

MASTER OF THE ENVIRONMENT (ENVM)

Courses

ENVM 5001 (3) Foundations of Environmental Leadership

Engages and exposes students to diverse leadership models and styles and emphasizes concepts and skills necessary for effective environmental leadership. Students will explore and critically analyze approaches and tools for effective collaboration, creative communication with diverse stakeholders, facilitation of events and processes, negotiation, fiscal management, strategic planning, practicing design thinking, developing organizational structures and leading social change.

Grading Basis: Letter Grade

ENVM 5002 (3) Environmental and Social Systems: Understanding, Mapping, and Stewardship

Environmental and Social Systems: understanding, mapping, and stewardship

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5003 (3) Ethics and Values in Environmental Leadership

Prepares students to be effective leaders within their organizations by introducing them to a wide range of value systems and examining links between these and effective leadership. Students will learn tools and approaches for effective analysis and presentation of value-based appeals and will learn through practical scenarios to identify and assess value-based analyses used by others.

Grading Basis: Letter Grade

ENVM 5004 (3) Public Finance and the Environment

Explores the impact of a variety of factors that may result in market failures, including public goods, externalities, information asymmetries and uncertainty, with a special focus on the environment and natural resources. Government policies as a mitigating policy tool for market failures impacting the environment are assessed

Grading Basis: Letter Grade

ENVM 5005 (3) The Business of Renewable and Sustainable Energy

Addresses the business of renewable energy, including opportunities and challenges with renewable electricity, renewable transportation fuels and energy efficiency. Topics include energy markets, opportunity identification, life cycle analysis, economic analysis, policy impacts and project financing of sustainable renewable energy business models. Formerly ENST 5002.

Equivalent - Duplicate Degree Credit Not Granted: MBAX 6930

Requisites: Restricted to Graduate (GRAD) and Non-Degree Graduate (NDGR) students.

Grading Basis: Letter Grade

ENVM 5006 (3) Sustainable Energy Policy

The global energy system is at the early stages of a remarkable transformation: from one largely dependent on fossil fuels (coal, oil, and natural gas) to one based on renewable and sustainable energy sources. Energy policy - actions taken by public entities to influence energy - have and will play an essential role in this ongoing transformation. This course takes a critical and pragmatic look at energy policy: what policies are available, how do we evaluate them, who are the stakeholders in the energy policy process, and how do policies drive energy technology adoption.

Requisites: Restricted to Graduate (GRAD) and Non-Degree Graduate (NDGR) students.

Grading Basis: Letter Grade

ENVM 5007 (3) Energy Systems and Technologies

Examines the basics of energy technologies and energy delivery systems. Covers both conventional energy sources (oil and gas, coal, nuclear and hydroelectric) and renewable/sustainable energy technologies (wind, solar, biomass, geothermal and end-use efficiency). Investigates individual technologies as well as integration of multiple technologies on energy systems such as the electricity grid and liquid and gas fuels infrastructures.

Requisites: Restricted to (GRAD) graduate students and (NDGR) non-degree graduate students

Grading Basis: Letter Grade

ENVM 5008 (3) Legislative Analysis, Writing, and Advocacy

This course will provide students with the skills and knowledge necessary to operate within the legal and policy framework of the United States. Students will learn how to locate and interpret federal and state statutes, municipal and county codes, agency policy documents, and judicial decisions at all levels. With this foundational knowledge established, the course then focuses on practical legislative drafting exercises, wherein students create clear and concise frameworks for the government and private parties to act while avoiding potential pitfalls in judicial interpretation. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5009 (3) Business Fundamentals for Environmental Professionals

Introduces MENV students to multiple facets of business including the entrepreneurial process/mindset and common business structures and processes, and sustainability. Consulting projects are used as proxies for working within a business involving key activities including project proposal, problem definition, solution development and presenting deliverables. Critical thinking is central to this process and teams will develop creative solutions to a business problem.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5010 (3) Water2050 Resilience and Sustainability

Using the Colorado River as a frame, this course dives deep into the role of water in our modern economy and communities. The past, present, and future of water in the West (and the world) is covered in detail, with field trips and engagement with working professionals core learning tools. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5011 (3) Collaborative Innovation and Social Change

Enhancing practical abilities to work for social change. We (1) learn about innovators who effectively leverage change, (2) engage in hands-on, highly interactive approaches to empathize, problem-solve and co-create, and (3) turn our ideas into real-world, prototype designs. Class is varied and interactive, relying on a mixture of videos, case readings, interactive activities and discussion.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5012 (3) Water, Climate, and Sustainable Cities

Provides students with the knowledge to characterize, analyze, assess and plan, urban systems, primarily those of water and landscape. Students will understand the nature of built systems in the urban environment, with particular focus on the urban water cycle and green infrastructure.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5013 (3) Environmental Governance: Actors and Institutions

This course will incorporate a theoretical understanding of how policies are made, what decisions are enacted, and which actors seek to influence policy outcomes. Students in this class will assess frameworks for understanding policy formation and decision-making, and apply this understanding to cases of environmental and natural resource policy. This course will provide a baseline understanding of concepts including: Common Pool Resource Management, Social Ecological Systems, Local and Traditional Ecological Knowledge, Treaties, Compacts, Storymaps, Public Engagement, and Media Engagement.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5014 (3) Foundations of Environmental Policy and Management

Examines concepts related to policy and regulatory processes, institutions, and management of the environment and natural resources. Surveys environmental issues and laws at the international, national, state and local levels. Focuses on policy tools including property rights, regulation, voluntary compliance, and market-based mechanisms. Students analyze a contemporary environmental or natural resources issue and prepare policy advocacy documents and presentations.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5015 (3) Water Energy Nexus

Examines the physical, biological, social, behavioral, economic, and engineering basis of the water energy space that, in practice, includes domestic water use, reuse, recycling, water use in thermal generation, water use in oil and gas operations, water use in industry, water use for renewable energy, the transportation of water, water supplies, desalination, food, agriculture, geopolitics, and security. Recommended for Juniors, Seniors, and Graduate Students interested in energy or water related issues. Technical background is valuable but not required. Formerly offered as a special topics course.

Grading Basis: Letter Grade

ENVM 5016 (3) Science, Politics, and Policy

Examines the intersection of science with politics and policy, with an emphasis on how scientific information can be used to influence and support reasoned decision-making at all levels of government. The course will present the material through currently relevant and evolving topics such as climate change, species conservation and management, drought and other extreme climatic events, and topical issues as they arise during the course.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5017 (3) Collaborative Skills + Practices for Sustainable Solutions

Achieving sustainable and resilient solutions requires leaders to reach across political, ideological and organizational boundaries, develop common knowledge, and engage people who represent components of complex systems. Collaboration is a core competency in sustainability and resilience planning and plays an increasingly important role in environmental policy. This course develops the skills and practices for effective collaboration.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5018 (3) The Scientific Basis of Environmental Change

Provides an overview of the science that underlies some of the most complicated global environmental challenges we face today. These include topics such as climate change, air quality, land management, agriculture, biodiversity loss and conservation, as well as the underlying biogeochemical, hydrologic, and ecological processes that are critical for understanding the changing environment. Previously offered as a special topics course.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Recommended: Prerequisite of department consent for Professional Master's in Global Engineering and Hazard Resilience (PMP) students.

Grading Basis: Letter Grade

ENVM 5019 (3) Advanced Environmental and Natural Resources Policy Field Seminar

Provides students with the opportunity to examine and research all environmental and natural resources policy issues within a geographic area. These areas can include the Colorado Plateau, the Greater Yellowstone Ecosystem, the San Luis Valley, the Puget Sound, or others. Emphasis will be placed on contextualizing contemporary natural resources issues within the greater political, policy, and human history of the examined area. Students will analyze these issues through the lenses of environmental justice, politics, and economics. Each student will choose a principal topic to deepen their knowledge in through research, teaching co-facilitation during the seminar, and writing a publication-quality policy paper. Course time will be spent on-location in the chosen geographic area to meet with policy makers, tribal leaders and members, business representatives, and other subject matter experts to deepen students' understanding of the issues.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5020 (3) Environmental Decision-making

Examines the laws and policies controlling governmental decisions affecting the environment and how individuals, companies, and organizations can influence those decisions. Particular attention is paid to the National Environmental Policy Act and those laws commonly implicated such as the Endangered Species Act, National Forest Management Act, and the Federal Land Policy Management Act. Students prepare and submit a substantial public comment on a pending agency action.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5021 (1) Writing Skills for Environmental Professionals

Writing for different audiences and purposes is from emailing colleagues to writing grant applications, policy reports, internal memos, and more is a critical professional skill. Students will: (1) Develop skills in rhetorical analysis; (2) Practice information literacy; (3) Synthesize information; (4) Improve clarity, concision, and organization; and (5) Understand language conventions.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5022 (3) Communicating for Sustainability and Impact

Sustainability professionals interface with a broad range of audiences, within the context of rapid and accelerating rate of environmental change, making effective communication increasingly challenging. Information gets lost in exclusionary jargon and technical details or ignores a prior knowledge (or misconceptions) of various audiences. This course centers around improving and practicing the art of communication through storytelling, effective visuals, brevity, and audience analysis. Students will leave with a personal portfolio that showcases learned communication skills. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5023 (3) GIS for Sustainability Professionals

Geographic Information Systems (GIS) are increasingly important for tackling environmental change and sustainability challenges. This introductory course in GIS will provide a broad foundation of spatial thinking and geo-technologies. We will consider spatial data, learn about real-world applications of GIS within the field of sustainability, and work through hands-on exercises in ArcGIS Online and QGIS to build confidence utilizing such software in your future careers. A personal laptop is required; prior GIS experience is not. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5024 (3) Stakeholder Engagement: Processes, Practices, Politics

This course is organized around stakeholder engagement issues that are important to understand within, and across, the MENV's five areas of specialization. This course examines stakeholder processes, practices and politics and apply these to various cases, issues, challenges and opportunities.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5026 (3) Sustainable Land Use and Development: Principles and Practices

Survey of fundamentals of land use planning, growth management and urban/ community development systems, covering a range of cultural, legal and ecological issues. By way of case studies and best practices, focus on new, sustainable approaches at the intersection of real estate development, land use and urban planning, economic/community development and environmental policy.

Grading Basis: Letter Grade

ENVM 5027 (3) Microgrids and Distributed Energy Resources

Covers technical, regulatory, and economic issues associated with distributed energy resources and microgrids. Microgrids are used to provide energy access in developing countries where there are still close to a billion people without access, on tens of thousands of islands and other remote areas where they have to rely on diesel gensets and everywhere that require a higher level of reliability and resilience than can be provided by a centralized grid. It will also cover technologies such as passive solar construction, heat pumps, induction stoves, pressure cookers, and electric vehicles that are critical to decarbonization of the energy sector.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5028 (3) Supply Chain Management for Food and Fiber

Provides students with an overview and in-depth, engaged analysis of food and fiber specific supply chain management. Using a mix of lecture, group projects, guest lectures students will learn supply chain fundamentals, the challenges facing supply chain managers and develop solutions.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite ENVM 5038-Nourishing Humanity within Planetary Boundaries: Introduction to Food Systems.

Grading Basis: Letter Grade

ENVM 5029 (3) Food & Agriculture Policy in the United States

Examines agricultural and food law and policy in the United States with a focus on enhancing sustainability and equity while ensuring a sufficient food supply. Surveys the history, overlapping mandates, authority, philosophies, and rules of the USDA, FDA, and EPA. Investigates policies pertaining to production, environmental impacts, food constituents, labeling, safety, manufacturing, marketing, retail, nutrition guidance and assistance programs. Previously offered as a special topics course.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites Introduction to Sustainable Food Systems: Nourishing Humanity within Planetary Boundaries.

Grading Basis: Letter Grade

ENVM 5030 (3) Planning for Resilient Futures

Planning for Community Resilience and Climate Action examines the relationships and connectivity between the natural environment, human society and the social ecological systems relevant to community resilience. The increasing demands of a globalizing economy, aging critical infrastructure, changing demographics, and the impacts of climate change increase concerns about the resilience of multiple scales of governance and the importance of social vulnerabilities.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5031 (3) Contemporary Issues in U.S. Public Lands Policy and Management

Examines critical and emerging issues on public lands across the U.S. today. Following an overview of the structure of public lands management, including federal land management designations and agencies and major laws and policies relevant to public lands management, we will transition into issue-based discussions of challenges facing public lands management. Previously offered as a special topics course.

Recommended: Requisite ENVS 5701.

Grading Basis: Letter Grade

ENVM 5032 (3) Corporate Sustainable Reporting and Strategy

Explores frameworks and standards used to measure sustainability across different industry sectors and provides an investors perspective regarding which companies merit investment based on their sustainability performance. It will include a review of ISSB, GRI, CDP, SASB and TCFD, the process of conducting Materiality Assessments, the global regulatory landscape, and the role of ESG raters and rankers. It will explore how companies across the sustainability spectrum are developing enterprise-wide strategies and communicating their efforts.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5033 (3) Policy and Climate Change in the Mont Blanc Region

Introduces students to the Mont Blanc region. Course begins with an assessment of the region's history, culture, economy and politics. Environmental and land use issues, along with climate change, will then be studied. Students will then review techniques and methods to assess climate impacts on the landscape. Previously offered as a special topics course.

Recommended: Graduate students only.

Grading Basis: Letter Grade

ENVM 5034 (3) Leading Socio-Environmental Change

Build essential skills to be a purpose-driven and ethical leader. Students will explore their values, deepen their self-awareness, and practice giving voice to their values in situations where their values clash with other expectations in the workplace. We approach leadership as a practice by exploring the interpersonal dynamics and psychology of high performing diverse teams as the foundation of work. Previously offered as a special topics course.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5035 (1) Introduction to Environmental Thought & Influencers

Grounds students in the influential writers ¿ both known and less known ¿ that have shaped the environmental movement in the United States over the past century. From classics environmental works to contemporary contributions, this course will provide students an opportunity to read and discuss major themes in environmental thought and commentary, and ensure that they are well-versed with the authors that students of the environment may be expected to know in their professional careers.

Grading Basis: Letter Grade

ENVM 5038 (3) Nourishing Humanity within Planetary Boundaries - Intro to Food Systems

Take a holistic approach to exploring environmental, economic, social, and cultural dimensions of agri-food sustainability. Conceptualize food systems and their dynamics, recognize their achievements, come to terms with their role in environmental and social ills, and explore a range of promising alternative practices for rebalancing and building resilience in food systems. Previously offered as a special topics course.

Requisites: Restricted to graduate students only.

Recommended: Corequisite ENVS 6305.

Grading Basis: Letter Grade

ENVM 5039 (1) Front Range Food System Field Lab

Venture into the food system of the Front Range to consider a range of strategies and career paths for rebalancing and building resilience in food systems. This field lab complements the material studied in ENVM 5038 - Nourishing Humanity within Planetary Boundaries: Intro to Food Systems. Formerly offered as a special topics course.

Requisites: Requires corequisite course of ENVM 5038. Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5040 (3) MENV Clinic

Seeks to bring the ideas and resources of supervised MENV students to bear on real-world, real-time resilience and sustainability challenges facing Colorado communities and organizations, with an emphasis on supporting under-served and at-risk populations and places. Through research, written reports, stakeholder interviews and other methods, MENV students gain critical skills and knowledge while providing valuable professional services.

Repeatable: Repeatable for up to 9.00 total credit hours.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5041 (3) Sustainability & Resilience in Practice

Explore sustainability strategies at the community scale and the drivers of decision making and investment in sustainability action. We will explore various approaches to sustainability with the goal of answering the question, ¿How do sustainability leaders engage with diverse stakeholders and decision makers to implement effective, equitable solutions to environmental problems?¿ We will select topics and case studies within Colorado that represent different kinds of challenges for sustainability planning and programs and evaluate solutions for each.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5042 (3) Renewable Energy Development & Project Finance

Renewable Energy Development & Project Finance will present students with a sampling of the day-to-day work of clean energy industry professionals. The course will focus on the business of decarbonizing the energy sector and deploying clean and efficient energy technologies from several distinct perspectives, including (1) renewable energy project development; (2) corporate renewable energy procurement; and (3) energy solutions for the built environment.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite The course will assume that students have some understanding of the energy space, therefore a background in energy topics including graduate-level work in energy policy, finance, law, business, or engineering is recommended.

Grading Basis: Letter Grade

ENVM 5043 (1) Benefit Cost Analysis

Analyze the environmental, economic, and international dimensions of a range of food production systems. Focuses on the economic benefit-cost analyses (BCA) that inform decision-making in food systems. BCA is a widely used economic valuation tool that involves estimating all benefits and costs in monetary terms and then adding and comparing those values and can help communicate the economic benefit of a proposed intervention. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites ENVM 5038 and ENVM 5039.

Grading Basis: Letter Grade

ENVM 5044 (1) Life Cycle Assessment - Bringing Objectivity into Subjective Conversations

Use the food system landscape to provide an introduction to life cycle thinking, including a survey of industry standards, approaches and tools useful in better understanding and making decisions around sustainability. Formerly offered as a special topics course.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites ENVM 5038 and ENVM 5039.

Grading Basis: Letter Grade

ENVM 5045 (1) Introduction to Monitoring & Evaluation

Gain an understanding of traditional and new approaches to monitoring and evaluation (M&E) in the context of food and water, sanitation and hygiene (WASH) systems in the developing world. Covers rigorous impact evaluation designs and when to use each.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites Intro to Food Systems (ENVM 5038) & Front Range Food Systems Field Lab (ENVM 5039).

Grading Basis: Letter Grade

ENVM 5046 (3) International Energy and Sustainability

This course is intended to explore the way in which different countries and cities around the world are approaching their transition to a sustainable and carbon free economy, highlighting the technologies, policies, economics, that underlie each country and city's approach. The classroom portion of the course will take place throughout the spring semester, meeting weekly for 1 hr. It will set the stage for the travel portion of the trip to a selected location, with the intent of witnessing some of the key urban sustainability and zero carbon technology and infrastructure solutions. The international component of the trip is anticipated to take place over a 10-12 day period (including travel).

Recommended: Prerequisite background in energy and or sustainability and application is required.

Grading Basis: Letter Grade

ENVM 5047 (3) Collaborative Skills for Sustainable Solutions

Collaborating is a core competency of sustainability. Meaningful collaboration is a combination of processes that provide a framework for decision-making and skills that are used within that framework. The course will approach collaborative skills from a practitioner's perspective and will draw from theory and practice as well as role play exercises related to the sustainable use of natural resources. Students will develop skills that make collaboration effective along with their application in the environmental, energy, and sustainability sectors.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 5048 (3) Marketing Sustainability and CSR

This course is designed to help students understand the power of marketing and branding within a context of Sustainability and Social Justice.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite some reading and critical reflection about business and the role of business in society.

Grading Basis: Letter Grade

ENVM 5049 (3) Foundations of Environmental and Natural Resource Economics

Introduces economic models, methods, and tools to analyze environmental and natural resource systems, their uses and issues, and policy solutions. Applies economic approaches to topics such as pollution, climate change, household waste and recycling, agriculture and food security, toxic substances and environmental justice, energy, forestry, fisheries, land, and water.

Requisites: Restricted to Graduate (GRAD) and Non-Degree Graduate (NDGR) students.

Grading Basis: Letter Grade

ENVM 5050 (3) Social Innovation and Sustainable Cities

Explore the emerging field of social innovation in the context of sustainable urban development; examine the core concepts, case studies and best practices that define it in areas such as carbon-neutral cities, impact investing/finance, modular housing, renewable energy, sustainable food production and urban mobility and develop our own social innovation ideas and models. Previously offered as special topics course.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Recommended: Prerequisite ENVM 5026.

Grading Basis: Letter Grade

ENVM 5051 (3) Humans, Environment, and Justice

This course will examine the justice implications of the relationship between humans and the natural environment and in particular land use. We will take as a premise that all people have the right to access clean water, air and soil and to be free of contamination and hazardous pollution. We will look at current struggles and debates around topics of environmental quality and the processes that deny people access to basic resources.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5052 (3) Transportation, Mobility & Sustainable Cities

The transportation sector is undergoing a revolution, with the sharing economy, new mobility options and technology advances changing not just how we travel but changing the makeup of cities themselves. This course will prepare students to be knowledgeable and effective practitioners in this revolution. Current transportation topics and policy debates will range from how we design our streets, to managing congestion, and how we price and pay for it all.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5053 (3) Climate Change: What Communities and Businesses Need to Know

Course will cover fundamentals of climate change and review the scientific consensus on the causes of climate change and its associated impacts. Students will examine impacts of climate change on public and private sector, and potential responses, as well as an overview of federal and state policy responses. They will examine the challenges and opportunities that face public and private sector decision-makers every day as they work to reduce carbon pollution and prepare for future climate impacts. Previously offered as special topics course.

Recommended: MENV graduate students.

Grading Basis: Letter Grade

ENVM 5054 (3) Stakeholder Engagement: Processes, Practices, Politics

This course is organized around stakeholder engagement issues that are important to understand both within and across the MENV's 5 areas of specialization (environment and natural resources policy, renewable and sustainable energy, urban resilience and sustainability, sustainable food systems, and sustainability in the outdoor industry). Throughout the course, we examine stakeholder processes, practices, and politics and apply these to a variety of cases, issues, challenges, and opportunities. The course is divided into three units designed to educate students holistically on stakeholder engagement. Unit One begins with the big picture of stakeholder engagement, examining how it is done in different contexts and cases. Unit Two focuses on techniques for and processes of engagement so that you will have a variety of tools in your toolbox to use as needed in different situations. Unit Three focuses on the perspectives of different communities that employ stakeholder engagement and also, in cases, serve as

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5055 (3) Data Science and Visualization

Explores ways of searching for and collecting relevant data and presents ways of cleaning, understanding, analyzing, and presenting such data. This class will require a basic understanding of mathematical concepts, statistics, and computer programming with a focus on the ability to use the R statistical programming language.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5057 (3) Introduction to Resilience Management

In the era of COVID-19 and Climate Change, building resilience in our communities, economies and natural environments is a fundamental element of reframing and executing functional governance, green economies, policies and programs. The course is gaged to give students a firm understanding of resilience thinking and how to apply resilience tools across sectors of society.

Grading Basis: Letter Grade

ENVM 5059 (3) Global Consulting for Environmental Professionals

Experience the professional rigors of consulting while learning how to navigate the global economy, international business cultures, economic conditions, and differences in business between the US and other countries. You will be part of a team of 3-5 students that will deliver a strategic solution to a real-world company working to solve a global social, sustainability and/or environmental problem.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5060 (3) Governing for Sustainable Communities

To make a sustainable environment, we need to have legal and governmental structures and rules that foment – and do not stymie – sustainable practices. This course explores how we govern for sustainable outcomes at all levels of governance, with a focus on the local. We will also examine the role that courts play in determining the lawfulness of such governance. Students will have an opportunity to role-play as lawmakers.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5061 (3) B Impact Clinic

Evaluate sustainability and social impact performance for client companies using B Lab's B Impact Assessment (BIA). The BIA, a prerequisite for B Corp Certification, is used by over 100,000 businesses worldwide. Weekly workshops train students on the BIA, Certified B Corporations, and client engagement skills. Students offer consulting throughout the semester, culminating with the delivery of impact improvement recommendations.

Recommended: Prerequisite it is strongly recommended that students either have completed at least one graduate-level MENV or MBA course on business fundamentals, business operations, sustainable business, or equivalent; or have a minimum of 2 years full time professional experience in a for-profit business.

Grading Basis: Letter Grade

ENVM 5062 (3) Zero Carbon Buildings and Cities

Review of the current standards for Net Zero Energy and Carbon (NZE and NZC). Understanding building efficiency metrics and methods, onsite renewable energy considerations, building electrification, embodied carbon transportation impacts, and offsite renewable energy options. Integration of electric vehicle loads and conducting load shaping to minimize carbon impact on a time of use basis. City and utility policies and programs.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5063 (3) Agroecology

Integrating a scientific framework, and ecological concepts with a concern social justice and cultural regeneration, this class introduces students to Agro-ecology as a discipline and a set of practices highlighting the multi-functionality of agricultural systems. We will also explore Agro-ecology as a social movement that aims to leverage traditional ecological knowledge to decolonize the multiple ecologies from seed to gut.

Requisites: Restricted to graduate students only.

Recommended: Prerequisite ENVM 5308.

Grading Basis: Letter Grade

ENVM 5064 (3) Introduction to Sustainability in the Outdoor Industry

Providing an introduction to public lands and natural resources policy, challenges and opportunities for community economic development, and the outdoor recreation industry. Outdoor recreation economy definitions, theories and frameworks are discussed and critically examined. Key stakeholders are identified, along with current and future trends, opportunities, and challenges. The need for sustainable practices and cross-cultural understanding and communication within the outdoor recreation economy is also emphasized. Finally, we will explore the diverse career opportunities that exist within the outdoor recreation industry.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5065 (3) Community Economic Development and the ORE

Introduces community economic development theories, frameworks, and processes, as relevant to the ORE. Best practices for building the ORE within all types of communities are discussed, highlighting the importance of equitable, community-focused, integrated, and sustainable destination development practices. Tying this all together is the importance of community economic development in building community capacity for the future.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5066 (3) Environmental Stewardship: Practice and Law

Addresses the context in which environmental laws have been created, as well as the customs and laws related to resilience, sustainability, stewardship, and honorable practice. It will concentrate on law as a means of market regulation, cultural expression, health, equity, and justice. Water and land law, property rights, wildlife and public land management, and other topics of historical and ongoing relevance will be discussed.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5067 (3) Building Community Capacity

Assist partner communities who are looking to build community capacity through outdoor recreation. Students learn and apply best practices related to building community capital and trust, assessing community strengths, providing strategic planning and guidance, engaging diverse community stakeholders, developing successful partnerships and identifying relevant programs, partners and funding sources to assist with community economic development.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5068 (3) Qualitative Methods for Sustainability

Qualitative Research Methods is oriented to students who are likely to engage in research of any kind, formal or informal, that is concerned with people and the environment. It will cover the methods, employed in social sciences, that help us understand people's perceptions, beliefs, motivations, and actions around environmental issues.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5070 (3) Consulting in Practice: Introduction to Individual and Group Consulting

Learn the basics of consulting in this class. Great consultants are strategists and problem solvers. They know how to sort through complexity and uncertainty to assess the core issue that a client needs to address. In this class students will learn 101 skills such as: project definition, scoping, proposal writing, project management of deliverables, contracts, and relationship management.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5071 (3) Facilitation for Change

Learn how to guide groups toward agreement while increasing productivity and connection. Facilitation is the process of guiding a conversation with intention and skill toward the desired outcome. It is used for projects ranging from small-scale, brief gatherings to multi-year projects involving hundreds of people. In this class, we will learn the main types of facilitation and how they can be used effectively in varied professional and community settings. This class is open to anyone with an interest in facilitation regardless of current skill.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5072 (3) Energy Markets, Transactions and Policy

Review the various regulatory structures and markets that exist (including the various ISOs and RTOs), the overarching federal policy structure and entities that govern them, and the opportunities for utilities, renewable energy developers, and end-users to engage with those markets and work within and navigate the completed energy landscape.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites ENVM 5006 and 5007.

Grading Basis: Letter Grade

ENVM 5074 (3) Conservation Management: Policies, Leadership and Best Practices

Introduces students to complex conservation issues and examine how governments, tribes and organizations have, and continue to nurture and conserve healthy land and waterscapes, while balancing a variety of human impacts and uses. Students will examine how conservation policymaking occurs and the importance of governance, more broadly, in conserving our natural resources. Indigenous and traditional knowledge surrounding land and water use and management internationally are examined including the integration of said knowledge in the management of public lands. Relevant tools and methods that are used are examined alongside best management practices at a local, regional and international level. These include the importance of engaging and collaborating with diverse stakeholder groups and recognizing the multiple disciplines, lived experiences and perspectives that all contribute to conservation management.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5075 (3) Equity in the Outdoors

DEI is an ongoing learning process and requires commitment, personal leadership, and accountability. Building a community, work environment, and society that is diverse, inclusive, equitable, and just requires a foundation from which to develop. This course offers students insight into the importance of diversity, equity and inclusion as it relates to the outdoor industry and the importance of removing barriers to access for people from all backgrounds and lived experience to not only the outdoors, but the outdoor industry. Key challenges and opportunities surrounding DEI within the ORE will be examined, alongside some tools and strategies that students can use to help lead the transition to a more equitable outdoor industry. This course will enable students to be a part of developing an inclusive foundation for their respective organizations and communities with knowledge, tools, and best practices from global leaders within the outdoor recreation economy and beyond.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5076 (3) Entrepreneurship and Applied Project Management

This course is an applied project-based course where students will partner with a business, non-profit organization or community to address an identified problem or opportunity related to the outdoor industry. Over the course of the semester, students will be introduced to business fundamentals, project management, and other relevant skills and knowledge to help them with their projects and to better understand and manage the entrepreneurial landscape. Whether students are interested in working for a start-up, small-medium sized enterprise, non-profit or government agencies, the need for entrepreneurial thinking and skills are essential and can be applied across all sectors. Real-world project experience will be gained through participating in the Wright Collegiate Challenge – a friendly competition supported by the Colorado Outdoor Recreation Industry Office where students work in small teams to help a business, organization or community address an identified problem or opportunity related to the outdoor industry.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5077 (3) Circular Economy and Sustainability

Fundamentals of a circular economy, the business value in a circular economy, how business models are presently shifting, and why businesses should become part of this transformational shift. This course will also cover knowledge and skills needed to critique and improve sustainability outcomes for businesses and their stakeholders.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5078 (3) Sustainable Business Practice

Provide students with the knowledge and tools to drive environmental and social responsibility in the business sector. Focus will be creating the case for a new business model by looking at market failures, the environmental crisis, and the critical role businesses play in being a force for good and exploring the practical tools required to implement sustainable solutions.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5079 (3) The Science and Practice of Sustainable Agriculture

Explore the underlying biology and ecology of crop and animal agricultural production systems. The goal of this class is to equip students with a base understanding of the ecology of agricultural systems, gain applicable vocabulary and concepts related to agriculture and an understanding of the challenges and opportunities farmers face when seeking sustainable solutions.

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 5080 (3) Low-Carbon Energy Technologies of the Future

Transitioning to a zero-carbon future will require major and fundamental changes in energy systems. Numerous advanced energy-related technologies and concepts are being explored – but which ones will succeed? This course takes a closer look at green hydrogen, advanced nuclear, carbon capture and storage (CCS), enhanced geothermal, and others; to better understand their potentials, limitations, and likely future impacts.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites of ENVM 5007, ENVM 5042, and ENVM 5072.

Grading Basis: Letter Grade

ENVM 5081 (3) Climate and Energy Justice

This course explores the roots of environmental injustice and evaluates solutions through a socio-ecological framework. Students apply strategies and tools to identify injustice in underserved communities.

Requisites: Restricted to graduate students only.

Recommended: Prerequisites ENVM 5018 The Scientific Basis of Environmental Change.

Grading Basis: Letter Grade

ENVM 5082 (3) Conservation and Sustainable Development in Brazil's Tropical Forests

Brazil's tropical forests sequester and store carbon, harbor biodiversity, and support the livelihoods of millions of forest-dependent people. This Global Intensive Education Abroad class takes 12 MENV students to Brazil for two weeks, with one week in each of the Amazon and Atlantic Forest biomes. We work closely with Brazilian graduate students and professors to visit communities and talk with stakeholders about their efforts to promote conservation and sustainable development in Brazil's forests.

Requisites: Restricted to graduate students only.

Recommended: by application only.

Grading Basis: Letter Grade

ENVM 5750 (3) Climate Politics and Science-Policy

Explores, understands and critically analyzes influences and trends in climate politics and science-policy. Course participants will gain an improved understanding of the myriad factors, pressures and processes that are involved in contemporary climate politics undergirding explicit policy proposals. Course participants will more capably identify consequential spaces of decision-making, recognize tractable places for change and fashion constructive strategies for their own research by way of best available evidence from work done in these areas. Overall, our attention to these course themes, concepts and case studies will help us to more capably understand, analyze and engage in the high-stakes 21st century arena of climate politics and science-policy. Previously offered as a special topics course.

Equivalent - Duplicate Degree Credit Not Granted: ENVS 5750, GEOG 5750 and SOCY 5750

Requisites: Restricted to graduate students only.

Grading Basis: Letter Grade

ENVM 6001 (1) Capstone Innovation Lab 1

Providing hands-on, learning-by-doing experiences, while also providing client organizations with solutions to complex problems and useful products. Projects can take place in-residence with a client, when appropriate. Project ideas will be codeveloped by students and industry, government, or non-profit partners and will be guided and evaluated by a committee of ENVS faculty. Required for all MENV students.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 6002 (2) Capstone Innovation Lab 2

Providing hands-on, learning-by-doing experiences, while also providing client organizations with solutions to complex problems and useful products. Projects can take place in-residence with a client, when appropriate. Project ideas will be codeveloped by students and industry, government, or non-profit partners and will be guided and evaluated by a committee of ENVS faculty. Required for all MENV students.

Requisites: Requires a prerequisite course of ENVM 6001 (minimum grade C). Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 6003 (5-6) Capstone Project

Providing hands-on, learning-by-doing experiences, while also providing client organizations with solutions to complex problems and useful products. Projects can take place in-residence with a client, when appropriate. Project ideas will be codeveloped by students and industry, government, or non-profit partners and will be guided and evaluated by a committee of ENVS faculty. Required for all MENV students.

Requisites: Requires a prerequisite course of ENVM 6002 (minimum grade C). Restricted to Master of the Environment (MENV) graduate students only.

ENVM 6004 (1) Capstone Leadership Lab

Providing hands-on, learning-by-doing experiences, while also providing client organizations with solutions to complex problems and useful products. Projects can take place in-residence with a client, when appropriate. Project ideas will be codeveloped by students and industry, government, or non-profit partners and will be guided and evaluated by a committee of ENVS faculty. Required for all MENV students.

Requisites: Requires a prerequisite course of ENVM 6003 (minimum grade C). Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 6005 (3) Capstone Innovation Lab (CIL)

Develops professional practice via the process of selecting, scoping, and launching a MENV Capstone Project.

Requisites: Restricted to Master of the Environment (MENV) graduate students only.

Grading Basis: Letter Grade

ENVM 6100 (3) Special Topics for Master of the Environment Program

A variety of topics not currently offered in curriculum; offered depending on instructor availability and student demand.

Repeatable: Repeatable for up to 18.00 total credit hours. Allows multiple enrollment in term.

Grading Basis: Letter Grade

ENVM 6101 (1-3) Special Topics for Master of the Environment Program

A variety of topics not currently offered in curriculum; offered depending on instructor availability and student demand.

Repeatable: Repeatable for up to 18.00 total credit hours. Allows multiple enrollment in term.

Grading Basis: Letter Grade

ENVM 6302 (3) Sustainable Landscapes, Sustainable Livelihoods

Examines rural transformation and the adoption of recreation economies in communities across the U.S. West in response to burgeoning recreation industry and interest in public lands. Students will evaluate different approaches for developing and managing recreation economies in small towns that consider diverse social, cultural, economic, and environmental constraints as well as opportunities in a time of rapid change. Project-based course. Students learn techniques to gather and synthesize data that support solution development.

Equivalent - Duplicate Degree Credit Not Granted: ENVS 6302

Recommended: Prerequisite one year of MENV, ENVS, MBA or relevant graduate work.

Grading Basis: Letter Grade

ENVM 6840 (1-4) Masters of the Environment Independent Study

An independent study is a collaboration between a student and a faculty member on a special project that provides the student with a learning experience. An independent study may also fill an academic need of importance to the student that cannot be filled by regular course offerings. Independent studies are opportunities for students to earn credit for learning outside the normal lecture and seminar class structure. All independent study requests must be considered and approved by MENV program administration for approval.

Repeatable: Repeatable for up to 9.00 total credit hours.

Grading Basis: Letter Grade