



Masters of the Environment

University of Colorado **Boulder**

SPRING 2025 COURSE DESCRIPTIONS:

New MENV course

GHG Accounting and Management (3cr)

ENVM 5083

[Colette Crouse](#)

This course will introduce students to the fundamentals of greenhouse gas emissions accounting and management, including GHG inventory development, target-setting, reduction planning and reporting. It will cover GHG emissions scopes 1-3 and will review accounting standards such as the GHG Protocol, definitions of zero carbon and net zero, and discussion of globally recognized third party frameworks such as the Science-Based Targets Initiative. We will also discuss the carbon management hierarchy and issues of impact, transparency, and credibility, which will include the application of carbon offsets, RECs, and the role of carbon markets in mitigating climate change. A particular focus will be paid to practical knowledge, with students developing and analyzing a detailed, Excel-based inventory model, and data management framework. Students are strongly encouraged to have at least an intermediary working knowledge of Excel prior to beginning this course, including familiarity with formulas and functions such as Index Match, If Statements, Pivot Tables and charts.

001 (39393) – TH, 4:00-6:30pm, SEEC N124

Low-Carbon Energy Technologies of the Future (3cr)

ENVM 5080

[Paul Komor](#) & Suzanne Tegen

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.

001 (39395) – T, 4:00-6:30pm, SEEC N126

Environmental Justice in Law and Practice (3cr)

ENVM 6100

[Gregor MacGregor](#)

This course will provide students with the skills and knowledge necessary to locate contemporary and historical environmental justice (EJ) issues within the greater framework of American law and policy. Students will examine the history of environmentalism and EJ as both have developed, intersected, and been at odds with one another during the last 200 years. They will then learn the contemporary landscape of EJ issues, legal requirements, and societal aspirations through a combination of academic commentary and case studies. Using this knowledge, students will produce advocacy documents that apply conceptual EJ lenses to recommend real-world solutions.

001 (31466) – TTH, 8:30-9:45am, SEEC N128

Climate Action Planning for Cities (3cr)

ENVM 6100

Angie Fyfe

Climate action is needed at all levels of government if we are to achieve global climate and sustainability goals. This course will explore the synergistic relationships between U.S. federal, state, and local government climate action planning and the delicate international architecture that supports the Paris Agreement and the Sustainable Development Goals. From this broad perspective, the course will narrow its focus to delve into the “Race to Zero,” and the specific high-impact actions necessary to move local governments toward a carbon-free future.

007 (39146) – M, 3:35-6:05pm, LBB 155

Returning MENV courses

Environmental Governance: Actors & Institutions (3cr)

ENVM 5013

[Meghan McCarroll](#)

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.

001 (31502) – W, 4:05-6:35pm, SEEC N128

Science, Politics, and Policy (3cr)

ENVM 5016

[Jojo La](#) & Tanya Petach

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.

001 (31503) – T 5:30-8:00pm, SEEC N129

Communicating for Sustainability & Impact (3cr)

ENVM 5022

[Meghan McCarroll](#)

Sustainability professionals interface with a broad range of audiences, making effective communication challenging. Good communication considers the needs, interests, and a priori knowledge of the audience. It weaves science and technical details into the art of storytelling. In this course, students will practice and improve their written, visual, and oral communication using audience analysis, storytelling, active listening, and other essential tools. By the end, each student will showcase their communication skills in a personal portfolio.

001 (31509) – TTH, 10:00-11:15am, SEEC N136

GIS for Sustainability Professionals (3cr)**ENVM 5023**[Meghan McCarroll](#)

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.

001 (31510) – TTH 8:30-9:45am, SEEC N136

Food & Agriculture Policy in the United States (3cr)**ENVM 5029**[Wendy Moschetti](#) & [Taber Ward](#)

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.

001 (31474) – W, 5:45-8:15pm, SEEC N126

Planning for Resilient Futures (3cr)**ENVM 5030**[Gretel Follingstad](#)

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.

002 (31501) – W 4:05-6:35pm, SEEC N125

MENV URS Clinic (3cr)**ENVM 5040**[William Shutkin](#)

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.

001 (31493) – T 2:30-5:00pm. AERO N250

Renewable Energy Development and Project Finance (3cr)**ENVM 5042**[Adam Knoff](#) & [Owen Westbrook](#)

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.

001 (31475) – W, 4:0-6:35pm, SEEC N124

Transportation, Mobility, & Sustainable Energy (3cr)

ENVM 5052

[Jean Sanson](#)

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.

001 (31492) – T, 5:30-8:00pm, SEEC S125

B Impact Clinic (3cr)

ENVM 5061

[Devon Bertram](#) & **Maria McDonald**

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.

001 (31496) – M, 4:05-6:35pm, SEEC N128

Zero Carbon Buildings (3cr)

ENVM 5062

[Josh Radoff](#)

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.

002 (31497) – TTH, 10:00-11:15am, SEEC S125

Agroecology (3cr)

ENVM 5063

[Damien Thompson](#)

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.

001 (31498) – TTH, 11:30-12:45pm, SEEC N129

Environmental Stewardship: Practice and Law (3cr)

ENVM 5066

Matt Nadel

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.

001 (31499) – TH, 5:30-8:00pm, SEEC N125

Clinic: Building Community Capacity (3cr)

ENVM 5067

[Natalie Ooi](#)

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.

**By application only.*

001 (31500) – TTH, 1:00-2:15pm, SEEC C315

Qualitative Methods for Sustainability (3cr)

ENVM 5068

[Damien Thompson](#)

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.

001 (31504) – TTH, 1:00-2:15pm, SEEC N124

Facilitation for Change (3cr)

ENVM 5071

[Christine Ageton](#)

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.

001 (31505) – TTH 2:30-3:45pm, SEEC N128

Entrepreneurship and Applied Project Management (3cr)

ENVM 5076

[Paul Dreyer](#)

Introducing 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.

001 (31506) – T, 4:00-6:30pm, SEEC N126

Sustainable Business Practice (3cr)

ENVM 5078

Matt Abbott

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.

001 (31507) – M, 5:45-8:15pm, SEEC N124

The Science and Practice of Sustainable Agriculture (3cr)

ENVM 5079

[Dan Goldhamer](#)

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.

001 (31508) – M, 5:45-8:15pm, SEEC N136

GHG Accounting & Carbon Management (3cr)

ENVM 5083

[Collette Crouse](#)

Introduces students to the fundamentals of greenhouse gas accounting and management, including market trends, GHG inventory development, data analysis, strategic planning, and carbon markets. A particular focus will be paid to practical knowledge, with students developing and analyzing a detailed,

Excel-based inventory model.

001 (39393) – TH, 4:00-6:30pm, SEEC N124

Capstone Innovation Lab 2 (1cr)

ENVM 6002

[Alice Reznickova](#)

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.

001 (31452) – F, 8:30-10:10 am, TBD

002 (31453) – F, 10:25-12:15am, TBD

003 (31454) – F, 12:30-2:10pm, TBD

**Please note, all sections should be similar in size. No exceptions on capacity changes. Each section permits a capacity of 33. No waitlists available.*

Climate and Energy Justice (3cr)

ENVM 6100

[Jorge Figuero Serrano](#)

This course will explore the historical roots and current manifestations of environmental and climate

injustice in Colorado and beyond. It will be grounded on practice: how to apply environmental and climate justice lenses and tools to address current urgent challenges & issues that cut across MENV's 5 thematic tracks. Students will learn about the different roles and strategies that law, policy, equity and markets can play in addressing environmental and climate justice; and of the intersectionality of climate change mitigation and adaptation. Consistent application of analysis and strategies on real-world problems, and guest speakers from diverse backgrounds, fields and experiences will enrich and ground-truth this professional course.

002 (31467) – TH, 5:30-8:00pm, CASE E220

Global Intensive: Sustainable Cities, Sustainable Energy (3cr)

ENVM 5046-002

[Josh Radoff](#)

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' 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 predetermined 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).

005 (31470) – W, 8:30-9:45am, AERO 232.