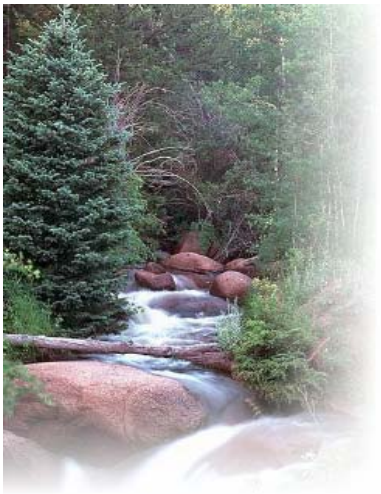
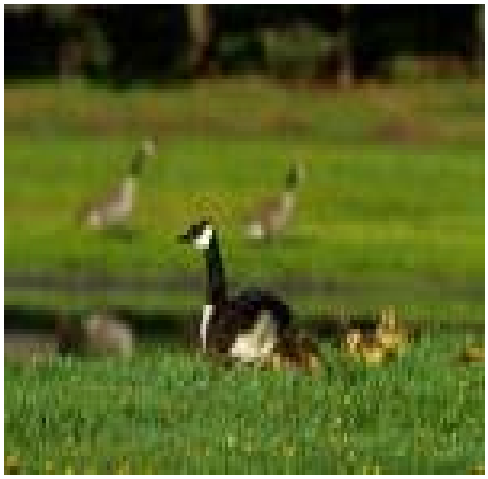


2009
Spring Courses

Virginia Tech
Natural Resources Program
National Capital Region Campus

January 19 – May 13



Application: http://www.grads.vt.edu/admissions/applying/index.html#online Deadline: December 1, 2008
Registration: https://banweb.banner.vt.edu/ssb/prod/twbkwbis.P_WWWLogin Deadline: Dec.1, 2008– Jan. 26, 2009

NR 5884 Topics: Green Enterprises: Business Strategies in Natural Resources (3 credits, CRN)
Theory and practice of new venture planning in Green Enterprises, with special emphasis on opportunities in Natural Resources. Focus is on development of a comprehensive business plan; analysis of the industry environment and target market; assessment of the competition; marketing and sales strategy; and financial analysis. Students start with a feasibility study and work with it through the planning, startup and funding stages.
Location: Alexandria Center, Room TBD; Instructor: Jeannine Vail Mantz; Mondays, 7:00 – 9:45 PM.

FOR 5134 Environmental Conflict Management (3credits, CRN)
This course will introduce students to the theories and practical approaches associated with understanding and managing for modern environmental conflicts, with an emphasis on the processes and structures unique to the United States. The seminar-styled course will cover the causes, controls, and potential remedies for managing the intense conflicts routinely associated with natural resource management and environmental regulation.
Location: Northern Virginia Center, Room TBD; Instructor: Michael Mortimer; Mondays, 7:00 – 9:45 PM.

NR 5194 Environmental Ethics (3 credits, CRN)
Environmental ethics is an in depth analysis of current and past environmental issues in the context of ethical and philosophical considerations starting from individual and group ethics and moving toward more global and societal ethics. The course addresses influences and pressures such as social (in) justice, cultural traditions, politics, science, technology, and religion. In addition, the course explores practical application of professional ethics to the resource decision making process regarding current issues. Teaching methods emphasize but are not limited to class participation, case studies, role playing, technical and popular readings, guest lecturers, and video.
Location: Northern Virginia Center; Instructor: Jennifer Plyler; Tuesdays, 7:00 – 9:45 PM

NR 5984 Environmental Conservation and the American Landscape (3 credits, CRN)
This course provides a comprehensive examination of American attitudes toward the environment and the history of our efforts to protect it. Early European settlers viewed the American landscape through particular lenses, and their attitudes toward landscape changed as they encountered new landforms and types of wilderness as the country expanded westward and matured. By the end of the nineteenth century, we recognized environments that needed to be protected and began to set aside large areas containing special natural features (national parks, monuments, and forests). Throughout the twentieth century, our definition of environments that required conservation expanded further, and we defined "wilderness" within national parks and forests for special protection. By the end of the twentieth century, public efforts to protect the environment were greatly enhanced by private conservation efforts, as the land trust movement matured. Thus, the course will examine changing definitions of the American environment in the context of national development and our evolving strategies of environmental conservation.
Location: Alexandria Center; Instructor: Shelley Mastran; Tuesdays, 7:00 - 9:45 PM.

NR 5884 Topics in Natural Resources: Global Biodiversity (3 credits, CRN)
This course will examine the biological principles that underpin the major international agreements on biodiversity, especially the UN Convention on Biological Diversity. Key topics include identification and monitoring of biological diversity; the ecosystem approach; marine, agricultural, inland waters, and drylands biological diversity; invasive species; bioinformatics; and indigenous knowledge, among others. Convention processes will also be studied, especially as they move from the scientific level to the political realm. Teaching methods emphasize but are not limited to class discussion, student presentations, case studies, technical and popular readings, guest lecturers, and video.
Location: Northern Virginia Center; Instructor: Michael Ruggiero; Tuesdays, 7:00 – 9:45 PM

NR 5984 Ecological Economics (3 credits, CRN)
This course provides a historical overview of various schools of economic thought, presents the major principles required to fuse ecology with economics, and helps students to analyze economic policies under the lens of ecological reality. Particular attention is paid to economic growth theory and policy as it pertains to the sustainability of human society and management of natural resources. This is a trans-disciplinary course, incorporating relevant principles and practices from political science, psychology, and physics in addition to ecology and economics. Students are not required to construct mathematical models. The course is organized in 4 modules (following an introductory session): 1) ecological principles; 2) economic principles; 3) integrating ecological and economic principles, and; 4) policy and political economy in relation to natural resources.
Location: Northern Virginia Center; Instructor: Brian Czech; Wednesdays, 7:00 - 9:45 PM.

NR 5714 Ecosystem Management (3 Credits, CRN)
Ecosystem management has received a great deal of attention over the past few years, but the basic principles remain elusive. Ecosystem management can be viewed simply as working ecological principles into land management policy and practice or as a holistic concept for dealing with large spatial scales and long time frames, as well as involving many ecological and socio-economic variables into the management scheme. This course will use a problem-based learning format to explore relevant content that places ecosystem management in context. Guest lecturers will provide insights into current applications within land management agencies, industries, and non-governmental organizations.
Location: Northern Virginia Center; Instructor: Milagros Alvarez; Wednesdays, 7:00-9:45 PM.

NR 5984 Urban Forestry (3 credits, CRN)
This course will address the concern for natural resources in the rapidly growing and changing urban environments of today's modern world. Urban forestry will be treated from an ecological systems perspective recognizing that important connections exist between the livability of cities and the service functions provided to society by trees, forests, and related green space in urban and urbanizing environments. Classes will cover the history and evolution of a wide range of public and private programs designed for the conservation, management, and restoration of trees, forests, and related natural resources in urban settings. Lectures will also provide in-depth knowledge and understanding of the benefits and techniques associated with protecting, maintaining, restoring, and improving the health of trees, forests and natural resources in urban areas.
Location: Northern Virginia Center; Instructor: Gary Evans; Thursdays, 7:00-9:45 PM.

NR 5884 Topics: International Wildlife Conservation (3 credits, CRN)
Wildlife resources around the globe are impacted by human decision-making. Declines in many populations of terrestrial, freshwater and marine species are well-documented. Local-level land-use, local, national and international policies, and human trade and development activities heavily influence wildlife populations and their potential for management to assure viable populations. This course reviews issues of global wildlife conservation concern, US-based and international agencies working toward wildlife conservation objectives, organizations and activities impacting international wildlife management policy and practices across key regions of the globe. This course will provide knowledge and skills to those interested in including an international wildlife perspective to their academic and professional focus.
Location: Northern Virginia Center, Room TBD; Instructor: Heather E. Eves; Thursdays, 7:00-9:45 PM.

NR 5864 Sustainability Science (3 credits, CRN)
Course Description: Sustainability science is a new transdisciplinary approach that recognizes the limitations of traditional scientific inquiry in dealing with the complex reality of social institutions interacting with natural phenomena. This course examines both the role and limits of natural resources and the environment in relation to human political, social, and economic goals and aspirations. We will explore global environmental concerns related to "progress" and "development." A central issue will be can scientifically meaningful "limits" or "boundaries" be defined that would provide effective warning of conditions beyond which the nature-society systems incur a significantly increased risk of serious degradation? Throughout the course, we will provide readings, films, and guest lectures on scientific and societal issues.
Location: Northern Virginia Center; Instructor: Mansi Grover Vyas; Thursday; 7:00 – 9:45 PM.

NR 5224 Field Biology and Ecology (3 credits, CRN)
This course will provide opportunities to explore the ecological and biological diversity found throughout the National Capital Region and beyond. Field trips will also be supported by lectures focused on providing biological and ecological understanding of the landforms and landscapes occurring from the coastal plains and estuaries along the Atlantic Ocean to the fields and forests of the Piedmont and Appalachian eco-regions. The course will feature field identification and observation of the plants and animals in representative ecosystems, with special emphasis on mammals, birds, amphibians, and reptiles. Native trees, scrubs, grasses, and other flowering plants will also be examined in natural plant communities.
Location: Northern Virginia Center; Instructors: Sheffield, Evans, Huff, and others, Saturdays.

Online Courses (go to Blackboard for online courses http://learn.vt.edu)

NR 5344 Natural Resources Law and Policy (3 credits, CRN, Online)
Natural resource management has a governing framework of laws and policies. Knowing and understanding these myriad laws - which can be overlapping and even contradictory - and the historical and philosophical underpinnings of these laws - is essential to the natural resource manager and conservation professionals. This course will look at specific laws, with an emphasis on wildlife, fisheries, and forests, public lands, and other natural resources. More importantly, it will give students the tools needed to find and understand the laws relevant to particular resources. The course will include an overview of the legislative and regulatory processes that have an enormous impact on the implementation of resource management and conservation programs. The emphasis will be on U.S. federal law, but will also touch on international, state, and local law. For independent written assignments, the instructor will make every effort to work with students who are not planning to work in the U.S. to study the laws of their own countries or the countries in which they plan to work.
Instructor: Ellen Paul

NR 5674 Public Lands and Realty Principles (3 credits, CRN, Online)
This course introduces the organization, legislative structure, and legal and policy components for managing public real estate and lands. Learners will become acquainted with the legal principles and policies of federal lands, some of the key guidelines for meeting of federal land responsibilities to the American public, through land status records, boundary maintenance, withdrawals processing, and title claims settlement. The course is designed to meet the requirements for career paths in Federal Lands management agencies. Emphasis is placed on learning - legal concepts, critical analysis, problem solving, original thinking and discussion through writing and term projects. Students will work with others in land management agencies and with local, county or state land organizations to complete some assignments.
Instructor: Gary Evans.

NR 5724 Conservation Ecology (3 Credits, CRN, Online)
Human activities are having a cumulative effect on the natural systems upon which life depends. Future land management impacts will likely entail unprecedented change in environmental conditions. More integration of the traditional natural resources fields will be required to develop innovative approaches to sustain resource development. Conservation ecology provides insights to the many benefits and services that nature offers and explores strategies to sustain ecological integrity and plan landscapes for human use. It is an emerging interdisciplinary approach to harmonizing the interactions between people and nature at ecosystem scales. Emphasis will be on the synthesis and integration of knowledge, skills, and abilities required to develop innovative approaches to sustain resource development as conservation issues become more complex.
Instructors: Alan Thornhill and David Trauger

NR 5194 Environmental Ethics (3 credits, CRN, Online)
Environmental ethics is an in depth analysis of current and past environmental issues in the context of ethical and philosophical considerations starting from individual and group ethics and moving toward more global and societal ethics. The course addresses influences and pressures such as social (in)justice, cultural traditions, politics, science, technology, and religion. In addition, the course explores practical application of professional ethics to the resource decision making process regarding current issues. Teaching methods emphasize but are not limited to class participation, case studies, role playing, technical and popular readings, guest lecturers, and video.
Instructor: Jennifer Plyler.

NR 5984 Outdoor Recreation Design and Development (3 credits, CRN, Online)
This course is another in the Interdisciplinary Recreation Management Series. This course focuses on recreation design and development, as an integral component of land management at the federal, state, local governments, as well as the private level. The full recreation spectrum from wilderness areas to intensively used urban/suburban areas and facilities will be covered in

the course. Students will be able to take the course as a natural resource specialist or a design professional or both. During the course, all students will be considered a member of an interdisciplinary planning and design team at their selected level of government or the private sector.
Instructors: Robert Leopold and Gary Evans.

NR 5984 Ecological Economics (3 credits, CRN, Online)
This course provides a historical overview of various schools of economic thought, presents the major principles required to fuse ecology with economics, and helps students to analyze economic policies under the lens of ecological reality. Particular attention is paid to economic growth theory and policy as it pertains to the sustainability of human society and management of natural resources. This is a transdisciplinary course, incorporating relevant principles and practices from political science, psychology, and physics in addition to ecology and economics. Students are not required to construct mathematical models. The course is organized in 4 modules (following an introductory session): 1) ecological principles; 2) economic principles; 3) integrating ecological and economic principles, and; 4) policy and political economy in relation to natural resources.
Instructor: Brian Czech.

NR 5984 Human Dimensions in Natural Resources (3 credits, CRN, Online)
This course will provide an introduction to human dimensions of natural resource management—how it is defined, why it is important, and a historical overview, including a discussion of relevant laws and policies. The social science theories that provide a foundation for human dimensions will be examined, along with human values, attitudes, and beliefs related to nature and natural resources. Demographic changes are having a profound effect on both natural resources and those who manage them; we'll explore the stakeholder approach to management, effective communication methods, and conflict resolution and avoidance. Management is a process, not a product. Understanding that process, the process of policy development, and the role of stakeholders in both is critical. Finally, we'll discuss human dimensions research issues, methods, planning, and how to use study results.
Instructors: Kieran Lindsey

NR 5984 Public Lands Valuation (3 credits, CRN, Online)
This course introduces the history of appraising public lands, the chronology of laws and regulations for public lands appraisal and describes the definitions associated with market valuation of public lands. One module provides the Valuation Theory and Process with a focus on public lands as opposed to privately owned lands. An additional module focuses on Federal and non federal appraisal standards, including market value rules. The Public Lands Valuation process module focuses on USDA Forest Service and DOI Bureau of Land Management valuation processes, however the valuation process covers at least 5 Agencies. The final module contains case studies, where the learner is challenged to apply what has been learned in previous modules.
Instructor: Dr. Gary Evans

PSCI 5364 Public Ecology (3 credits, CRN, Online)
Today's environmental challenges (e.g., biodiversity loss, forest fragmentation, climate change, etc.) require us to think in new and innovative ways about the future of life on Earth. Public ecology emerges at the confluence of three major currents shaping the contemporary environmental arena: 1) the need for local communities to coalesce and use local knowledge and local action to address local concerns; 2) the need for dialogue and collaboration across the many disciplinary and cultural boundaries that divide environmentally concerned scientists, policy-makers, and citizens; and 3) the need for a vision of nature and human society that encourages people to create healthy human ecosystems and sustainable communities at local, regional, and global scales.
Instructor: David Robertson.

NR 5954 Study Abroad (6 credits, CRN)
New Zealand: We are very excited to announce the offering of a new study abroad course "Humans and the Environment" in New Zealand to be held during the December 2008-January 2009 break between the Fall and Spring semesters. Based on the successful course offered by the College of Natural Resources during May/June 2008 we developed a new course open to all majors (Sophomore or above). The class will depart from the USA on 26-December, 2008 and will arrive back in the USA on 16-January, 2009. This will be a VT Spring semester class for six credit hours. More information can be obtained from the instructor for the 2008 course in New Zealand, Dr. Hammett, at 231-2716 or himal@vt.edu. To be added to a listserv to get information for this course please send an email to Dr. Hammett.

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