articles, students will learn to apply ecological concepts to local conservation and restoration projects, assignments, and fieldwork. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 420RR Community-Based Natural Resource Mgm't 3 CREDITS**

Much of southern Africa has adopted Community-Based Natural Resource Management (CBNRM) approaches to conservation, led and implemented by community organizations, traditional leaders, conservation NGO's, private-sector investors, and government authorities. The goal of CBNRM is for local communities and private landowners to benefit directly from both consumptive and non-consumptive natural resource utilization strategies. This course covers major approaches to CBNRM focusing on evaluating the success of local strategies. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 425RR Humans and the Environment 3 CREDITS**

Understanding a culture's relationship to the natural world provides insight into successful conservation strategies. Successful approaches to community-based conservation often incorporate local knowledge and necessitate perceiving humans as part of the environment. Drawing on disciplines such as anthropology and geography, and this reading and discussion-based course covers topics such as Human Wildlife Conflict, Traditional Ecological Knowledge, impacts of protected areas on local people, ecosystem services, and the methods and problems associated with applying research to conservation and development efforts. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 430RR Biological Field Methods 3 CREDITS**

Conservation biology and ecology are based on a solid foundation of skills related to field methodology and the observation, recording, and reporting of plants and wildlife in their natural environments. This course provides an introduction to a variety of field methodologies and natural history observation techniques, and will provide students with the information and tools needed to understand the scientific process: formulating a research question, collecting data, compiling and analyzing data, writing a scientific paper, and presenting research results. This course gives students practical research skills and field experience that cannot be gained in a classroom setting. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 435RR Introduction to Natural History 3 CREDITS**

Natural history is the study of plants and animals in their natural environments and is the basis of all scientific learning. The concepts of conservation biology and ecology are enhanced by a solid foundation in natural history. No great technical knowledge is necessary to comprehend the practice of natural history, but it is necessary to practice these skills in the

field. Students will become familiar with the flora and fauna native to their program area, and will learn standardized methods to record observations, patterns, and experiences in the field. Students will also read and discuss a variety of natural history-related essays. This field course is offered by Round River Conservation Studies. Contact the Environmental Studies program chair for more information.

### **ENVI 440S Internship 1 to 8 CREDITS**

### **ENVI 101 Environment: Science, Society, Culture 4 CREDITS**

Interdisciplinary exploration of the fundamental principles of Environmental Studies. Students will consider influential approaches to understanding nature, and investigate local environmental issues. This course draws on ideas from the natural sciences, the social sciences and the humanities.

### **ENVI 102 Ecology of Food Systems 4 CREDITS**

We eat many times a day, but very few of us think about our meals as part of a complex system of interactions between plants, animals, people, machines, and institutions. In this course we will explore the current state of the US food system, from production to consumption as well as issues such as food waste and food insecurity. Through hands-on experiments, guest experts and field visits, we'll also learn about the many ways that folks are working to create new food systems that are more just, fair and ecological. This course will also introduce students to the hands-on skills essential for sustainable agriculture on a variety of scales. On some days, participants should come to class dressed to do garden work and expect to get their hands dirty, as well as spend time visiting several area farms and gardens. Students will have the opportunity to implement what they learn while working in Westminster's campus garden and in cooperation with community partners. (WCore: WCSAM, QE)

### **ENVI 103 Radical Hope 4 CREDITS**

We live in a world in the midst of a climate crisis, a 6th great extinction, and ongoing environmental injustice. How might we find hope in our connection to things like pigeons, mushrooms, and frogs? The world around us is filled with environmental monsters and ghosts. What might we learn from those stories of horror and loss? The Anthropocene seems fraught with change, peril, and despair at every step; what tools for a more verdant and just future, what seeds for radical hope might we find among the ruins? This course aims to acknowledge the dramatic changes associated with the Anthropocene and the anxiety and despair that those changes might produce. In response, however, together we will look for tools to address this despair and reassess those changes to consider ways we might discover creative connections to the world around us, and how those connections might contain kernels of a more hopeful present and future. (WCore: WCSBS)

### **ENVI 115 Science of the Environment 4 CREDITS**

In this course, you will get hands-on opportunities to learn about many critical aspects of our environment the soil that produces the food we eat, the air we breathe and the water we drink, as well as the climate of the planet we call home. You will have the opportunity to learn how these important environmental systems work, as well several techniques and tools to collect, analyze, and interpret environmental data. A major goal of the course is to help you understand the science behind many environmental issues so that you can make informed decisions about important environmental and global challenges. (WCore: WCSAM, QE)

### **ENVI 201 Green Careers 1 CREDIT**

This course will help students discern their career goals and the ways in which they aim to make a difference in the world via an Environmental Studies degree. Through course exercises and experiences students will begin to identify and acquire the skills and tools they can use to make those changes. The course will include an investigation into the range of environmentally focused careers, while helping students to identify the coursework and professional development students will need in order to succeed with in them.

### **ENVI 202 People and Places 4 CREDITS**

Have you seen hilarious public restroom graffiti, or initials and the symbol of a heart carved on the face of a boulder? Have you wondered about why people do what they do and say what they say in certain places but not other surroundings? How do people make sense of and cope with surroundings such as a prison, or a crowded and polluted neighborhood? Through readings, discussions, site visits, and other activities, we will delve deep into the

intricacies of human-place relationships and examine the way in which social differences (race, gender, class, etc.) shape and influence that relationship. Topics may include nature in prisons, wilderness therapy, and community gardens, among others. (WCore: WCSBS)

### **ENVI 203 Climate Resilience 4 CREDITS**

In this course, students will engage in extensive interdisciplinary research on how indigenous and people of colors communities build ecological, cultural, and emotional resilience in response to the crisis of climate change. Students will also collaborate on developing a website where they communicate their research findings to the general public. New content for the website will be created by cohorts of students each time the course is offered. (WCore: WCSBS, DE)

### **ENVI 300 Special Topics in Environmental Studies 1 to 4 CREDITS**

A changing topics course that addresses specific issues, ideas, practices, and solutions for Environmental Studies. Possible topics are activism, computer modeling, meteorology, adventure sports, endangered species, etc.

### **ENVI 301 Field Study 1 CREDIT**

This course takes students into the environment. Academically structured weekend trips and carefully guided service learning opportunities are powerful tools for meeting learning goals like active learning, teamwork, global consciousness, social responsibility, and leadership. ENVI 301 offers our students short, intense learning opportunities where they travel to engage contemporary environmental debates or learn about significant environmental issues. Prerequisites: ENVI 101 or instructor permission.

### **ENVI 305 Geographic Information Systems 4 CREDITS**

This course has cross-disciplinary appeal from Computer Science to Geology to ENVI. Maps and other geographic information are increasingly present in myriad applications in our data-rich, digital world. Environmental studies in particular make extensive use of "spatial data", i.e., information involving locations. Working with spatial data is best accomplished with the extensive capabilities provided by geographic information systems (GIS). GIS include a combination of hardware and software that allow us to collect, store, manage, analyze and present spatial data. Such data are increasingly available, are easily collected with GPS tools or even with smart phones, and are used to address issues in many fields. In this class, students will learn how GIS systems work and, in a series of labs, will work with GIS software using various data types to query and analyze it, present it as maps and graphs, and collect data concerning environmental topics. Students will also learn spatial analysis techniques, some principles of cartography, essential principles of how geographic information is used to solve problems. (4)

### **ENVI 330 Extended Field Study 4 CREDITS**

The concerns of Environmental Studies are grounded in specific places, topics, and processes. Extended field study courses put students in those places so that they can explore deeply the challenges, possibilities, contexts, and processes at the heart of contemporary and historical environmental issues. These field courses require a commitment to travel away from campus for an extended period of time (ranging from 1 week to a full semester) for the field experience. This course is repeatable for credit.

### **ENVI 331 Environmental Conflict and Cooperation 4 CREDITS**

Wars, ambushes, evictions, occupations, political and personal arguments, murders, feuds. The Environmental History contemporary social context of the west is full of conflict. But it is also full cooperation, agreement, help, love, encouragement, and collaboration. In this course we will visit the sites of this conflict and cooperation. We'll talk to actors in the debates and the process and look to understand the context of the conflict and the hope behind the cooperation as people look to address the wide range of environmental issues across the West. The sites we visit will be driven by the itinerary of the trip, current events, and the availability of guest speakers. This course will function as one of the Westminster Expedition Courses (and must be taken with ENVI 332, ENVI 333, and HIST 202).

### **ENVI 332 Landscape and Meaning 4 CREDITS**

This course will function as one of the Westminster Expedition Courses (and must be taken with ENVI 331, ENVI 333, and HIST 202). This course will examine the link between the landscapes of the West and the cultural meanings attached to them. The natural landscapes that surround us contain a world of meaning. The earth is home, habitat, playground, resource, waste-sink. It is seen as dangerous and peaceful, bountiful and depleted, crowded and open. Places like Yellowstone National Park, the Nez Perce Trail, the

Atomic Test site, or the expanses of the Bitterroot mountains carry with them profound histories and meanings the often confound their natural appearance. How do we reconcile these contradictions? What do they mean in terms of the cultural and political ecologies of particular places? How do the cultural values we attach to natural landscapes challenge our understandings of their history and our own involvement in the natural world? By looking at the cultural geography of the environment we can analyze how the meanings of nature are actively created and why it is contested by different people in different places. And, perhaps most importantly, why it matters. In this course students will examine these landscapes of meaning in person. They will hear from experts, managers, and discuss the contested meanings that surround them. Students will prepare questions for guest lecturers, write descriptive field notes while observing and participating in social life, reflect on your interviews and field notes through exploratory essays, write critical reviews of existing relevant research, and complete an original analysis of a cultural landscape that incorporates properly-cited primary and secondary source material. You may take lots of pictures, video, or record sounds and present them to the public on the expedition blog.

### **ENVI 333 The Indigenous West 4 CREDITS**

This course will function as one of the Westminster Expedition courses (and must be taken with ENVI 331, ENVI 332, and HIST 302). Indigenous peoples inhabited all of the American West; today's Indigenous nations exercise sovereignty over fragments of their former territory. This course investigates the "Indigenous history" of some of the West, based upon the Expedition's itinerary. For example, Blackfeet were displaced from Glacier and Sheepeaters from Yellowstone, now iconic parts of the National Park system. Students will also visit contemporary Indigenous nations and investigate their roles in land-use issues. Students will meet with Indigenous peoples, public lands managers, scholars, and activists along our route. (WCore: EWRLD) (Americas History category)

### **ENVI 340 Special Topics in Environmental Science 1 to 4 CREDITS**

Upper-division courses exploring influential ideas, texts, and practices from the intersection of science and environment.

### **ENVI 341 Environmental Toxicology 4 CREDITS**

Environmental toxicology is the study of the nature, properties, effects, and detection of toxic substances in the environment and in any environmentally exposed species, including humans. This course will provide a general understanding of toxicology related to the environment. Fundamental concepts will be covered including dose-response relationships, absorption of toxicants, distribution and storage of toxicants, biotransformation and elimination of toxicants, target organ toxicity, teratogenesis, mutagenesis, carcinogenesis, and risk assessment. In the second part of the course, we will study the toxicodynamic and kinetics of contaminants in the environment including fate and transport. The course will examine chemicals of environmental interest and how they are tested and regulated.

### **ENVI 350 Special Topics in the Civic Environment 1 to 4 CREDITS**

Upper-division courses exploring influential ideas, texts, and practices from the intersection of the civic realm and the environment.

### **ENVI 351 The Global Environment 4 CREDITS**

This course presents students with an opportunity to study to global implications of contemporary environmental issues and relationships between nature and society. Many scientists and social scientists have argued that we are in the midst of the Anthropocene, an epoch in which people have fundamentally changed the earth's environment. Students will approach these issues with attention to cross-cultural interactions and ideas that shape environmental and humanitarian concerns in light of global processes of social and ecological transformation, students will study the global nature of many environmental issues, their impacts on local communities and ways those communities have responded. Global environmental issues such as energy, agriculture or water use will be considered through specific local changes with an emphasis on communities in Asia, Africa and South America. (WCore: EWRLD)

### **ENVI 352 Water in the West 4 CREDITS**

An old aphorism notes that to get rich in the West, one should become a water lawyer. Another states that "Whiskey is for drinking and water is for fighting." Forest historian Char Millar writes that "Great hopes, deep doubts, even despair, have been integral to the history of western water policy." The American West has long been defined in large part by its lack of water. The region's aridity lies at the heart of endless ecological, social, political, and

legal debates that have at times sparked violence. This course will explore the social world of water in the region, and the challenges presented by its relative scarcity.

**ENVI 353 Environmental Movements 4 CREDITS**

In this course we'll examine how environmental movements work. What big ideas do they mobilize around? What strategies are effective or ineffective? How do they promote change? We'll consider how US based movements differ from those in other parts of the world and what those differences mean. We'll also look closer to home with a research project analyzing how organizations in Utah have worked to promote a more sustainable future. At a protest against environmental injustice at Love Canal, a young woman wore a sign that said, "We've got better things to do than sit around and be contaminated." This class will look at what people have done and why.

**ENVI 355 Special Topics-Env. Humanitie/Soc Sci 4 CREDITS**

Upper-division special topics courses exploring influential ideas, texts, and practices at the intersection of the humanities and social sciences and the environment.

**ENVI 360 Special Topics in Env. Humanities 1 to 4 CREDITS**

Upper-division courses exploring influential ideas, texts and practices at the intersection of the humanities and the environment.

**ENVI 361 Writing the Environment 4 CREDITS**

This course will ask students to develop their written communication skills through a carefully focused series of writing assignments. Students will build their confidence in written expression by engaging multiple genres including the research essay, the argumentative essay, the editorial, the cover letter and the personal reflection.

**ENVI 363 Gender and the Environment 4 CREDITS**

This course examines holistic and alternative ideas and practices pertinent to gender and the environment, and their significance in creative and activist work to promote social and environmental justice and wellbeing. Themes to be discussed include gendered embodiment of the environment, gender and environmental movements, and queer ecology, among others. Course reading materials are drawn from multicultural and global sources in environmental humanities (art, film, literature, etc.) and related interdisciplinary fields of inquiries (masculinities studies/critical men's studies, women's and gender studies, queer studies, etc.).

**ENVI 364 Spiritual Ecology 4 CREDITS**

In this class, we will embark on a collective journey to hunt for hope in a world as challenging as this one we are currently living in. From diverse perspectives, we will examine the role that spirituality plays in global earth healing. Through readings, discussions, and other activities, we will ponder the questions of where we came from, where we are at now, where we are going, and what the place of humans is in the larger living system. The class will also be an opportunity for us to build a learning community where we explore our own inner landscapes, our actions in the outer world, and collective solutions to a sustainable and just world.

**ENVI 365 Literature of the Environment 4 CREDITS**

In this course, we will read and discuss a selection of contemporary environmental literature by multiethnic writers in North America and beyond. Much of our reading will be in the genres of poetry, fiction and creative non-fiction. Along the way, we will examine the historical and political contexts in which these texts were produced while attending to diverse perspectives that inform our perceptions of the environment—from the philosophical to the political and from the scientific to the poetic.

**ENVI 370 Theories of Nature 4 CREDITS**

This course is designed to introduce students to the field of Nature and Society. This course covers the fundamental integrative theories that explore nature and society interactions, including key contributions from economics, literature, sociology, political science as well as political, social, and cultural ecology. The focus is on learning how to assess the complex interactions between natural and built environments, technology, institutions, social groups and individuals, and value/ethical systems which shape the context for social policy analysis and decision-making. The goal is to promote among students thoughts and practice that facilitate sustainable development both at the community and national level.

**ENVI 401 Directed Studies 1 to 4 CREDITS**

A tutorial-based course used only for student-initiated proposals for intensive individual study of topics not otherwise offered in the Environmental Studies Program. Prerequisite: consent of instructor and school dean.

**ENVI 405 Senior Capstone 4 CREDITS**

A capstone course for Environmental Studies majors ordinarily taken during one of the last two semesters of undergraduate study. The Senior Capstone will challenge students take the learning they've done in the classroom and apply it to the real world. Students will work in partnership with local community organizations, government agencies and individuals to identify and address environmental needs through community-based action. This work can take different shapes for students from the different concentrations, and will give students the chance to develop their ability to grapple with complex environmental issues and conduct efforts in preparation for future careers, graduate school, and more.

**ENVI 440 Internship 1 to 8 CREDITS**

Students receive credit for meeting pre-arranged learning objectives while working for a business, a non-profit, a government program, or some other organization that engages the environment. Hands-on experience is especially important to Environmental Studies students, and the faculty will work to support internship opportunities for all students. Students will be graded on assigned coursework and evaluation by their site supervisor. Prerequisites: 60 college credits completed (for transfer students at least 15 hours completed at Westminster or permission of instructor), minimum 2.5 GPA, and consent of faculty advisor and Career Center internship coordinator. Interns will work for 42 hours per each registered credit. This course is repeatable for credit. Some majors limit how many internship credits may count towards the major, consult your faculty advisor. REGISTRATION NOTE: Registration for internships is initiated through the Career Center website and is finalized upon completion of required paperwork and approvals. More info: 801-832-2590 <https://westminstercollege.edu/student-life/career-center/internships.html>

**ENVI 450 Undergraduate Research 1 to 4 CREDITS**

Students undertake a portion of a research project and learn all aspects of interdisciplinary inquiry in Environmental Studies. This course may be taken one credit at a time. This course is repeatable for credit.