NATURAL RESOURCES AND SOCIETY (NRS)

NRS 1250 Introduction to Conservation and Natural Resources (3 credits)
General Education: Social and Behavioral Ways of Knowing
Foundations of natural resource management and agencies with responsibility for land management; philosophical, theoretical, and historical basis for protected areas; principles and frameworks for managing human use of and recreation on public lands.

NRS 2000 (s) Seminar (1-16 credits, max 99)
Credit arranged

NRS 2010 Introduction to Natural Resource Enterprise Management (2 credits)
Provides an introduction to private sector Natural Resource Management and the Natural Resource Enterprise Management program. Typically Offered: Fall.

NRS 2030 (s) Workshop (1-16 credits, max 99)
Credit arranged

NRS 2040 (s) Special Topics (1-16 credits, max 99)
Credit arranged

NRS 2350 Society and Natural Resources (3 credits)
General Education: Social and Behavioral Ways of Knowing
Cross-listed with FOR 2350
An exploration of how people use, value, manage, impact, and are affected by natural resources; course emphasizes social and economic realities and political and legal processes in a context of current and historical natural resource issues. Two lectures and one 1-hour small discussion group meeting per week.

NRS 2990 (s) Directed Study (1-16 credits, max 99)
Credit arranged

NRS 3100 Research Design and Methods (4 credits)
Quantitative, qualitative, and mixed research designs and methods to study the social aspects of natural resources, conservation, and the environment. Service-learning course. Typically Offered: Fall.

NRS 3110 Public Involvement in Natural Resource Management (3 credits)
Theoretical and applied concepts of public involvement in both public and private sectors of natural resource management; case studies and applied techniques or methods for public involvement; National Environmental Policy Act (NEPA) regulations and other public involvement policy or law. Field trip may be required. Typically Offered: Spring.

NRS 3640 Politics of the Environment (3 credits)
Cross-listed with POLS 3640
Political factors that influence formation, implementation, and impact of public policies aimed at protecting the environment.

NRS 3830 Natural Resource and Ecosystem Service Economics (3 credits)
The role and application of economic theories and methods in natural resource and ecosystem service decision-making. Economic tools are applied to the management of forests, fisheries, rangeland, recreation, wildlife, and other contemporary issues. Typically Offered: Spring.
Prereqs: FOR 2350 or NRS 2350; and ECON 2202 or ECON 2720; and MATH 1143

NRS 3860 Managing Complex Environmental Systems (3 credits)
Cross-listed with ENVS 3860
Complex environmental systems are comprised of interconnected social, economic, and environmental components. Explore complex environmental systems, frameworks and fundamental principles of sustainability in these systems by examining theory and practice in case studies. Topics may include natural resource scarcity and human conflict, ecosystem service provision, management, and conservation, and land tenure, rights, and justice relating to human access to natural resources.

NRS 3870 Environmental Communication Skills (3 credits)
Introduction to communications skills in the context of natural resources, including environmental and cultural interpretation; communication psychology and media applied to noncaptive audiences in natural resource situations. Field trip may be required. Special fee assessed.
Prereqs: Permission

NRS 3980 (s) Internship (1-16 credits, max 99)
Credit arranged

NRS 4000 (s) Seminar (1-16 credits, max 99)
Credit arranged

NRS 4030 (s) Workshop (1-16 credits, max 99)
Credit arranged

NRS 4040 (s) Special Topics (1-16 credits, max 99)
Credit arranged

NRS 4200 Introduction to Bioregional Planning (3 credits)
Cross-listed with ENVS 4200
Joint-listed with ENVS 5200, LAW 5200
, NRS 5200. This class introduces students to bioregional planning concepts and shows the difference between “traditional” planning and bioregional planning and explores the relevance of “traditional” planning and bioregional planning for communities in the American West. Additional work required for graduate credit. Typically Offered: Fall.

NRS 4400 Restoration Ecology (3 credits)
Cross-listed with REM 4400
The ecological restoration of disturbed ecosystems. Fundamental principles from ecology, ecophysiology, and community ecology are used in a systems ecology approach to examine how the structure and function of damaged ecosystems can be restored -- with the goal of establishing a stable and self-sustaining ecosystem.
Prereqs: NR 3210, FOR 2100, WLF 2200, BIOL 3140, or Permission

NRS 4440 Recreation Ecology (3 credits)
This course addresses outdoor recreation and natural management using a recreation ecology framework. Physical and social impacts resulting from outdoor recreation in parks and protected areas will be discussed (i. e. , soil erosion, water contamination, vegetative trampling, light pollution, crowding, etc.), as well as visitor use management strategies to address those impacts. Typically Offered: Spring.
Prereqs: NRS 1250 Cooperative: open to WSU degree-seeking students.

NRS 4620 Natural Resource Policy (3 credits)
Cross-listed with POLS 4620
Joint-listed with NRS 5820, POLS 5620
Political and institutional context for making natural resource policy; emphasis on interaction between private and public sectors and the federal, state, and tribal governments, including an examination of topical issues in natural resource politics.

NRS 4720 Remote Sensing of the Environment (4 credits)
Cross-listed with FOR 4720
Current airborne and satellite systems, data acquisition on ground and from remote locations, instrumentation, imagery interpretation and digital analysis, applications for natural resource science and management. Two 75-minute lectures and one two-hour lab per week. Recommended Preparation: MATH 1143. Typically Offered: Fall. Cooperative: open to WSU degree-seeking students.

NRS 4730 ECB Senior Presentation (1 credit)
General Education: Capstone Experience
Cross-listed with FISH 4730, FOR 4730
, FSP 4730, REM 4730, WLF 4730. Reporting and presenting the senior project (thesis or internship); taken after or concurrently with REM 4970. Serves as the senior capstone course for Ecology and Conservation Biology (ECB).
Prereqs: Instructor Permission

NRS 4750 Local and Regional Environmental Planning (3 credits)
Cross-listed with ENVS 4750
This course focuses on environmental planning by governments, nonprofit organizations, and collaborative partnerships at the local and regional level. Students will study a variety of planning approaches, such as community visioning and policy and management tools. Topics will include planning for public health, natural areas, working landscapes, and the built environment. Typically Offered: Varies.
Prereqs: Junior or Senior standing or permission.

NRS 4760 Environmental Project Management and Decision Making (4 credits)
General Education: Capstone Experience
Cross-listed with ENVS 4760
Integrated, interdisciplinary approaches to project and program management and decision making. Emphasis on environmental planning techniques, scenario development, analysis, and application of geospatial tools such as GIS and remote sensing. Direct experience and basic skills for project and program development and evaluation. Typically Offered: Spring (Even Years).
Prereqs: ENVS 4200

NRS 4780 LIDAR and Optical Remote Sensing Analysis (3 credits)
Joint-listed with NRS 5780
LIDAR and optical remote sensing data play a key role in natural resource and environmental research and management. Students will use open-source software to efficiently and effectively work with optical and LIDAR remote sensing datasets. Topics include introduction to open-source software for LIDAR and optical remote sensing analysis, acquisition and pre-processing of optical and LIDAR remote sensing data, and remote sensing analysis approaches that allow conversion of remotely sensed data into management/research relevant information. This course focuses on development and application of practical skills through project-based learning. For graduate credit, primary literature review, discussion, and a class project including evaluation and writeup of unique and advanced datasets is also required.
Prereqs: STAT 2510 and WLF 3700; or STAT 4270 and NRS 4720 or FOR 4720

NRS 4820 Outdoor Leadership Expedition (3 credits)
This expedition-based course will explore the practice of leadership, using the wilderness experience as the classroom. Topics include trip planning, small group dynamics, decision-making, communication, and expedition behavior. Examining leadership theory, modeling of leadership techniques, written assignments, and backcountry skill development are used to support learning. Typically Offered: Fall.

NRS 4830 Senior Project Presentation (1 credit)
Cross-listed with FOR 4830
Reporting and presenting the senior project (thesis or internship); taken after or concurrently with FOR 4970.

NRS 4840 Forest Policy and Administration (2 credits)
Cross-listed with FOR 4310
Evaluation of land and forest problems and policies in the U. S. ; analysis of current conditions and policies; historical development of governmental and private agencies concerned with the administration of forest conservation program. Recommended Preparation: FOR 2350.
Prereqs: Junior standing.

NRS 4850 Ecology and Conservation Biology Senior Project (1-3 credits, max 3)
Cross-listed with FISH 4850, WLF 4850
Scholarly work; learning objectives include development and formal proposal of a specific project and conducting the project or research with the guidance of a faculty mentor.

NRS 4870 Environmental Education (3 credits)
Concept and techniques of environmental education with emphasis on informal education settings, such as residential and day-use environmental education centers, nature centers, and visitor centers. Field trip may be required. Typically Offered: Spring.

NRS 4880 NEPA in Policy and Practice (3 credits)
Joint-listed with NRS 5880
In-depth review of the National Environmental Policy Act (NEPA), its legislative background and history, significant case law, and Council of Environmental Quality (CEQ) guidelines. Students will review examples of agency categorical exclusions, environmental assessments, and environmental impact statements. Students will evaluate whether specific documents "meet the intent or spirit" of NEPA, compare state vs. federal NEPA regulations, and review at least one federal agency's NEPA procedures.

NRS 4900 Wilderness and Protected Area Management (3 credits)
Historical and legal aspects of the wilderness and protected area concepts; conceptual and applied approaches, considering both ecological and sociological elements; recent research. Typically Offered: Spring and Varies.

NRS 4970 Senior Thesis (2-4 credits, max 4)
Independently plan and conduct a thesis project; write and defend the thesis under supervision of an advisor.
Prereqs: Senior standing and minimum 3.2 GPA, or Permission

NRS 4980 (s) Internship (1-16 credits, max 99)
Credit arranged

NRS 4990 (s) Directed Study (1-16 credits, max 99)
Credit arranged. For the individual student; conferences, library, field, or lab work.
Prereqs: Senior standing, 2.5 GPA, and permission

NRS 5000 Master's Research and Thesis (1-16 credits, max 99)
Credit arranged

NRS 5010 (s) Seminar (1-16 credits, max 99)
Credit arranged. Seminar examining a wide range of topics that cross-cut the diverse areas of expertise of faculty and graduate students in the Department of Natural Resources and Society. Each course focuses on a specific cross-cutting topic with special emphasis on examining how the topic is viewed with multiple perspectives across disciplinary boundaries. Emphasis is also placed on student cohort building, networking, and professional career development. Typically Offered: Varies.
Prereqs: Permission

NRS 5020 (s) Directed Study (1-16 credits, max 99)
Credit arranged

NRS 5030 (s) Workshop (1-16 credits, max 99)
Credit arranged. Selected topics in the conservation and management of natural resources.
Prereqs: Permission

NRS 5040 (s) Special Topics (1-16 credits, max 99)
Credit arranged.

NRS 5050 (s) Professional Development (1-16 credits, max 99)
Credit arranged. Credit earned in NRS 5050 will not be accepted toward graduate degree programs.

NRS 5060 Fundamentals of Research (3 credits)
Course instructs students on the common philosophical and commonsensical foundations of modern scientific inquiry and the fundamentals of research design and methodology common to all forms of scientific inquiry. These include research philosophies, strategies, designs, and methodologies as used by social and biophysical researchers in natural resource, environmental, and sustainability professions. The course will develop students' fundamental research competencies associated with the standards of quality and expectations of rigor for modern scientific inquiry. Typically Offered: Fall. Cooperative: open to WSU degree-seeking students.

NRS 5070 Moral Reasoning in Natural Resources (3 credits)
Cross-listed with LAW 5070
Exploration of the practical aspects of moral reasoning on current issues in natural resources. The purpose of the course is to discover the essence of reasoning, rationality, and reflection on moral and ethical dilemmas with regard to current issues in natural resources. Typically Offered: Summer.

NRS 5080 Foundations of Research in Natural Resources and Society (3 credits)
This course will instruct students on specialized topics in the design and implementation of research. These include strategies, best practices, and structure of literature reviews, overview of sampling strategies, and data collection methods applicable to a range of research questions or hypothesis, preliminary consideration of analysis approaches for different data, and effective components of research publications. Typically Offered: Spring.
Prereqs: NRS 5060 Cooperative: open to WSU degree-seeking students.

NRS 5090 Writing a Scientific Article (2 credits)
Students will write and prepare to submit a scientific manuscript over the semester. We will workshop and discuss issues including writing styles, choosing a journal, and peer review. Students should have data ready to write up at the start of the semester. This course is appropriate for social, biophysical, and interdisciplinary scientists. Typically Offered: Varies.

NRS 5150 Introduction to Ecological Data Analysis in R (1 credit)
This course teaches programming and data science skills in the R programming language in the context of ecology. No prior programming skills are required. Specific topics will include basic introduction to data analysis in R and data exploration using graphics. Graded Pass/Fail. Typically Offered: Fall.

NRS 5200 Introduction to Bioregional Planning (3 credits)
Cross-listed with ENVS 5200, LAW 5200
Joint-listed with ENVS 4200, NRS 4200
This class introduces students to bioregional planning concepts and shows the difference between "traditional" planning and bioregional planning and explores the relevance of "traditional" planning and bioregional planning for communities in the American West. Additional work required for graduate credit. Typically Offered: Fall.

NRS 5310 Wildfire Risk and Management (3 credits)
This course will explore foundational and emerging concepts surrounding wildfire management and wildfire risk. Special focus will be on theory and methods that inform ongoing wildfire management practices at local, state, and national levels. Students will consider social science lessons pertaining to landscape-level wildfire management, debate the utility of various scientific approaches or methods for assessing risk from wildland fire, discuss how science and policy influence collaborative wildfire management, and propose ways to strengthen the connections between science and real-world application. Typically Offered: Spring. Cooperative: open to WSU degree-seeking students.

NRS 5520 Current Lit in Remote Sensing (1 credit, max 99)
Review, present, and discuss recent articles related to remote sensing of the environment. Students choose, critically review, and discuss the articles to develop critical-thinking skills, remote sensing research strategies, and confidence in their knowledge of the literature.

NRS 5550 Human Dimensions of Natural Resources (3 credits)
Application of theory and methods from behavioral, social, and policy science to conservation and natural resources management. Focus on multiple perspectives for managing fish, wildlife, and ecosystems; understanding how data that concern human behavior are collected and interpreted; and how insights integrate into management, rule-making, and policy. This requires knowledge of how people think and act toward resources and subsequent effects on those resources and management. The seminar format will use primers and case studies in addition to direct exposure to people, agencies, and organizations involved in Idaho's and the Pacific Northwest's fish, wildlife, and ecosystem management. Typically Offered: Varies. Cooperative: open to WSU degree-seeking students.

NRS 5560 Team Leadership for Environmental Educators (1 credit)
This course provides participants with the theoretical understandings and practical tools needed to develop an effective leadership practice. Students will be asked to build upon their life experience and their experience at MOSS to provide context for discussions and practice. Topics to be covered include group dynamics, strengths-based personal development, conflict resolution, and a survey of popular leadership theory. Located at the McCall Field Campus. Typically Offered: Fall.

NRS 5570 Community Leadership for Environmental Educators (1 credit)
This course explores the leadership theories and tools needed to create culture, build trust, and maintain efficiencies within small and large organizations. In particular, it will explore how organizations and teams confront change in order to find success. Students will be asked to build upon their life experience and their experience at MOSS to provide context for discussions and practice. The course is located at the McCall Field Campus. Typically Offered: Spring.

NRS 5600 Place-based Ecology I (4 credits)
Cover plant and animal community ecology from both a qualitative and quantitative perspective. Topics will include community interaction of plants and animals; community dynamics, succession, and disturbance; basic data collection and statistical analysis of habitat association data; and the effect of abiotic factors on community structure. Typically Offered: Fall.

NRS 5620 Field Science Teaching (2 credits)
Address basic natural history concepts for instructors involved in experiential environmental education with students age 12 to 18 years old. Field activities, readings, and instructor modeling of teaching techniques will be included in the format of the course. The course will focus on how to engage each student to learn ecological principles and apply them in a field teaching setting. Typically Offered: Fall.

NRS 5630 Place Based Env. Education (4 credits)
Educating students so that they have the skills and knowledge base in order to begin to understand the human and natural environment in which they live is a complicated endeavor. This course is designed to provide a foundation of educational pedagogy, a survey of place-based literature in areas critical to this educational endeavor, and opportunities for personal and professional application. Typically Offered: Fall.

NRS 5640 Teaching Environmental Education in a Winter Environment (2 credits)
Address basic principles of ecology during winter. Emphasis will be placed on field experiences, including principles of teaching in a winter environment, winter weather, and organism adaptation to winter. Typically Offered: Spring.

NRS 5650 Science Communication and the Environment (4 credits)
Examines the flow of scientific information between experts and non-experts, with emphasis on educational settings. Project-based and includes practice in digital storytelling, documentary film, blogs, podcasts, public talks, and field experiences. Located at the McCall Field Campus. Typically Offered: Spring.

NRS 5660 Place-based Ecology II (4 credits)
Explore how plants and animals manage the unique survival challenges of winter. Delve into fundamentals of winter ecology, including the changing snowpack, life under the ice, plants and animals in the winter environment, and plant-animal interactions. The middle of the course addresses environmental change and interactions with winter ecology. At the end of the semester, the springtime environment will be used to study fundamental chemical and physical processes that drive the natural world emerging out of its apparent hibernation. Work outdoors to gain hands-on knowledge and practical experience. Field experiences will be fundamental in developing ecological understanding, with field trips to various locations to gain crucial insight into the natural world during the winter and spring seasons. Outdoor experience and learning will be complemented by lectures, group discussions, readings, and field experiments.

NRS 5670 Environmental Education Teaching Practicum I (2 credits)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of mentors at a residential environmental learning center. Teaching in a residential environmental learning center consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. Typically Offered: Fall.

NRS 5680 Environmental Education Teaching Practicum II (2 credits)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of mentors at a residential environmental learning center. Teaching in a residential environmental learning center consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. Typically Offered: Spring.

NRS 5690 Environmental Education Teaching Practicum III (2 credits)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of Teton Science School staff. Teaching at the Teton Science School consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. Typically Offered: Spring.

NRS 5700 Visitor Use Management (3 credits)
This course provides the social science foundations of visitor use management used by agencies and organizations with responsibility for outdoor recreation management. Philosophical, theoretical, and historical basis for stewardship of human access to recreation resources on public lands and waters will be discussed with specific attention to the Interagency Visitor Use Management Framework. Typically Offered: Summer.

NRS 5740 Environmental Politics and Policy (3 credits)
Political and institutional context for the formulation, implementation, and evaluation of U. S. environmental policy.

NRS 5750 Leadership for the Environmental Educator (2 credits)
Addresses basic outdoor leadership theory and practice for instructors involved with experiential environmental education with students 12-18 years old. Includes a back country trip, class work, instructor modeling, peer feedback, and reflective practice. Focuses on the individual student's understanding of leadership theory and ability to put theory into practice as a member of a community of learners. Located at the McCall Field Campus. Typically Offered: Fall.

NRS 5760 Environmental Project Management and Decision Making (2 credits)
Integrated, interdisciplinary approaches to environmental project and program management and decision making. Emphasis on environmental planning techniques, scenario development, analysis, and application of geospatial tools such as GIS and remote sensing. Direct experience and basic skills for project and program development and evaluation.

NRS 5780 LIDAR and Optical Remote Sensing Analysis (3 credits)
Joint-listed with NRS 4780
LIDAR and optical remote sensing data play a key role in natural resource and environmental research and management. Students will use open-source software to efficiently and effectively work with optical and LIDAR remote sensing datasets. Topics include introduction to open-source software for LIDAR and optical remote sensing analysis, acquisition and pre-processing of optical and LIDAR remote sensing data, and remote sensing analysis approaches that allow conversion of remotely sensed data into management/research relevant information. This course focuses on development and application of practical skills through project-based learning. For graduate credit, primary literature review, discussion, and a class project including evaluation and writeup of unique and advanced datasets is also required.

NRS 5800 Restoration Ecology Practicum (2 credits)
Capstone experience in the Restoration Ecology Certificate program. Students work independently to develop plan for implementing and assessing the success of ecological restoration; plan must synthesize literature, concepts, and challenges; plan shall be written with graphics and electronic submission for possible Internet publication.
Prereqs: FIRE 5326 and REM 4400, or Permission

NRS 5820 Natural Resource Policy (3 credits)
Cross-listed with POLS 5620
Joint-listed with NRS 4620, POLS 4620
Political and institutional context for making natural resource policy; emphasis on interaction between private and public sectors and the federal, state, and tribal governments, including an examination of topical issues in natural resource politics.

NRS 5840 (s) Indigenous Land/Water Relations and Governance (3 credits)
This course examines sustainability science and Indigenous cultures of leadership/governance in addressing complex relationships between land, water, human, and other-than-human communities. Methodological diversity and cross-disciplinary knowledges are explored as tools for sustaining planetary co-existence. Typically Offered: Fall.

NRS 5880 NEPA in Policy and Practice (3 credits)
Joint-listed with NRS 4880
In-depth review of the National Environmental Policy Act (NEPA), its legislative background and history, significant case law, and Council of Environmental Quality (CEQ) guidelines. Students will review examples of agency categorical exclusions, environmental assessments, and environmental impact statements. Students will evaluate whether specific documents "meet the intent or spirit" of NEPA, compare state vs. federal NEPA regulations, and review at least one federal agency's NEPA procedures.

NRS 5910 Theories of Environmental Behavior (3 credits)
Intensive examination of contending theoretical frameworks of human behavior; the course surveys classic and contemporary social theory, including normative theories of environmental behavior and descriptive perspectives on human behavior and/or the human-nature relationship. Typically Offered: Varies. Cooperative: open to WSU degree-seeking students.

NRS 5920 Emerging Media Outreach in Natural Resources (3 credits)
This course introduces students to basic media skills in photography, audio, video, microblogging, social media, content management, and basic coding, and blog on a topic of their choice. Students also will explore and share their field experience through a variety of media and will engage and examine social media uses for advertising, marketing, and public relations outreach in natural resources.

NRS 5970 (s) Practicum (1-16 credits, max 99)
Credit arranged. Graded Pass/Fail.
Prereqs: Permission

NRS 5980 (s) Internship (1-16 credits, max 99)
Credit arranged.
Prereqs: Permission.

NRS 5990 Non-thesis Master's Research (1-16 credits, max 99)
Credit arranged. Research not directly related to a thesis or dissertation.
Prereqs: Permission.

NRS 6000 Doctoral Research and Dissertation (1-45 credits, max 99)
Credit arranged
Prereqs: Admission to the doctoral program in Natural Resources and Department; Permission