

## Graduate Courses

Academic Department	Course Number	Description	Sustainability-Inclusive	Sustainability-Focused	Next Available
College of Engineering and Technology	CE 5540: Sustainable Construction	Investigations into green building construction practices and sustainability including use of novel or recycled materials, energy management and efficiency, water use/re-use, and indoor air quality.		X	Fall 2023
College of Engineering and Technology	CE 6560: Advanced Waste Water Treatment	Advanced study of theory. Design of biological treatment units. Practice in control methods.		X	Fall 2023
College of GVS Leadership & Public Affairs	ES 5250: Watershed Management	Examine the major chemical and biological factors that affect watershed health and how to incorporate them into a watershed management plan in consultation with stakeholders. Discuss the importance of stakeholder engagement and identify key stakeholders and the key social, legal and economic issues that will affect management decisions.		X	Fall 2023
College of GVS Leadership & Public Affairs	ES 6800: Seminar in Community-Based Environmental Studies	Provides forum for discussion and analysis of contemporary environmental problems. Class includes orientation to the Appalachian region in the context of environmental issues.	X		Fall 2023
College of GVS Leadership & Public Affairs	ES 6810: Seminar in Environment and Society	Interdisciplinary graduate-only offering covering such topics as natural resource conservation, environmental literacy, environmental ethics, policy, literature, and justice.		X	Fall 2023
College of Arts and Sciences	GEOG 5450: Gender, Environment and Development	Explores frameworks linking gender and the environment and examines how they have influenced the practice of development in various geographic contexts. Case studies from Africa, USA, Latin America, and Asia. Topics include gendered access to resources, health and inequality, men and masculinities, the body and the environment, non-governmental organizations, and grass root organizing.		X	Fall 2023
College of Arts and Sciences	GEOG 5470: Natural Resource Conservation	Themes in American environmental history, resource conservation and management, and contemporary environmentalism.		X	Fall 2023
College of GVS Leadership & Public Affairs	ES 5640: Risk, Climate Security, and Community Engagement	Climate change and other rapid environmental changes create risk to communities, infrastructure, and human security; managing these climate-related risks requires understanding of the community, its risk perception, and collaborative communication and management planning. Students characterize risk to communities from climate change and explore risk perception theory and methods to manage threats to human security. Students discuss concepts of justice and equity in risks to human security, risk management, and communication. Students explore these particular climate change and environmental challenges through the multidimensional and interdisciplinary lens of human security.		X	Summer 2023
College of GVS Leadership & Public Affairs	ES 5630: Climate Change Mitigation, Adaptation and Resilience Policy	This course introduces students to the study of climate policy and planning. Students examine the range of mitigation, adaptation and resilience approaches for managing greenhouse gas emissions and the impacts of climate change to improve human and environmental security. Students gain an understanding of the implications of climate change science for public policy making and hands-on experience in using climate information for preparing a climate change plan. Students explore a basic overview of public policy theory, discuss various policy options for mitigation and adaptation policy, and gain the skills necessary for incorporating climate into a diverse area of public policy issues. Students are presented with the general theory, analytic frameworks, and specific techniques necessary to analyze climate change policy alternatives within a larger human security framework. The skills learned in this class are applicable to a variety of levels of government planning (local, state and national) as well as across the private, nonprofit and public sectors.		X	Summer 2023
College of GVS Leadership & Public Affairs	ES 5620: Environmental Science and Public Policy	Public administrators face a wide range of environmental science and policy challenges. This course develops skills in science literacy and environmental policy management. Students are empowered with tools for addressing environmental issues integral to economic development, infrastructure, and broader regulatory frameworks. This class explores the interaction between scientific analysis and policymaking through case studies at multiple levels of government.		X	Fall 2023

College of GVS Leadership & Public Affairs	ES 5831: Environmental Sustainability Assessment	An introduction to sustainability assessment theory with special reference to application. Students analyze sustainability planning efforts, contextualize and write up results, measure impacts, and learn the process to complete an assessment		X	Fall 2023
College of GVS Leadership & Public Affairs	ES 5740: Strategies for Resilient Agriculture	Agricultural production systems comprise a fundamental sector of the economy, of which many policy makers have only specialized knowledge based on single commodities. Students gain an overview of the diverse portfolio of agricultural products that drive essential systems in the United States, and the major challenges that exist for achieving resiliency in the agricultural sector. Students explore food, livestock, fiber, and fuel crop management and associate supply chains that are complex systems influencing social, environmental, and economic resilience.		X	Fall 2023
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