

FALL 2024 COURSE DESCRIPTIONS:

New MENV course

Conservation Management: Policies, leadership and best practices (PLP) (3cr)

ENVM 6100

[Colleen Scanlan Lyons](#)

This course will introduce 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.

008 (19236) – TTH, 8:00-9:15am, SEEC N128

Returning MENV courses

Sustainable Energy Policy (3cr)

ENVM 5006

TBD

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.

001 (26971) – T, 3:30-6:00pm, DUAN G2B41

Energy Systems and Technologies (3cr)

ENVM 5007

[Joshua Radoff](#)

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.

001 (26970) – TTH, 8:30-9:45am, SEEC N124

Water, Climate, and Sustainable Cities (3cr)

ENVM 5012

[Paul Lander](#)

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.

001 (27006) – M, 3:35-6:05pm, HY SEEC N136

Foundations of Environmental Policy and Management (3cr)

ENVM 5014

[Gregor MacGregor](#)

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.

001 (27037) – TTH 10:00-11:15am, SEEC N128

The Scientific Basis of Environmental Change (3cr)

ENVM 5018

[Alice Reznickova](#) & [Meghan McCarroll](#)

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.

801 (27025) – M 10:00am-12:30pm, SEEC N128

802 (27026) – T 4:00-6:30pm, SEEC N128

803 (27027) – W 10:00am-12:30pm, SEEC N128

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

Supply Chain Management for Food and Fiber (3cr)

ENVM 5028

[Scott Donnel](#) & Kurt James

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.

001 (27038) – T 5:45-8:15pm, SEEC S125

Leadership & Ethics for Environmental Professionals (3cr)

ENVM 5034

Songya Kesler

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.

001 (27007) – M 3:35-6:05pm, SEEC N124

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

ENVM 5038

[Damien Thompson](#)

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.

001 (27009) – TTH 10:00-11:15am, SEEC S125

Sustainability & Resilience in Practice (3cr)

ENVM 5041

[Jonathan Koehn](#) & [Susie \(Leach\) Strife](#)

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.

001 (27008) – T 9:00-11:00am, TBD

Benefit Cost Analysis (1cr)

ENVM 5043

[Stephanie Shwiff](#)

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.

001 (27010) – W 5:45-8:15pm, HY SEEC N125

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

ENVM 5044

[John Heckman](#)

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.

001 (27011) – W 5:45-8:15pm, HY SEEC N125

Introduction to Monitoring & Evaluation (1cr)

ENVM 5045

James Harper

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.

001 (27024) – W 5:45-8:15pm, HY SEEC N125

Social Innovation and Sustainable Cities (3cr)

ENVM 5050

[William Shutkin](#)

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.

001 (27029) – W 3:35-6:05pm, TBD

Humans, Environment, and Justice (3cr)

ENVM 5051

[Fatuma Emmad](#)

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.

001 (27036) – TH 4:00-6:30pm, SEEC N124

Stakeholder Engagement: Processes, Practices, Politics (3cr)

ENVM 6100

[Christine Ageton](#)

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 stakeholders themselves.
007 (19222) – TTH 11:30am-12:45pm, SEEC N124

Introduction to Sustainability in the Outdoor Industry (3cr)

ENVM 5064

[Paul Dreyer](#)

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.

001 (27034) – W 3:35-6:05pm, SEEC N124

Community Economic Development and the ORE (3cr)

ENVM 5065

[Natalie Ooi](#)

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.

001 (27035) – TTH 2:30-3:15pm, SEEC N125

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

ENVM 5070

[Christine Ageton](#)

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.

001 (27039) – TTH 1:00-2:15pm

Energy Markets, Transactions and Policy (3cr)

ENVM 5072

[Robin Meidhof](#)

The energy transition is one of the greatest industrial undertakings in human history. This course will focus on the legal and market aspects of that transition, the challenges they present, and the ways in which you can become more effective at navigating those challenges. For example, the U.S. has needed more transmission for more than a decade, yet transmission lines still take between 11-20 years to build. Why? Can the U.S. meet its aspirations to rapidly electrify and decarbonize our grid without “big transmission?” We will begin our inquiry by discussing the legal and constitutional underpinnings of federal, state and local powers, the creation of regional markets and regulatory decision-making bodies, and the history of utility regulation. We will evaluate how current regulatory structures, laws, and policies present hurdles and opportunities for the energy transition and we will dig deep into understanding how you can be a catalyst for change in improving the opportunities for utilities, renewable energy developers, and end-users (i.e., consumers) to engage with the markets and perhaps most important, engage with the regulators and policymakers who enact the legislation and policies that are driving the energy transition.

001 (27040) – T 5:30-8:00pm, SEEC N136

Circular Economy and Sustainability (3cr)

ENVM 5077

[Anne Wiper](#)

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.

001 (27041) – M 3:35-6:05pm, SEEC S125

Capstone Innovation Lab 1 (1)**ENVM 6001**

[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 (26985) – F 9:00-10:00am, SEEC N128

002 (26986) – F 10:15-11:15am, SEEC N128

003 (26987) – F 11:30am-12:30, SEEC N128

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Capstone Leadership Lab (cr)**ENVM 6004**

TBD

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 (26988) – F 9:00-10:00am, AERO N250

002 (26989) – F 10:15-11:15, AERO N250

003 (26990) – F 11:30am-12:30pm, AERO N250

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

Policy Writing and Advocacy (3cr)**ENVM 6100**

[Rebecca Siever](#)

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. Students will complete the course with a series of practical oral and written advocacy exercises. This course will cover principle topics including the organization and hierarchy of law and policy in the US, structure and meaning of laws and judicial decisions, written and oral advocacy in law and policy, and drafting principles for legislation.

001 (26998) – W 4:05-6:35pm, SEEC N136

H2O Resilience and Sustainability (3cr)**ENVM 6100**

[Paul Lander](#)

Using the Colorado River Basin as our framework, we will journey through all of the elements of the water story. This basin, like many, is facing a dire future, primarily from the inability of humans to adapt to the realities of the physical world. The course will walk through the history of water in this region- culture, development, management- to begin to develop a frame for approaching a water future, one needing much greater resilience to indeed be sustainable.

Water 2050: Resilience & Sustainability Fall 2023 Notes:

Each student will learn the fundamentals of water science, law, policy, culture, economics, governance, and systems. As a group, the class will generate a body of work that provides an assessment of the basin, the key areas for system intervention, and possibilities for increasing resilience and sustainability.

003 (27000) – T 4:00-6:30pm, HY SEEC N125

GIS for Sustainability Professionals (3cr)

ENVM 6100

[Meghan McCarroll](#)

Geographic Information Systems (GIS) for Sustainability Professionals are increasingly important for understanding and managing environmental change and sustainability challenges. This introductory course in GIS will provide you with a broad foundation of spatial thinking and geo-technologies. We will consider what constitutes spatial data, learn about real-world applications of GIS within the field of sustainability, and will work through hands-on exercises in ArcGIS to build confidence utilizing such software in your future careers.

This is a computer-based course, but no prior GIS experience is required.

004 (27001) – TTH 2:30-3:45pm, SEEC N128

Sustainability Reporting (3cr)

ENVM 6100

[Debra Huttner](#)

Private and public entities around the world are increasingly taking on sustainability as core value. Many are driven by genuine desire for positive change. Others do so out of perceived need from customers, stakeholders, or investors. As a result, the need to be able to use frameworks to develop strategies and communicate progress and impact has been paramount. This class will explore the frameworks and standards used to measure sustainability across different industry sectors, differentiate between “CSR” and “ESG,” and provide an investors perspective regarding which companies merit financial investment based on their sustainability performance. It will include a review of reporting standards such as GRI, CDP, GRESB, SASB, the process of conducting Materiality Assessments, and showcase how companies across the sustainability spectrum are developing enterprise-wide strategy and communicating their efforts.

005 (2) – TH 4:00-6:30pm, SEEC N125

Microgrids and Distributed Energy Resources (DERs) (3cr)

ENVM 6100

[Peter Lilienthal](#)

This course will cover the applications of distributed energy resources with special emphasis on microgrids. The students will learn about three distinct types of microgrids; remote area power, islanded power, and grid-connected microgrids. It will also cover their value propositions of resilience, energy access, cost savings, and decarbonization and the technical and regulatory challenges that microgrids face. By the end of the course the students should be proficient in the use of the HOMER Pro software for optimizing the design of a microgrid. Evaluations will be based on class presentations and a final project.

006 (27003) – TH 4:00-6:30pm, SEEC N128